

Annual report of the Provincial Board of Health of Ontario, Canada.

Contributors

Provincial Board of Health of Ontario.

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ANNUAL REPORT
Provincial Board of Health
1918

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Annual Report

Provincial Board of Health

Ontario, Canada

FOR THE YEAR

1918

PRINTED BY ORDER OF

THE PROVINCIAL BOARD OF HEALTH



Printed and Published by J. T. Macdonald, Printer, at the King's Press, Toronto, Ontario

1918



Thirty-Seventh Annual Report
OF THE
Provincial Board of Health
OF
Ontario, Canada

FOR THE YEAR

1918

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO



TORONTO:

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

1919



Thirty-Seventh Annual Report
OF THE
PROVINCIAL BOARD OF HEALTH
OF
ONTARIO, CANADA
FOR THE YEAR
1918

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To His Honour SIR JOHN STRATHEARN HENDRIE, K.C.M.G., C.R.V.O., etc.,
etc., etc.

Lieutenant-Governor of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR:

I herewith beg to present for your consideration the Thirty-Seventh Annual Report of the Provincial Board of Health for the year 1918.

Respectfully submitted,

WM. DAVID MCPHERSON,

Provincial Secretary.

Toronto, April 2nd, 1919.

To the Honourable W. D. McPHERSON, K.C., M.P.P., Provincial Secretary of Ontario.

SIR,—I have the honour to submit for your approval the Thirty-Seventh Report of the Provincial Board of Health, made in conformity with and under the provisions of the Public Health Act, for the year 1918.

I have the honour to be, Sir,

Your obedient servant,

JOHN W. S. McCULLOUGH,

Chief Officer of Health.

Toronto, April 2nd, 1919.

PROVINCIAL BOARD OF HEALTH OF ONTARIO, 1918

The Board:

ADAM H. WRIGHT, M.D., M.R.C.S., Eng., Chairman	Toronto.
HENRY R. CASGRAIN, M.D.	Windsor.
THOMAS E. KAISER, M.D.	Oshawa.
WILLIAM H. HOWLEY, M.D.	Sudbury.
ARTHUR S. McELROY, M.D.	Ottawa.
JAMES ROBERTS, M.D., M.O.H.	Hamilton.

Executive Officers:

JOHN W. S. McCULLOUGH, M.D., D.P.H. (Tor.), Secretary and Chief Officer of Health.
R. W. BELL, M.D., Provincial Medical Inspector.
ALEX. R. WHITE, Sanitary Inspector, North Bay.

Laboratory Service:

JOHN A. AMYOT, M.B., C.M.G., Provincial Bacteriologist, Professor of Hygiene,
University of Toronto.
H. M. LANCASTER, B.A.Sc., Provincial Chemist, Professor of Chemistry, Dental
College, University of Toronto.
R. W. NAYLOR, M.B., Assistant Bacteriologist
A. R. BONHAM, B.A.Sc., Assistant Chemist.
W. T. CONNELL, M.D., Branch Laboratory, Kingston.
H. W. HILL, M.D., D.P.H., (Tor.), Branch Laboratory, London.

Engineering Service:

F. A. DALLYN, C.E. (Tor.), A.M. Can. Soc. C.E., Provincial Sanitary Engineer.
A. V. DELAPORTE, B.A.Sc., Chemist in Charge of Experimental Station.

Child Welfare Bureau:

MISS MARY POWER, B.A.
MISS B. KNOX, Nurse.

District Officers of Health:

District.

- No. 1.—Vacant by the death of MAJOR D. B. BENTLEY, M.D., Sarnia.
- No. 2.—THOMAS J. McNALLY, M.D., London.
- No. 3.—DANIEL A. McCLENAHAN, M.D., Hamilton.
- No. 4.—GEORGE CLINTON, M.D., Belleville.
- No. 5.—PAUL J. MOLONEY, M.D., Cornwall.
- No. 6.—W. EGERTON GEORGE, M.D., North Bay.
- No. 7.—ROBERT E. WODEHOUSE, M.D., Fort William.

Telephone No. Main 5800.



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CONTENTS

	PAGE
1. RESUME OF THE TRANSACTIONS OF THE BOARD, 1918	1
Amendments to the Public Health Act, 1918	1
Regulations for the Control of Babies' Sore Eyes	6
Venereal Diseases Prevention Act	7
Free Distribution of Biological Products	14
2. TABLE OF DEATHS FROM TUBERCULOSIS, 1908-1918	16
3. TABLE OF DEATHS RE COMMUNICABLE DISEASES, 1908-1918	16
4. STATEMENT OF BIOLOGICAL PRODUCTS	18
5. REPORTS OF DISTRICT OFFICERS OF HEALTH	20
District No. 1, Dr. T. J. McNally	20
District No. 2, Dr. T. J. McNally	20
District No. 3, Dr. D. A. McClenahan	23
District No. 4, Dr. George Clinton	25
District No. 5, Dr. Paul J. Moloney	27
District No. 6, Dr. W. E. George	31
District No. 7, Dr. W. E. George	31
6. REPORT OF THE BUREAU OF CHILD WELFARE, MISS MARY POWER, B.A.	37
Report of Nurse in Charge	40
7. REPORT OF PROVINCIAL MEDICAL INSPECTOR, R. W. BELL, M.D.	52
<i>Re</i> Proposed Oaklawn Cemetery	52
" 510 Yonge Street, Toronto	52
" 106 Front Street, Toronto	53
" Influenza at Burwash Prison Farm	54
" Nuisance in Township of Waterloo	55
" Nuisance in Township of Waterloo (2nd)	56
" Alleged Nuisance from Turnip Factory at New Toronto	56
" Nuisance at Oakville	57
8. REPORT OF THE PROVINCIAL SANITARY ENGINEER, F. A. DALLYN, C.E.	58
Table of Deaths from Typhoid Fever, 1908-1918	58
Table of Deaths from Typhoid Fever in Cities, 1908-1918	59
Approvals for Sewer Extensions, Disposal Works, etc.	62
Approvals for Water Mains, Purification Works, etc.	63
Report <i>re</i> Ingersoll Water Supply	64
Report <i>re</i> Canadian Copper Company, Water Supply to the Roast Yards	65
9. REPORT OF THE PROVINCIAL SANITARY INSPECTOR, ALEX. R. WHITE	66

	PAGE
10. REPORT OF PROVINCIAL BOARD OF HEALTH LABORATORY, TORONTO	73
11. REPORT OF BRANCH LABORATORY AT LONDON, 1918	103
12. REPORT OF BRANCH LABORATORY AT KINGSTON, 1918	111
13. "SANITATION OF ISOLATED RESIDENCES AND INSTITUTIONS," by Peter Gillespie, M.E.I.C. (Read before the Canadian Public Health Association, Toronto, May, 1919)	118
14. APPENDIX "A"—REPORTS OF LOCAL BOARDS OF HEALTH	131
Cities:—	
Brantford	131
Chatham	134
Fort William	136
Galt	146
Kingston	149
Kitchener	151
London	151
Niagara Falls	157
Ottawa	158
Peterborough	166
Port Arthur	167
Sarnia	170
Stratford	174
St. Catharines	176
Windsor	178
Woodstock	182
Towns:—	
Amherstburg	184
Barrie	184
Brockville	185
Burlington	187
Cornwall	187
Ford City	188
Fort Frances	189
Guelph Township	191
Hespeler	192
Keewatin	192
Midland	193
Mount Forest	193
North Bay	194
Orillia	199
Owen Sound	200
Port Hope	202
Renfrew	205
Sandwich	206
Simcoe	206
St. Mary's	208
Sudbury	208

ANNUAL REPORT

OF THE

Provincial Board of Health for the Province of Ontario

For the Year Ending 31st December, 1918

RESUMÉ OF THE TRANSACTIONS OF THE BOARD BY THE CHIEF OFFICER OF HEALTH

This is the 37th Annual Report of the Provincial Board of Health for Ontario for the year ending 31st December, 1918.

During the year five meetings were held by the Board. These meetings were attended by all the members with the exception of Dr. H. R. Casgrain who remains on duty overseas. At the end of the previous year the place of Dr. A. A. Weagant, of Ottawa, who resigned upon taking up his residence in Winnipeg, Manitoba, was filled by the appointment of Dr. Arthur Stevenson McElroy, of Ottawa.

Legislation.

At the 1918 Session of the Legislature the following amendments to the Public Health Act were passed, viz:—

AMENDMENTS TO THE PUBLIC HEALTH ACT

(BILL No. 139, 1918)

His Majesty, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

1. This Act may be cited as *The Public Health Amendment Act*, Short title. 1918.

2. Every district officer of health shall be paid such salary as may Salaries,
be fixed by the Lieutenant-Governor in Council, and his actual and etc., of
necessary travelling and other expenses incurred in the discharge of district
his duties, and such salary and expenses shall be payable out of such officers
of health.
sums as may be appropriated by the Legislature for that purpose.

3. Subsection 2 of section 25 of *The Public Health Act* is amended Rev. Stat.
by striking out the words "five per centum" in the seventh line thereof, c. 18, s.
and by substituting therefor the words "at a rate not exceeding six per 25 (2),
centum." amended.

4. Section 29 of *The Public Health Act* is amended by striking out Rev. Stat.,
the words "cleansing and" and the words "cleanse and" in the sixth c. 218, s. 29,
line, and by adding thereto the following subsection: amended.

Disinfect-
ing, etc.,
of premises.

- (2) The disinfecting, renovating and cleansing of houses and premises shall be carried on in accordance with the regulations.

Rev. Stat.
c. 218, s. 32a,
amended.
7 Geo. V,
c. 51.

5. (1) Section 32a of *The Public Health Act*, as enacted by the Act passed in the 7th year of His Majesty's reign, chapter 51, is amended by adding after the word "public," at the end of the third line, the words "and separate."

Commence-
ment of
section.

- (2) The amendment made by subsection 1 shall have effect and be deemed to have been in force as from the 12th day of April, 1917.

Rev. Stat.
c. 218, s. 41,
amended.

6. Section 41 of *The Public Health Act* is amended by adding thereto the following as subsection 2:

Temporary
absence of
M.O.H.

- (2) When the Medical Officer of Health is absent from the province for a protracted period the council may, with the written approval of the Provincial Board, appoint a legally qualified medical practitioner to be Acting Medical Officer of Health during such absence, and such Acting Medical Officer of Health shall have, during the absence of the Medical Officer of Health, all the powers, and perform all the duties of the Medical Officer of Health.

Rev. Stat.
c. 218,
amended.

7. *The Public Health Act* is amended by adding thereto the following section:

Disputes as
to remun-
eration of
M.O.H.
Application
to county
judge.

- 52a.—(1) Where a medical officer of health claims that the salary paid to him by a municipal corporation or the remuneration provided for under section 52 is not fair and reasonable, and gives notice of such claim in writing, signed by him, to the clerk of the municipal corporation, and the council of the corporation neglects to comply with such demand, or directs the serving upon the medical officer of health of a notice disputing such a claim, the medical officer of health, after the expiration of ten days from the receipt of such claim by the clerk of such corporation, may apply in a summary manner to the judge of the county or district court of the county or district within which the municipality lies, for an order allowing his claim and fixing the amount payable to him as salary under section 39 or as remuneration under section 52, and upon such application the judge shall hear the parties and their witnesses and shall make such order as he may deem just, and in and by such order shall settle and determine the salary properly payable to such medical officer of health, and a fair and reasonable remuneration under section 52.

Time for
making
application.

- (2) If such application is not made by the medical officer of health within thirty days after receiving notice from the corporation disputing his claim, he shall be deemed to have abandoned the same.

- (3) The judge, upon the application, shall take into consideration all the circumstances of the case, and amongst other matters the physical extent, population and assessment of the municipality.

Powers of judge.

- (4) *The Judges' Orders Enforcement Act* shall apply to every application or order made under this section.

Application of Rev. Stat., c. 79. Rev. Stat., c. 218, s. 54, amended.

8. Section 54 of *The Public Health Act* is amended by adding after the word "from" at the end of the second line the words "or exposed to," and by adding thereto the following subsections:

Communicable diseases.

- (2) Every person in a house when a communicable disease exists therein, and every person who during the period of quarantine enters such house, shall be deemed to be exposed to the disease.

Who to be deemed exposed to disease.

- (3) It shall be the duty of every physician, medical officer of health, superintendent of a hospital, nurse, midwife, and everyone in charge of a maternity hospital, every householder, and everyone in charge of a child, to see that such requirements as may be prescribed by this Act or by the regulations are duly complied with in respect of ophthalmia neonatorum, trachoma, inflammation of the eyes of the newborn, or other communicable diseases of the eyes.

Duty as to treatment of newborn for eye diseases.

9. Section 92 of *The Public Health Act* is amended by striking out the word "and" at the beginning of the second line thereof and by adding after the word "corporation" in the second line the words "and any person" and by striking out the words "or officer" in the tenth line and substituting therefor the words "officer or other person."

Rev. Stat., c. 218, s. 92, amended.

Returns from owners of waterworks, etc.

10. Section 94 of *The Public Health Act* as amended by section 47 of *The Statute Law Amendment Act, 1914*, is further amended by adding thereto the following subsections:

Rev. Stat., c. 218, s. 94, amended.

- (9) The Provincial Board may withdraw, amend or vary any approval given by it under this section or any order or certificate made by it, and may approve of a different or other system of sewerage, sewage disposal or sewage disposal plant, or a different or other location of the same.

Orders of Provincial Board as to sewerage or sewage disposal plant.

- (10) Before acting under the provisions of subsection 9 the Board shall notify the clerk of the township municipality in which the system of sewerage is located or into or through which it is continued or in which it is proposed to locate the system of sewerage, or into or through which it is proposed to continue the same, or in which it is proposed to locate a sewage disposal plant, and the Board shall hear and consider any objections which the council of the township or any resident therein may make to the erection of the said work or any part thereof.

Hearing and notice to municipality affected.

Application
to Railway
and Municipal
Board.

- (11) Where the Provincial Board has made an order or report under the provisions of subsections 7 to 10, the corporation of the urban municipality before proceeding with the work, shall apply to the Ontario Railway and Municipal Board, for an order prescribing the manner in which such work may be carried on, and notice of such application shall be given to the township municipality and to any resident therein whose property is, or may be, affected by the proposed works.

Powers of
Railway
and Municipal
Board.

- (12) Upon such application the Ontario Railway and Municipal Board may make an order;
- (a) Stopping up and closing any highway, road or road allowance, temporarily or permanently, for the purpose of allowing the proposed work to be carried on; and vesting the same in the urban corporation, and providing for the opening of other roads, highways and road allowances for the use and convenience of the residents of the township municipality in lieu of the roads, highways and road allowances so stopped up and closed, and the provisions of section 86 of *The Registry Act* shall not apply;
 - (b) imposing such terms and conditions upon the urban municipality with respect to the construction and operation of the proposed work as the Board may deem just;
 - (c) ordering that any buildings, restrictions, covenants running with the land or any limitations placed upon the estate or interest of any person or corporation, in any lands in or through which it is proposed that a sewage disposal system may be constructed or continued, or where the site of the sewage disposal plant is proposed to be located, shall be terminated and shall be no longer operative or binding upon or against any person or persons, and direct that any such order be registered under the provisions of *The Registry Act*;
 - (d) fixing the compensation to be paid for lands taken or injured in the construction of such works.

Registration
of
order.

- (13) The registration of any order under clause c of subsection 12, shall be a bar to any action or proceeding taken by any person or corporation claiming any right or benefits under or by reason of any such restrictions, covenants, interests, estate or title in the lands described in the order.

Jurisdiction
of Board
as to claims
for damages.

- (14) The Ontario Railway and Municipal Board shall have jurisdiction to enquire into, and hear and determine any application by or on behalf of any person or corporation interested complaining that any urban municipality constructing, maintaining or operating any sewage disposal system, or plant, or having the control thereof:

- (a) has failed to do any act, matter or thing required to be done by an Act or regulation, order or direction, or by any agreement entered into by the corporation; or
- (b) has done or is doing any act or is failing to do any act and that such act or failure is causing depreciation, loss, injury or damage to any property of any owner, and the said Board may make any order, award or finding in respect of any claim of damage or injury, as it may deem just.

- (15) The jurisdiction of The Ontario Railway and Municipal Board under this section shall be conclusive and all claims for injury, or damages or other matter arising under the provisions of this section relating to the construction by an urban municipality of a sewage disposal plant in a township municipality, shall be heard and determined by the Board and *The Ontario Railway and Municipal Board Act*, so far as it is practicable, shall apply to every application and order made to or by the Ontario Railway and Municipal Board under this section.

All claims
to be deter-
mined by
Board.

11. Subsection 2 of section 110 of the said Act is amended by striking out the figures "\$20" in the eighth line thereof, and substituting therefor the figures "\$500."

Rev. Stat.,
c. 218, s. 110.
(2) amended.

REGULATIONS

The following Regulations were passed by the Board approved by Order-in-Council and published in the *Ontario Gazette*, viz:—

PROVINCIAL BOARD OF HEALTH, ONTARIO.

REGULATIONS FOR THE CONTROL OF BABIES' SORE EYES.

Regulation 1.

Every physician in attendance upon a lying-in woman shall, immediately following the birth, instil into the eyes of the newly-born child a sufficient quantity of one per cent. solution of nitrate of silver (supplied free by the Provincial Board of Health) or of a 40 per cent. solution of Argyrol.

Regulation 2.

If within two weeks after the birth of a child, one or both eyes shall become reddened, inflamed, swollen or show any discharge, every physician, midwife, nurse or person in charge of a maternity or other hospital where such child is, and every person in charge of a child, shall forthwith report in writing to the Medical Officer of Health, the name, age and address of such child together with the circumstances of the case.

Regulation 3.

The Medical Officer of Health shall, upon receipt of such report and if the child is not under the care of a legally qualified physician, direct the parents or whoever has charge of the child to immediately place it in charge of a legally qualified physician or if the parents or persons in charge are unable to pay the cost of such attendance, the Medical Officer of Health shall provide the necessary treatment at the cost and charge of the municipality.

Regulation 4.

The Medical Officer of Health shall send a weekly report of all such cases to the Secretary of the Local Board for transmission to the Provincial Board as required by Section 24 of the Public Health Act.

VENEREAL DISEASES

An important step in the control of Venereal Diseases was made by the enactment of the Venereal Diseases Prevention Act, and the approval of the following regulations made thereunder, viz:—

(a) FORMS.

The following are forms prescribed under the Venereal Diseases Prevention Act:

(a)—FORM I V.D.

NOTICE TO PERSONS SUSPECTED TO BE INFECTED OR EXPOSED TO INFECTION WITH VENEREAL DISEASE.

To

You are hereby notified under authority of the Venereal Diseases Prevention Act to present yourself before a legally qualified medical practitioner for examination within *twenty-four* hours after the receipt of this notice. You are further notified to procure and produce to me, the undersigned, *within twenty-four hours* following examination, a report or certificate of the aforesaid medical practitioner as to whether you are or are not suffering from venereal disease, and if so in what form.

(Signed)

.....
M.O.H.

Date.....

Penalty for NON-COMPLIANCE, a fine of not less than \$25.00 nor more than \$100.00, or in default, imprisonment for three months.

(a)—FORM II V.D.

NOTICE TO MEDICAL PRACTITIONER TO EXAMINE AND REPORT UPON A PERSON SUSPECTED TO BE INFECTED WITH VENEREAL DISEASE.

ToM.D.

You are hereby authorized and required under the Venereal Diseases Prevention Act to examine.....
.....
and report to me as to whether or not.....
.....
is suffering from Venereal Disease, and if so in what form.

(Signed)

.....
M.O.H.

Date.....

(a)—FORM III V.D.

REPORT OR CERTIFICATE OF A LEGALLY QUALIFIED MEDICAL PRACTITIONER.

I, the undersigned, a legally qualified medical practitioner, hereby certify that
 on the.....day of....., 19 ,
 atI examined

 and found.....suffering from Venereal Disease in the
 form of

The examination comprised the following procedure, viz.:—

(Signed)

M.D.

Date.....

(a)—FORM IV V.D.

NOTICE RESPECTING THE COURSE OF CONDUCT OF A PERSON
INFECTED WITH VENEREAL DISEASE.

Under the provisions of the Venereal Diseases Prevention Act, you are hereby
 notified and required to present yourself to.....
M.D.,
 a legally qualified medical practitioner, for treatment. While under treatment
 and until non-infective you are required to obey Regulation (c) of the Provincial
 Board of Health.

(Signed)

M.O.H.

Date.....

Penalty for NON-COMPLIANCE, fine of \$25.00 to \$100.00, or 3 months' imprisonment.

(a)—FORM V V.D.

AUTHORITY TO ENTER INTO A HOUSE OR UPON PREMISES.

Under the authority of the Venereal Diseases Prevention Act, I, the under-
 signed, Medical Officer of Health for.....

 hereby authorize you to enter the house or premises at.....

 in the daytime for the purpose of examining.....

(Signed)

M.O.H.

Date.....

(a)—FORM VI V.D.

REPORT OF VENEREAL DISEASE.

Name of Disease:
 Serial Number: Sex
 Married or Single:
 Municipality:
 Date:

(Signed)

.....
 Medical Practitioner, Supt.,
 or Head of Institution.

(b) METHODS OF TREATMENT.

The following shall be deemed to be lawful and proper methods and remedies for the treatment, alleviation and cure of venereal disease, viz.:

(1) Gonorrhœa:

(a) The treatment of Gonorrhœa should be essentially local in character.

(b) The treatment of the complications of Gonorrhœa should be both local and systemic.

(c) The following remedies are approved, viz.: Silver, Iodine, Mercury, Potassium, Zinc Lead, and other mild astringents in their various forms.

(d) Essential oils, alkalies, balsams and hexamethylenetetramine.*

(e) Suggested methods of treatment are set forth in Appendix I.

(2) Syphilis:

Early stage.

Diagnosis.—Any suspicious sore upon the genitals or elsewhere should be diagnosed as early as possible and assumed to be syphilitic until this is disproved. It is said on expert authority that fifty per cent. of cases of primary syphilis may be aborted if undertaken before the Wassermann is positive.

The successful treatment of syphilis depends upon the early and vigorous treatment of the disease.

1. The following remedies are approved, viz.:

(a) Mercury in its various forms administered orally, intramuscularly and by inunction.

(b) The arseno-benzol derivatives administered intravenously.

(c) The Iodides—administered orally.

(d) Suggested methods of treatment are set forth in Appendix I.

(3) Chancroid:

(1) Carbolic acid and alcohol.

(2) Silver salts.

(3) Antiseptic dressings.

*CAUTION.—Some persons cannot tolerate this drug, even small doses causing painful micturition and hæmaturia.

None of these remedies, nor any other remedy, form of treatment, instrument or medicine, patent, proprietary, or otherwise, shall be sold, offered for sale, recommended, suggested, advertised, or promoted by anyone as a treatment for venereal, special, private or genito-urinary disease, unless such remedy, medicine, treatment, or instrument is prescribed by a legally qualified practitioner.

(c) COURSE OF CONDUCT OF A PERSON INFECTED WITH VENEREAL DISEASE.

(1) Every person infected with venereal disease shall forthwith place himself under the care and treatment of a legally qualified medical practitioner. If unable to secure medical attendance he must apply to the Medical Officer of Health of the municipality who will direct his course as to treatment. During the course of the disease he shall attend and carry on his treatment as required by the medical practitioner under whose care he is.

Penalty for non-compliance with this regulation, a fine of not less than \$25.00 nor more than \$100.00.

(2) He shall abstain from marriage, sexual intercourse, or any conduct likely to infect another. He shall continue treatment until pronounced non-infective, and in default of which he shall be reported to the Medical Officer of Health.

Penalty for non-compliance with this regulation, a fine of not less than \$100.00 nor more than \$500.00, or 12 months' imprisonment.

(d) DISTRIBUTION OF INFORMATION.

The Board shall distribute to every medical practitioner and every hospital requiring the same such information respecting venereal disease as may be determined upon by the Board, and every medical practitioner and every hospital receiving such information shall distribute the same to such persons suffering from venereal disease as may come under the care of the medical practitioner or hospital.

(e) REGULATING TREATMENT.

Persons in hospitals, places of detention and other institutions who are infected with venereal disease shall obey such rules as may be laid down by the physician or superintendent in charge.

(f) PREVENTING INFECTION.

Every medical practitioner, every hospital superintendent, the head of every hospital for the insane, for epileptics, for the feeble-minded, the head of every jail, reformatory, or other place of detention, and of every institution, private, public or otherwise, and every person infected with venereal disease shall take and maintain every precaution against the spread of these diseases as is now or may be from time to time prescribed by the Provincial Board.

(g) REPORTING.

Every medical practitioner, every hospital superintendent, the head of every hospital for the insane, for epileptics, for the feeble-minded, the head of every jail, reformatory, or other place of detention, and of every institution, private,

public or otherwise, shall report daily to the Medical Officer of Health by a serial number, in accordance with Form VI, every case of venereal disease coming under his treatment or care for the first time. If the patient has been under treatment by another physician or institution, notice thereof shall be sent forthwith to the Medical Officer of Health, but without giving the name of the patient.

The aggregate of all cases of each form of venereal disease shall be reported weekly by the Medical Officer of Health directly to the Board.

(h) NOTICES.

When required by the Board every local Board shall procure and provide for the putting up, in public urinals, conveniences, and similar places, of notices and placards dealing with venereal disease, its cause, manifestation, treatment and cure, but no notice or placard of this character may be so used unless such is approved by the Board.

(i) PUBLICATION OF INFORMATION AS TO TREATMENT.

When required by the Board every local Board shall provide for public advertising and placarding of such information relative to the treatment and cure of venereal disease, and the places where proper treatment may be procured, as the Board may deem advisable, and which may be approved by the Board.

(j) PENALTIES.

Every person violating any Regulation of the Board shall incur a penalty of not less than \$25, nor more than \$100, and in default of immediate payment shall be imprisoned for a period not exceeding three months.

(k) FEES.

Every medical practitioner making an examination and report as required under Sections 3 and 4 of this Act or as prescribed by the Regulations shall be paid by the municipality wherein the patient lives, the sum of five dollars, except in the case of public institutions other than gaols and prisons, receiving Government aid or which are maintained by the Government.

(l) PROCEDURE ON APPEALS.

In case of an appeal from any action or decision of the Medical Officer of Health under this Act, an application for appeal shall be made in writing to the Board, who shall thereupon set a date for the hearing within one week from the receipt of the application. Notice shall be given by the Board in writing by registered post, of the date and place of hearing to all parties concerned. The hearing shall be *in camera*.

(m) The administration of the Regulations shall not interfere with the course of justice in case of persons under arrest or in custody previous to trial for any offence committed against the provisions of the Venereal Diseases Prevention Act or anything therein authorized or under any other Statute or the Criminal Code.

(n) METHODS OF EXAMINATION.

The examination of any person with a view to ascertaining whether or not such person is infected with venereal disease shall be as follows:

- (a) In the case of *suspected* gonorrhœa, the examination shall include a physical examination of the person with a microscopical examination of the urethral, and prostatic discharges in the male, and of the urethral, bartholinic, vaginal and uterine discharges in the female.
- (b) In the case of *suspected* syphilis, the examination shall include a physical examination of the person and an examination of the blood, by means of what is known as the Bordet-Wassermann test, and a complete spinal fluid examination if such is deemed advisable by the Medical Officer of Health.
- (c) In the case of chancre or chancroid, the examination shall correspond to that detailed under (b), with the addition of the dark-field microscopical examination, india ink preparation, or one of the recognized stains for *spirochæte pallida*. In all cases the report of the examination shall include full details of the methods of examination carried out.

(o) HOSPITALS.

Every hospital in Ontario receiving public aid shall make provision for the reception and treatment of persons suffering from venereal disease.

APPENDIX I.

TREATMENT OF VENEREAL DISEASES.

The following line of treatment is suggested for venereal diseases. Treatment should begin immediately following diagnosis.

PROPHYLACTIC TREATMENT.

Should a patient be seen within twenty-four hours after a suspicious intercourse, prophylaxis may be used with great assurance of success. If within eight hours, success is almost certain. The earlier the better.

The patient should, as soon after intercourse as possible, wash the genitals with soap and water, urinate and apply calomel ointment (30%) freely over the glands, foreskin and body of the penis. In the female, the same treatment should be applied to the vulva. In the male, argyrol, 30 to 40 drops of a 20% solution, freshly prepared, should be injected into the urethra and retained for ten minutes, or a bougie of argyrol (10%) retained for ten minutes. In the female, a vaginal irrigation of two quarts of hot soap and water solution should be used, and this followed by:—

- (1) A vaginal suppository of 10% argyrol applied high in the vagina and retained; or
- (2) The application of 5% silver nitrate solution to the vaginal walls.
- (3) The urethra should be treated with an argyrol bougie (10%) retained for ten minutes.

TREATMENT OF GONORRHOEA IN THE MALE

By injection. How should an injection be used?

The patient should first urinate in order to clear the urethra of discharge and should then inject 3iii to 3iv of the solution.

The following solutions are recommended:—

- (1) Argyrol, 5% to 10% retained for ten minutes.
- (2) Silver iodide, $1\frac{1}{2}\%$ to 1% retained for ten minutes.

The injections should, in the early stage, be made four times a day and continued until the discharge changes from mucopurulent to serous. Then a mildly astringent injection should be used in the same manner, excepting that it should not be retained. The following remedies are recommended:—

- (a) Zinc Sulphate, 1 to 2 gr. to the oz.
- (b) Potas. Permang. 1 in 5,000, or
- (c) Zinc Sulphate and Plumbi Acet. aa, 1 gr. to the oz.

The physician should instruct the patient to thoroughly wash his hands with soap and water after handling the genitals, because of the danger of careless habits, leading to infection of the eyes, etc.

On visits subsequent to the first, the patient should be instructed to come with a full bladder. The urine should be passed in glasses as follows, viz.:

Two ounces in the first, the middle portion in the second, and the terminal portion in the third.

If the urine in the first glass is turbid, and that in the second and third clear, it indicates anterior urethritis.

If all three are turbid, it indicates anterior and posterior urethritis and bladder involvement.

If the first glass is turbid and the second clear, and the third turbid or contains flakes or shreds, the patient has both anterior and posterior urethritis. This is, assuming that the urine is acid.

If the urine is alkaline, the turbidity may be due to a deposit of phosphates which will clear up on the addition of a little acetic acid.

The patient should be warned of the harmful effect of "stripping" the penis to reveal the morning drop. He should also be warned of sexual stimulation in any form.

Under the most satisfactory conditions, the physician would be well advised not to hope for a cure short of a period of six to ten weeks.

By irrigation.

The irrigation treatment of gonorrhoea is recommended by certain authorities. If such treatment is undertaken it should be done only by the physician, who should follow closely the details of treatment laid down in standard text-books and in the current literature.

By systemic treatment.

The use of internal remedies with the idea of the cure of gonorrhoea has not proven satisfactory, but for the purpose of combating pain and other symptoms arising in the course of the disease these remedies have their value.

Attention should be paid to proper diet, copious drinking of water, total abstinence from stimulating drinks or foods, over-exercise and excessive use of tobacco. Rest and fresh air are important adjuncts in the treatment.

The treatment of prolonged cases with complications should be carried out in accordance with the rules laid down in standard texts and the literature.

In any cases of doubtful diagnosis a Wassermann test should be made in order to rule out the possibility of concealed syphilis.

CHANCROID.

The utmost care should be taken in the diagnosis of all sores so as to distinguish the herpetic, the chancroid and the chancre. Clinically these sores frequently resemble one another. Differentiation is often very difficult. Therefore the use of the laboratory is indispensable in diagnosis. *In all cases syphilis should be excluded.*

Chancroid should be treated as follows:—

- (1) By the careful application to the sore of pure carbolic acid followed by alcohol, or
- (2) Silver nitrate, grs. 40 to the oz. most carefully applied.

These to be followed by a simple moist dressing such as boracic acid. Herpetic sores should readily heal under a simple boracic dressing.

SYPHILIS.

In the treatment of *Chancre* the application of antiseptics before a positive diagnosis will render the discovery of the spirochæte difficult, if not impossible.

To secure the best material for making the smear, the sore should be grasped between the gloved finger and thumb and wiped until clear serum exudes. This should be placed on a slide for the microscope. The diagnosis being made, systemic treatment should be vigorously carried out.

MERCURY AND IODIDE.

Mixed and tonic treatment should also be vigorously carried out at the same time and the patient kept under observation for a period of two years, the Wassermann test being taken at intervals. Good food and life in the fresh air are essential to successful treatment.

The treatment of the later stages of syphilis and of the many complications arising in the course of the disease should be carried out as laid down in standard text-books.

INTRAVENOUS TREATMENT.

One should not stop short of five successive weekly intravenous injections of one of the arseno-benzol compounds, beginning with a half dose and increasing to the maximum. The effect of each dose should be carefully watched. A week after the final treatment, a Wassermann should be taken. If positive the treatment should be continued, using maximum doses.

In all forms of venereal disease the use of tonics, good food and life in the fresh air are essential to successful treatment.

Free Distribution of Biological Products.

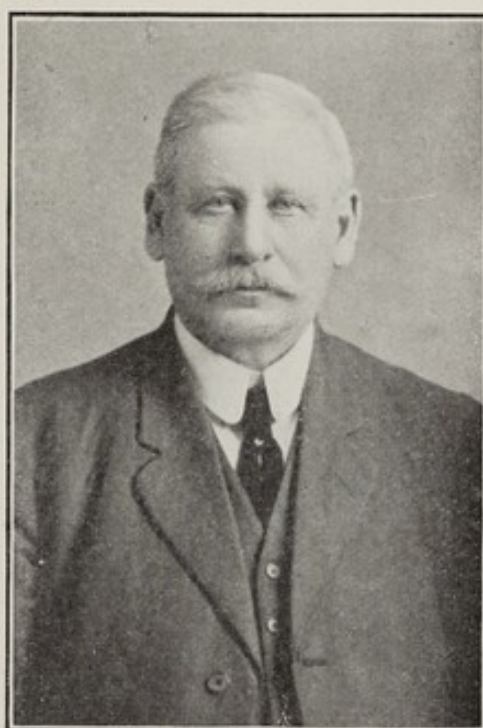
The net cost of the biological products purchased, and supplied free to the public, was \$35,024.60.

In addition, the Board's Laboratory prepared and supplied T.A.B. vaccine,

influenza vaccine and treatment for babies' sore eyes, in large quantities. T.A.B. vaccine and influenza vaccine were freely supplied to the troops.

The District Officers of Health.

The vacancy in District No. 1, on account of the lack of qualified men, most of whom are engaged in A.M.C. work overseas, has not yet been filled. It is hoped that, now the war is over, the experience of Ontario physicians in army sanitation will make the selection of an officer for this important district an easy one. Lt.-Col. R. E. Wodehouse, D.O.H. for No. 7 District, still continues as O.C. of the Convalescent Home at Bearwood, Berks. It is hoped he will be able to return at an early date to resume his duties. These two vacancies have



THE LATE GEORGE E. YOUNG
Sanitary Inspector.

entailed an enormous amount of additional work upon Drs. T. J. McNally and W. Egerton George, which they have carried on with commendable spirit.

The Board desires to express its high appreciation of the services of all the District Officers of Health. It is with sincere regret that the Board has to announce the death at Chatham of the Sanitary Inspector, Mr. Geo. E. Young. Mr. Young had faithfully served the Board over a long period of years. He was the sincere friend of the labouring man whether in lumber camp, mine or on railroad construction, and by his diligence had secured many improvements in camp conditions in the newer and unorganized regions of Ontario. He had been in failing health for a number of years but although urged to rest persisted in carrying on when his own interest demanded a holiday. He died at Chatham, his former home.

The position occupied by Mr. Young has been filled by the appointment of Mr. Alex. R. White, whose experience as Sanitary Inspector of North Bay for years gives assurance that he will be able to give good service.

Water Supplies and Sewerage.

In October, the Provincial Sanitary Engineer, Mr. F. A. Dallyn, C.E., joined the C.E.F. despatched to Siberia as Hydrological officer. His place has been temporarily filled in the person of Mr. W. R. Worthington, B.A.Sc., kindly loaned by the City of Toronto. The details of the work carried out during the year are given elsewhere in this volume.

The Experimental Plant.

The chemist in charge of the plant, Mr. A. V. DeLaporte, B.A.Sc., went overseas early in the year, joining the Royal Engineers, in which unit he secured a commission. His absence, with that of the Engineer, necessitated the closing of the plant about the month of October. On their return the experimental work, details of which are given elsewhere, will be resumed.

DEATHS IN ONTARIO FROM TUBERCULOSIS BY AGES, 1908-1918.

Year.	Total.	Ratio per 100,000	Under 5 years.										15-19	20-29	30-39	40-49	50-59	60-69	70-79	80 & over.	Not stated.	Total death: from all causes.
								5-9	10-14													
			0-1	1	2	3	4															
	23,904		571	370	224	139	132	468	586	1,871	6,695	4,895	3,098	2,217	1,497	688	138	315	327,014			
1908	2,511	112	68	46	20	13	13	43	67	216	764	479	315	217	136	70	14	30	30,947			
1909	2,380	106	47	27	25	9	15	54	54	179	687	487	290	222	163	66	15	40	30,792			
1910	2,291	102	38	35	19	15	6	36	55	184	652	463	293	222	160	71	18	24	31,332			
1911	2,353	93	63	30	15	10	18	48	64	181	618	476	325	218	156	85	12	34	31,878			
1912	2,250	87	53	30	19	9	15	46	42	154	631	500	304	200	134	64	7	42	32,150			
1913	2,294	85	53	36	20	10	18	32	41	188	632	479	313	204	156	56	10	47	34,317			
1914	2,340	85	54	41	20	16	11	56	58	181	688	469	307	214	116	63	12	34	32,440			
1915	2,466	89	79	39	25	19	16	55	74	168	676	513	273	242	176	73	15	20	33,294			
1916	2,559	92	66	43	35	19	9	53	61	224	683	536	327	238	156	68	17	24	35,580			
1917	2,460	88	51	43	26	19	11	45	70	196	664	490	351	240	144	72	18	20	33,284			

This Table was Compiled by the Registrar General's Department.

*DEATHS IN ONTARIO FROM CERTAIN COMMUNICABLE DISEASES, 1908-1918

Year	Population	Small-pox	Scarlet Fever	Diphtheria	Measles	Whooping Cough	Typhoid	Tuber- culosis Lungs
1918...	2,711,620	2	84	335	95	305	208	2,129
1917...	2,769,850	1	59	396	58	228	232	2,014
1916...	2,776,886	5	49	461	411	341	335	2,148
1915...	2,767,350	2	42	341	145	193	298	2,088
1914...	2,749,840	1	111	443	61	196	358	1,982
1913...	2,677,600	4	137	339	166	272	446	1,955
1912...	2,582,500	2	152	371	111	419	483	1,921
1911...	2,523,274	3	290	427	169	169	637	2,035
1910...	2,239,621	2	237	435	304	186	706	2,013
1909...	2,233,264	3	200	430	167	262	669	2,017
1908...	2,226,860	2	163	450	38	246	662	2,129

*Compiled from the Registrar General's returns.

CASES AND DEATHS FROM COMMUNICABLE DISEASES FOR THE YEAR 1918

From Weekly Reports of Local Boards of Health

Months.	Smallpox.		Scarlet Fever.		Diphtheria.		Measles.		Whooping Cough.		Typhoid.		Tuberculosis.		Infantile Paralysis.		Cerebro-spinal Meningitis.		Syphilis	Gonorrhoea	Chancreoid
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Cases	Cases
January	79	...	337	7	394	32	1,013	13	367	8	24	7	187	63	4	2	4	3	...	...	...
February	91	...	357	4	289	18	861	6	168	6	35	3	131	69	1	...	15	10	...	...	...
March	47	1	339	9	347	23	1,256	15	286	2	27	4	101	71	...	...	17	10	...	...	...
April	39	...	383	16	349	22	1,461	11	240	4	38	5	187	122	2	1	17	12	...	...	...
May	71	...	324	6	193	14	1,935	12	251	8	27	4	209	124	6	2	13	6	...	...	...
June	15	...	196	4	136	13	1,426	8	277	11	24	6	172	147	1	...	9	8	...	...	...
July	38	...	158	5	195	10	748	1	169	12	42	15	178	109	1	...	15	13	...	...	...
August	21	...	101	2	164	11	347	6	246	12	240	27	206	116	5	2	1	...	66	108	3
September ..	17	1	127	1	230	18	110	1	179	11	165	24	172	95	11	4	4	...	108	280	9
October	6	...	187	3	351	52	188	4	72	31	111	31	259	181	2	...	6	3	...	...	...
November ..	6	...	159	9	167	30	68	8	60	23	46	13	159	124	1	...	8	4	...	...	...
December ..	5	...	194	4	278	24	18	3	57	5	18	3	161	138	...	...	9	5	...	...	...
Total year	435	2	2,862	70	3,093	267	9,431	88	2,372	133	797	142	2,122	1,359*	34	11	118	80	425	1,012	29
Total yr. 1918	435	2	2,862	70	3,093	267	9,431	88	2,372	133	797	142	2,122	1,359	34	11	118	80	425	1,012	29
.. 1917	225	...	2,027	38	3,590	223	7,795	31	1,670	54	825	83	1,707	819	102	11	113	66	...	...	...
.. 1916	174	3	1,449	39	3,212	284	21,977	227	2,205	97	1,225	158	1,813	984	190	27	195	129	...	...	...
.. 1915	626	2	1,415	29	2,719	169	9,684	107	882	51	920	96	1,356	774	13	4	139	105	...	...	...
.. 1914	511	2	2,722	60	2,772	213	4,884	60	798	56	1,060	125	1,335	776	29	5	68	55	...	...	...
.. 1913	774	2	2,746	101	2,194	233	7,895	134	484	84	1,519	213	1,576	1,040	35	20	61	48	...	...	...
.. 1912	535	3	2,646	111	2,340	238	2,634	58	414	142	2,569	305	1,525	860	49	19	59	58	...	...	...
.. 1911	481	3	4,141	210	2,631	280	1,975	77	331	45	2,477	286	1,272	976	39	19	56	54	...	...	...
.. 1910	559	1	3,798	208	2,559	323	5,211	162	473	94	2,192	425	1,675	1,499	81	15	15	12	...	...	...
.. 1909	874	1	3,461	189	2,635	386	857	134	732	144	2,535	578	1,841	1,723	...	...	...	...	...	...	...
.. 1908	941	5	3,513	146	2,477	367	792	33	754	144	2,276	563	2,103	1,918	...	...	...	...	...	...	...

* The monthly returns include only deaths from pulmonary tuberculosis or consumption, and not other tubercular diseases.

† Two weeks.

STATEMENT OF BIOLOGICAL PRODUCTS

DISTRIBUTED FREE OF CHARGE BY THE PROVINCIAL BOARD OF HEALTH, ONTARIO

October 1st, 1917, to September 31st, 1918

	Smallpox Vaccine points	Diphtheria Antitoxin units	Diphtheria Antitoxin syringes	Dip. Toxin Anti. Vials	A.-M. Serum x 20cc.	Intra Spinal ouffts	Tetanus Antitoxin units	Tetanus Antitoxin syringes	Pr. for Rabies	Pertussis vaccine				Silver Nitrate 50- lution. Box	Typhoid and Paratyphoid vaccine			
										Boxes 14cc.	Bottle 10cc.	Bottle 12cc.	25cc.		Civic S.	Civic D.	Military S.	Military D.
October.....	2,560	17,805,000	1,088	....	106	11	244,500	94	4	105	33	....	30	106	525	275	10,775	6,450
November.....	9,620	26,366,000	1,344	....	167	15	409,500	23	6	99	50	....	5	30	756	378	25,000	21,750
December.....	4,954	19,427,000	1,195	....	47	9	51,000	20	....	53	11	....	3	36	156	78	23,250	21,050
January.....	6,230	22,841,000	1,520	10	130	7	178,500	75	2	298	87	....	85	34	262	131	33,750	47,100
February.....	8,195	17,566,000	1,087	21	51	7	15,300	14	2	219	50	....	29	48	844	422	11,140	14,070
March.....	8,300	14,852,000	989	....	113	18	73,500	3	....	386	147	....	4	73	552	276	10,500	11,000
April.....	4,640	8,659,000	365	....	94	17	157,500	14	2	106	44	....	27	81	402	255	38,750	23,000
May.....	3,935	6,226,000	388	....	69	....	103,500	....	1	80	2	....	....	8	427	219	49,300	35,475
June.....	5,245	7,599,000	436	2	63	....	178,500	13	4	254	67	....	....	89	2,611	1,360	64,915	31,790
July.....	2,515	13,089,000	846	....	99	32	381,000	10	1	241	48	....	22	65	384	192	27,500	18,750
August.....	3,060	9,746,000	518	....	22	6	241,000	2	5	80	36	6	2	229	6,652	2,995	30,500	20,250
September.....	3,285	16,498,000	964	....	50	20	347,500	43	....	294	124	6	40	168	{ 38,166cc }	{ .. }	{ 49,500cc }	{ .. }
October.....	1,755	25,624,000	915	....	14	2	144,000	6	2	28	6	....	10	109	{ 546cc }	{ .. }	{ 11,000cc }	{ .. }
	64,294	206,298,000	11,655	33	1,025	144	2,525,300	317	29	2,243	705	12	257	1,076	13,571	6,581	329,880	250,685
														plus	38,712cc	plus	60,500cc	

S—Single dose.

D—Double dose.

SUPPLEMENTARY STATEMENT

	COST				REVENUE						
	Smallpox Vaccine	Diphtheria antitoxin units	Diphtheria antitoxin syringes	Diphtheria antitoxin	A.M. serum x 20 cc. vials	Intraspinal outfalls	Tetanus antitoxin units	Tetanus antitoxin syringes	Pasteur Pre. Tr. for rabies	Total Cost	Syringes and intra-spinal outfalls
October	102.40	2670.75	217.60	.....	106.00	4.95	73.35	18.80	60.00	3,253.85	241.35
November	384.80	3954.90	268.80	.....	167.00	6.75	122.85	7.10	90.00	5,002.20	282.65
December	197.80	2914.05	239.00	.....	47.00	4.05	15.30	4.00	.....	3,421.20	247.05
January	249.20	3426.15	304.00	12.50	130.00	3.15	53.55	15.00	30.00	4,223.55	322.15
February	327.80	2634.90	217.40	26.25	51.00	3.15	45.90	2.80	30.00	3,339.20	223.35
March	332.00	2227.80	197.80	.....	113.00	8.10	22.05	.60	.....	2,901.35	206.50
April	185.60	1298.85	73.00	.....	94.00	7.65	47.25	2.80	30.00	1,739.15	83.45
May	157.40	933.90	77.60	.....	69.00	.....	31.05	.....	15.00	1,283.95	77.60
June	209.80	1139.85	87.20	2.50	63.00	.....	53.55	2.60	60.00	1,618.50	89.80
July	100.60	1963.35	169.20	.....	99.00	14.40	114.30	2.00	15.00	2,477.85	185.60
August	122.40	1461.90	103.60	.....	22.00	2.70	72.30	.90	75.00	1,860.80	107.20
September	131.40	2474.70	192.80	.....	50.00	9.00	104.25	8.60	.....	2,970.75	210.40
October	70.20	3843.60	183.00	.....	14.00	.90	43.20	1.20	30.00	4,186.10	185.10
	\$2571.40	30944.70	2331.00	41.25	1025.00	64.80	798.90	66.40	435.00	38,278.45	2,462.20

Gross Cost..... \$38,278.45
 Less Revenue..... 2,462.20

Net Cost..... \$35,816.20

THE DISTRICT OFFICERS OF HEALTH PROVINCE OF ONTARIO

DISTRICT No. 1.

Comprising the Counties of Lambton, Middlesex, Oxford, Elgin, Kent and Essex. Taken over temporarily.

DISTRICT No. 2.

Comprising the Counties of Grey, Bruce, Huron, Perth, Waterloo, Wellington and Dufferin.

T. J. McNALLY, M.D.,

District Officer of Health, London, Ont.

I have the honour to submit to the Provincial Board of Health the following report for the year 1918 for the above Districts.

This year, as during the past two years owing to war conditions and the large area under supervision our attention and efforts have been largely occupied attending to and giving assistance when and where requested by Local Boards of Health so that systematic inspection of each municipality has not been possible.

Notwithstanding the conditions as mentioned above I have visited each city in the Districts several times, most of the towns once or oftener and many of the rural municipalities as well.

I have especially emphasized upon local authorities when visiting them the importance of constant supervision of their water supply, and the disposal of sewage and garbage in a sanitary manner.

It is pleasing to note the ever increasing interest manifested by the public in protecting themselves against contracting disease through these channels of communication though all too often systematic supervision is only taken by the local authorities when an epidemic has shaken them from their ignorant, careless or indifferent attitude towards protecting their community.

That this may not be a reproach to us as guardians of the Public Health and to correct this condition I respectfully urge the Provincial Board to require from each Local Board where there is a municipal water supply a bi-weekly examination of the water by one of the Provincial Laboratories or some authority approved by the Chief Officer of Health, and where such examination shows a suspicious condition that the District Officer be notified at once to investigate the cause and report to the Provincial Board the result of his inspection and the measures taken to correct the condition.

The necessity of some such regulation was painfully impressed upon me by the most serious epidemic from water infection that I have had to deal with since I have been acting as your District Officer, and which occurred this year at Chatham.

I called upon the local authorities in the early part of the season and directed attention to the necessity of frequent examination of the water supply. An examination was made in June which was reported upon, showing colon bacilli in 25cc. but it was not examined again for about a month when it was found to be seriously contaminated, and in the interval the damage was done.

The first case was reported on July 23rd, and the epidemic of typhoid raged for a couple of months with the last secondary cases reported in November; in all 162 cases in the city with 16 deaths, and 62 cases from outside municipalities treated in Chatham hospitals with 8 deaths besides many cases treated in surrounding municipalities, traceable to the same source of infection.

It appears to me a reasonable inference that had there been a bi-weekly or more frequent examination of the water supply and the first suspicious result of examination sent to the District Officer some of this fatal epidemic might have been avoided.

Once the epidemic was recognized every effort was made by the local authorities, assisted by the Provincial Board to eliminate the cause and curtail the ravages of the disease.

In addition to the old measure inoculation of the public with antitoxin was generally adopted as a preventative measure and I have reason to believe with excellent results, judging from the fact that notwithstanding the severe mental and physical strain to which the nurses in both hospitals were subjected and the fact that they cared for over two hundred cases, many of very severe type not one of them came down with the disease, they having all been inoculated.

The board of health had a medical man appointed to give inoculation free to all who wished it; 1,400 were treated by him with free antitoxin supplied by the Provincial Board, besides a much larger number treated by their family physician.

The water supply of the city is now under the personal supervision of Dr. Mustard who makes a daily examination and supervises the treatment and chlorination most efficiently.

There was a small outbreak of typhoid at Owen Sound due to contamination of one of their sources of supply; this was checked up early and the spring cut off and it will not be used again until the supply from it is filtered.

Our rural municipalities are supplying altogether too many cases of this disease though the cases are mostly isolated.

NUISANCES.

Among the larger and more serious conditions complained of and corrected during the year are the following:

Lucknow.—The G.T.R. cattle yards.

Sarnia.—The city garbage dump, situated in the Township of Sarnia while not yet out of existence is carefully handled under Inspector Crosby, and the city is proceeding satisfactorily towards providing incineration.

Kitchener.—The city garbage dump situated in the Township of Waterloo. This appears to me the most glaring infraction, without cause, of the Health Act that has come under my observation, as the City owns and heretofore operated an incinerator and was drawing the garbage past it to the dump.

Abatement of the condition was only obtained when the township authorities sought relief through process of law.

Arthur.—The village drain has at present been removed from the list of nuisances after considerable effort on our part.

Here I am afraid it is necessary for me to record some failures (for the present at least).

London.—Nuisance caused by the effluent of Hyman's Tannery.

Tillsonburg.—Contamination of the stream from the Creamery.

Norwich.—Contamination of the stream by the Creamery. Nor has there been any attempt on the part of the offending parties so far as known to me to correct conditions complained of, though in all cases promise of abatement has been given.

MEAT AND MILK SUPPLIES.

I regret to notice that in some municipalities visited the local authorities have eased up in their supervision of Slaughter Houses and meat since I have been unable to make regular tours of inspection. This is especially noticeable where the business has passed into new hands and the regulations have not been brought directly to their notice.

The milk supply of all cities, most of the towns and some of the villages in the Districts under my supervision are now being inspected under local by-law so that there is a decided improvement in the cleanliness and quality of this food.

RURAL SCHOOLS.

The continued inspection of the rural schools by the Local Health Officer is gradually bringing about a betterment of sanitary conditions, especially where action is taken in conjunction with the school inspector who has power to withhold grants until the improvements recommended by the Health Officer are effected.

COMMUNICABLE DISEASES.

Smallpox.—This disease made its appearance in several municipalities during the year but in mild form, and was taken care of by the Local Board except in a couple of instances where I was called in to give some assistance.

Scarlet Fever.—During the year, scarlet fever was reported from several points but did not assume the form of a general epidemic, being confined to a moderate limit by the Local Officer in every instance.

Tuberculosis.—This disease is still claiming too many victims though an advance in its early recognition by the general practitioner is gradually taking place and early treatment being adopted is leading, I believe, to a larger per cent. of recoveries than formerly though we are yet woefully short of local institutions to properly care for those affected.

Diphtheria.—The general incidence of this disease is being materially lessened by the use of antitoxin as a prophylaxis and its early use in full dosage where the disease has developed.

The more general search for carriers and their quarantine and treatment has been markedly successful in controlling and stamping out the disease as demonstrated in Kitchener, Owen Sound, Walkerville, Windsor and their neighbouring municipalities.

Measles.—This disease appeared in several municipalities in mild form during the year, but has not gained any widespread epidemic form as in 1916.

Mumps and Whooping Cough.—These so-called youthful maladies have made frequent appearance but I have not been called upon to give the Local Officer assistance as they have usually been confined to a few cases by him.

Influenza and Pneumonia.—In our endeavour to control the ravages of these diseases during the months of October, November and December we are forced to admit a real reverse to preventative medicine and Public Health work.

Their incidence was general and their type the most severe ever known, claiming victims not alone from the weak and aged but for the most part from the strongest and best of our people.

In District No. 1 the victims numbered nine hundred and seventy-three, and in District No. 2 there were nine hundred and seventy-one fatalities.

In view of the recurrence of these diseases in epidemic form isolation of all cases, especially early ones, seems advisable.

DISTRICT NO. 3.

Comprising the following Counties: Norfolk, Haldimand, Welland, Lincoln, Wentworth, Brant, Halton, Peel and York.

D. A. McCLENAHAN, M.D.

District Officer of Health, Hamilton.

The year 1918 was one of increased activity along public health lines—I think we are beginning to get results following the gradual education of the public. We make progress only as fast as we have public opinion behind us. In my meetings with Boards of Health and Township Councils, also Women's Institutes, I have tried to point out to them that the old theories of public health that were in vogue twenty to twenty-five years ago will not do for to-day. It will not do for instance, to say that we have a case of typhoid fever in a house because there are decaying vegetables in the cellar or that we have a case of diphtheria because there is a pin point hole in the plumbing in the bath-room. The public must be taught that cases of infectious diseases come from previous cases and that they must be reasonably fresh cases. This explodes the old idea that dirt produces disease, because so far as we know there is no such thing as spontaneous generation of disease germs. The public must be made to realize that while infection may spread by water, food, milk and flies that a more important route is by contact. People are very prone to look for the cause of infection in the obscure route because it appeals more to their ideas of the bizarre, when the real cause or route of the infection is close at hand and simple.

I have tried at these meetings to tell the people something about bacteria—how they live and are disseminated and to show them that we do not get, say, scarlet fever by the scales being sent in a letter by a patient who had scarlet fever months before. Our Sanitary Inspectors must be taught that the garbage pail at the back door is only a menace to health when we consider it as a possible breeding ground for flies, that the public health workers should not be considered as street cleaners and that there are vastly more important things in the prevention of disease than in cleaning of streets and collection of garbage—these are necessary though from an aesthetic point of view. At the same time at these

meetings I have pointed out to the people the real need there is for a proper control of the milk supply, close supervision of communicable diseases including tuberculosis and venereal diseases—prevention of breeding of flies, and the furtherance of child welfare.

Throughout my District in 1918 there were a large number of farmerette camps located at different points. I made an inspection of the camp and its surroundings in each case and also had samples of water taken and warnings issued to the girls where the water was found to be polluted. Camps were located at Burlington, Vineland, Niagara-on-the-Lake, Winona, Beamsville, Clarkson, and a number of other points, the girls were advised to be inoculated against typhoid and were in a number of instances inoculated free of charge.

In May, 1918, a complaint came to me from Fort Erie about the milk supplied to the citizens of that village, I took a sample of the milk and on examination for butter fat it showed a percentage of 2.2. This could only mean that the milk was being watered. An information was not laid in this case but the milk suddenly improved in quality; later I was informed that the same milkman had lost a cow from his herd through death from tuberculosis. I went to see him about the matter and he was quite willing to have the balance of the herd tested by tuberculin and get rid of any tubercular cattle. I had word subsequently from the veterinary surgeon who had charge of the herd that everything was now satisfactory and there were no tubercular cattle in the herd. There seems to be a weakness in the Federal and Provincial laws in that there is no authority to go upon a farmer's land and order him to have his cattle examined for tuberculosis if it is suspected in the herd. In the above case I pointed out to the owner that it was in his interest to have his herd above reproach as no one would buy the milk if suspicious of the health of the cattle. He was willing to co-operate.

During 1918 I was very much interested in the municipality of Crystal Beach. Crystal Beach is a police village and is very anxious to have sewers and a sewage disposal plant as well as a waterworks system. They have established a system of outdoor closets with buckets and have a garbage and night soil collection system. The system is a failure because of want of supervision—the Sanitary Inspector appointed by the Township Council has been ill and there was no one appointed to attend to his duties and that left the man who did the collecting of the night-soil practically an autocrat and if any one complained then he would not collect for them at all. I saw the Township Council and a number of the residents of Crystal Beach at a meeting in Ridgeway and they agreed to appoint a Sanitary Inspector at once and see that the collecting was done regularly. Another difficulty in Crystal Beach was that the residents had nowhere to dispose of the waste water and surface water. Mr. Dallyn, Engineer of the Provincial Board of Health, visited Crystal Beach with me and looked over the situation and gave the citizens an idea as to what the proposed improvements would cost them, I do not know what action has been taken since in the matter but have had no more complaints. A large number of complaints were investigated in different municipalities.

In the month of June I visited along with Dr. Maw, of Caledonia, all the schools in the Township of Oneida. Dr. Maw is the M.O.H. for the township.

We visited the schools and besides inspecting the school building and surroundings we gave talks to the children and tried to interest them in public health work.

In July I was called to investigate complaints in Port Colborne, Georgetown and Simcoe.

The year 1918 will be remembered as the year of the great scourge, namely, the so-called Spanish influenza. This disease is passed from one to another by contact, very often by droplet infection. Public opinion in a good many cases forced the M.O.H.'s and Boards of Health to close schools, churches, theatres, etc.—this procedure is of doubtful value—the disease seemed to begin—the number of cases increase up to a certain peak and then there was a decline. If the schools and churches, etc., were closed at the peak of the epidemic then every one was sure that it was a very valuable proceeding, but if the schools, etc., were closed at the beginning then the results were not so good as the epidemic kept spreading up to a certain point and then declined. During the recrudescence of the disease the same thing occurred. The spread of the disease seemed to be stayed only when the most of those not immune had contracted the disease. In the cities and towns the great need was for some place to put those who were ill and had no one to look after them. There was also great need for volunteer nurses and a great many with a self-sacrificing spirit beyond praise came forward and rendered very valuable help. The medical men were greatly overworked and a number of them lost their lives through their devotion to duty. The best results from treatment were observed where the patients went to bed at the onset of the symptoms of the disease. Serums seemed to have no prophylactic or curative value.

DISTRICT NO. 4.

Comprising the Counties of Prince Edward, Hastings, Northumberland and Durham, Peterborough, Haliburton, Ontario, Victoria, Simcoe and Muskoka.

GEO. CLINTON, M.D.

District Officer of Health, Belleville.

I have the honour to herewith submit for your consideration a condensed report for 1918.

Early in January at the request of the Provincial Secretary, Hon. W. D. McPherson, and Chief Officer Lt.-Col. J. W. S. McCullough, M.D., D. P.H. I started on a tour of inspection to assist the work of Mr. Dunlop, Chief Inspector of Prisons, etc.

I first visited Kingston and inspected the following:—

Kingston.—General Hospital, Hotel Dieu, St. Mary's on the Lake Orphanage, House of Refuge, House of Industry, Home for Friendless Women and Children, Protestant Orphanage.

Belleville.—General Hospital, Children's Shelter, House of Refuge for Hastings County, Gaol, Home for Friendless for City.

Peterborough.—Nicholls Hospital, St. Joseph Hospital, St. Vincent Orphanage, St. Joseph House of Providence, Protestant Home, Isolation Hospital.

Lakefield.—County House of Refuge for Peterborough County.

Cobourg.—Hospital, House of Refuge, Asylum for returned soldiers, Gaol.

Port Hope.—Hospital.

Bowmanville.—Hospital.

Oshawa.—Hospital.

Whitby.—Gaol, Whitby Hospital for Soldiers.

Lindsay.—Hospital, Gaol, House of Refuge.

Full reports of these were sent to Mr. Dunlop in parts of January and February, 1918.

I endeavoured to make a general sanitary survey when at above-named places.

In March I made a general survey of the factories in Peterborough. Detailed reports have been given. The general conditions in the city were unchanged.

April 30th I visited Madoc Village and Hungerford Township—found some improvement.

May 8th, I was at the British Chemical Company, Trenton. The main boarding house, office and club all have septic tanks and sewerage well cared for. Water supply was taken from river, but a good mechanical filter. Several shacks outside of the company's ground were in a dirty, bad condition and crowded. Some typhoid. I drew the attention of the M.O.H., and Sanitary Inspector of the conditions and they promised to give it attention.

May 9, Mohawk, Royal Flying Corps were stationed. This camp had been put out of bounds as there had been smallpox in Belleville. I assured them all danger was over. At that time large sums were being spent to make it a perfect, permanent, sanitary camp.

May 8th, at Trenton. No special changes. Not as good as it should be.

May 15th, at Wellington settling dispute between baker and butcher, which I did.

May 22nd, at Oshawa. M.O.H. Dr. McKay told me no changes since my last visit except a new shifting sand filter working well.

July 10th, Hallowell Township, Prince Edward County. Found two slaughter houses in a filthy condition—had to prosecute one. The M.O.H., Dr. Cahoon, and Warden of County accompanied me. These two butchers had retail shops in Picton.

August. At Hastings Village I found a retail butcher shop and slaughter house out of the village so filthy and numerous flies, that I forbade selling another pound of meat or slaughter of any more animals until he fulfilled the regulations to the satisfaction of the local board of health. The local board of health informed me he did so at once. These were the only special cases that gave trouble.

July 3rd. I visited Peterborough Lakes with Dr. Adam Wright, viz., all summer resorts on Clear Lake, Stoney Lake, Burleigh Falls, Buckhorn and Oak Orchard.

July and August. Algonquin Park.

Dr. Bell and I left Toronto for Lake of Bays, hence to Huntsville, Peninsular Lake, Fairy Lake and Mary Lake, visiting every summer resort on all these.

From Huntsville to Algonquin Park, at all the resorts at Minnissing the sewerage was bad and closed the following week. Nomingan much better. The Highland Inn was satisfactory. Two others, Algonquin Hotel on Joe Lake very good: Mowat Lodge on Canoe Lake requires much repairs.

Then from the Park to Rose Point near Parry Sound, hence to Pointe au Baril—two very good hotels, viz., Ojibway Hotel and Skarrava.

Then from Pointe au Baril to Bala on Muskoka Lake, Lake Joseph and Rosseau. There were very little changes on these lakes in the past year. The Royal Muskoka had repaired the sewage filter beds and installed a modern incinerator.

Early in April we had a small outbreak of smallpox in Belleville brought here by a soldier from down east. Dr. Yeomans had it well in hand when I was called. Only three families, all mild cases.

There were no other severe epidemics until influenza came in the autumn. I

have been unable to get the number of cases. Later on it spread to the country districts. Many cases were fatal.

All canning factories were inspected and found much improved.

There has been no marked epidemic in my district until the influenza came.

Altogether it has been a satisfactory year's work.

All of which is respectfully submitted.

DISTRICT NO. 5.

Comprising the Counties of Lennox and Addington, Frontenac, Leeds and Grenville, Dundas, Stormont and Glengarry, Prescott and Russell, Carleton, Lanark and Renfrew, and the City of Kingston.

LT.-COL. PAUL J. MOLONEY, M.D., C.M.

District Officer of Health, Cornwall.

Dr. J. W. S. McCullough, Chief Officer of Health, Toronto, Ont.

SIR,—I have the honour herewith to submit my annual report, for the year 1918, of my work in District No. 5, comprising the Counties of Lennox and Addington, Frontenac, Leeds and Grenville, Dundas, Stormont and Glengarry, Prescott and Russell, Carleton, Lanark, Renfrew and the City of Kingston.

The district had a population by the last census of 326,958 people.

Outside of the urban population the residents are almost entirely engaged in mixed farming.

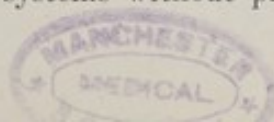
In the towns and cities a fairly large percentage are employed in the various manufacturing concerns, principally in the cotton and paper mills and the iron working establishments and in smaller numbers in lumber mills, furniture factories, woollen mills, etc., etc.

While in the northern parts of this district we have large settlements of residents of German and Polish extraction, and those of the County of Prescott and parts of the adjoining counties are largely French-Canadians, the bulk of the people are of British and U.E.L. stock.

One result of the war in this district has been a very marked improvement in the financial position of farmers and their desire and ability to instal modern sanitary conveniences in their homes. It is a depressing fact that notwithstanding the natural advantages for the promotion of health to be found in the open country, there is more sickness prevalent, and the people in the aggregate live shorter lives than in the towns and cities.

This is due largely to the want of proper sanitary conveniences in the homes and dearth of knowledge of the laws of public health. In the towns and cities the municipal authorities are compelled by public opinion and by the law to supply the inhabitants with pure water and proper sewage disposal works and knowledge of the laws of health especially as regards the benefit of sunlight in the homes and proper ventilation is more general.

Almost all the villages, towns and cities are situated on some large or small river with which this part of the Province is abundantly supplied, but in the great majority of cases their municipal water supply is more or less contaminated by sewage pollutions from other urban centres further up stream. Most of the towns had installed sewerage systems before the Provincial Board had decided to prohibit the installation of sewerage systems without proper disposal works being



included as part of the plant. These conditions have been allowed to continue owing to the war and the resulting financial conditions.

For many years at Public Health Conventions, it has been a contentious point as to whether for the purpose of supplying a pure water supply the first move should be the elimination of the contamination of our rivers and lakes or the immediate purification of the water supply by filtration and chlorination. The former is no doubt the proper object to be ultimately aimed at, but it is likely to be attained only in the distant future. Immediate treatment by filtration and chlorination is now generally observed. An up-to-date system has been recently installed in Hawkesbury and another is under contract for the Town of Rockland.

In connection with water purification plants municipal councils should not only instal up-to-date systems but also be most careful in the selection of those who are to be charged with their operation. In all cases conscientious, well paid employees only should be engaged, as no matter how excellent the modern plant may be it is only by constant, careful supervision that the proper results can be obtained at all times.

During certain periods the results obtained at Kingston, Renfrew and Smith's Falls were far from satisfactory.

Apart from extensions of the present systems no new municipal sewage systems have been installed in this district or additional works constructed to purify the effluent.

The inspection of milk, meat and other food products in the district was fairly satisfactory, but no regular system of inspection has been carried out—most municipal councils objecting to this on account of the expense involved.

Slaughter house conditions are improved but still far from satisfactory, many out of the way and most unsanitary places being used for occasional slaughtering. At the same time quite a few up-to-date plants have been installed.

SUMMER RESORTS.

This district is unusually favoured with many widely known summer resorts, the more notable being those on the St. Lawrence, including the Thousand Islands—the Rideau Lakes and the Charleston Lake. Excepting with regard to those on the St. Lawrence the law against contamination of the waters by the cottagers has been fairly well enforced. Where there are in the aggregate several thousand summer homes scattered over a very wide area some delinquents are overlooked, but prompt reference to the courts of detected cases has tended to keep the waters of our summer resorts unequalled for purity by any others equally populated in the country.

Action in the case of the St. Lawrence resorts has been stayed until the report of the International Waterways Commission has been issued, as it is likely an international understanding between United States and Canada will be arrived at so that there will be a uniform enforcement of sanitary regulations.

COMMUNICABLE DISEASES.

During the year the district had a bad epidemic of Spanish influenza. Small-pox, also, was very prevalent in the early months of the year. Special reference will be made of these in a separate paragraph. Apart from the above the district was unusually free from communicable diseases.

Sporadic cases and small outbreaks of infantile paralysis, scarlet fever, diphtheria, measles, and whooping cough occurred in various localities but they were easily controlled.

The public health besides the ordinary routine work of a district officer has been promoted during the year by a series of public lectures and the distribution of pamphlets and other literature dealing with health problems.

A detailed report of the work performed has been sent to the Chief Officer of Health from time to time.

During the year a sanitary inspection was made of two insane asylums, twelve hospitals, seven houses of refuge, six orphanages and children's shelters, and seven gaols.

Faults in construction, lack of equipment and any unsanitary conditions were brought to the notice of the proper authorities and the necessary changes ordered.

A routine sanitary inspection has been made of all the principal towns and villages and also of others when special conditions called for it.

This office has been used more extensively than in past years by the local medical officers, boards of health, municipal councils and individuals as a source of information regarding interpretation of the Health Act, advice on general sanitary matters and as to control of communicable diseases. All communications have been attended to as promptly as possible, some delays being inevitable owing to absence from my office.

Besides the regular routine work special visits have been made in some cases as many as ten times in connection with sanitary matters to Calabogie, Arnprior, Renfrew, Clarence Creek, Bourget, Cumberland, Rockland, St. Eugene, Vankleek Hill, Hawkesbury, Napanee, Portland, Sydenham, Cardinal, Gananoque, Mountain, Smith's Falls, Perth, Alexandria, Cambden, Kingston, Carleton Place, Shabot Lake, Almonte, Maxville, Morrisburg, Westboro, Ottawa, Carp, East View, Finch, Winchester, Brockville, Pembroke, Petawawa, Lancaster, L'Orignal, (Pembroke), Elgin, Athens, Prescott and Iroquois.

The smallpox epidemic in the first months of the year and that of Spanish influenza in the latter months of the year require special mention.

SMALLPOX.

In the latter months of 1917 and during January and February smallpox was epidemic in Hawkesbury, Vankleek Hill and the surrounding country.

Except for a few exceptions the disease was of a mild form and resulted in no deaths except in children prematurely born. Two of the latter died in Hawkesbury badly covered with the smallpox rash.

In Hawkesbury 248 cases were reported and in this district there were at least five hundred cases.

Vaccination especially in the towns was well observed, the Provincial Board of Health supplying 6,000 vacc. points free.

Minor epidemics occurred in Alexandria and Renfrew, and the thorough and prompt measures taken in these outbreaks by the local authorities and Health Officers Drs. Hope and McCann had excellent results, and in marked contrast to the results achieved in other municipalities.

Many school boards in the district now make the presentation of a certificate of successful vaccination against smallpox a condition for the reception of pupils to their schools. If this practice was general those recurring epidemics of smallpox in this district would eventually cease.

SPANISH INFLUENZA.

Reports in press of the ravages of this disease and warnings by the Provincial Board and local officers of health had very little effect in causing the different municipalities to prepare effectually for its onset.

Although the most urgent demand during the height of the disease was for doctors, experience showed that what was most needed was nurses, trained and untrained, the latter often proving in cases where the whole or greater part of the family went down of greater practical usefulness than the former as they took the part not only of a nurse to the best of their ability but as housekeepers as well.

So many divergent views are expressed by eminent authorities as to the causation and spreading of this disease that the medical profession and general public are at a loss as to what steps to take to guard against its onset and dissemination.

From a study of the epidemic in this district I venture to make the following observations:

The greatest danger is from panic. Places which had thoroughly prepared for the disease by organizing the medical, nursing and hospital arrangements and then waited in confidence for the outbreak have had a very low case and death rate.

Crowding together of people where they come in close or actual contact spreads the disease.

The wearing of masks, although theoretically a great preventative is not practical.

Putting the patient to bed in the early stages of the attack and keeping him there until well over the disease with the best nurse available gives the best results. The confidence inspired by the physicians' visits also helps.

As authorities tell us we should expect another outbreak next year Health Boards should organize their resources well in advance.

A body of voluntary, practical nurses, preferably with at least a short period of training, under capable leaders with a central headquarters supplied with the needed medical and other supplies and with adequate means of transportation should be organized in every municipality. This would be in addition to the regular professional nurses who are, of course, always available as far as their numbers will permit.

Every effort was made by this office to supply doctors and nurses to the affected sections, and most valuable aid was received from Dr. McCullough, Chief Officer of Health, especially in the early stages of the outbreak. For example, we were able to send fifteen nurses to Renfrew within two days from the call for help—later all the sources of supply were exhausted and little could be done to aid affected localities. A few doctors and a number of final year medical students from Montreal and elsewhere gave most valuable assistance.

The mortality varied greatly from Morrisburg where they had no deaths to some small villages where 10 per cent. of the inhabitants died. Cornwall, Renfrew and several other towns had a death rate of one per cent.

Here as elsewhere the majority of the deaths were among strong, healthy adults.

NORTH BAY, ONT., Jan. 1st, 1919.

DISTRICT NO. 6.

Comprising the Districts of Nipissing, Parry Sound, Sudbury and Temiskaming.

DISTRICT NO. 7.

Comprising the Districts of Kenora, Rainy River, Thunder Bay, Algoma, Manitoulin and Patricia.

Major Robert E. Wodehouse, M.D., Port Arthur (now on active service C.E.F.). District taken over temporarily by Dr. George.

W. EGERTON GEORGE, M.D.

District Officer of Health, North Bay.

Although the expense incurred shows a decided increase it would have been materially greater had not one of the trips to the west been made at the expense of the Department of Prisons and Charities. The trip was in fact in the interest of public institutions, but it was also used to further our observations and assist Public Health measures. The total expense for the year to the Department of Public Health was \$1,073.00 which was divided in the following proportions, \$312.43 in District 7, \$760.57 in District 6. The general rise in hotel rates and transportation is responsible for the increase over last year. A much needed advance in my accountable warrant from \$200.00 to \$300.00 was made toward the end of the year and had the effect of preventing the use of private funds for public expense. The long western trips which keep me away for several weeks at a time made such an advance imperative. During the year I travelled 27,100 miles.

This vast area of Northern Ontario through which three Transcontinental Railways run more or less parallel for over 1,000 miles, separated about 300 miles at their widest point, constitutes Health Districts 6 and 7. Three or four railways run north and south dividing the country into more or less rectangular areas. These large open spaces are receiving increasingly greater attention from large corporations representing paper, minerals and lumber. Good farming land reasonably accessible to the railways is rapidly being taken up. Towns of considerable importance spring into existence within a short time after one of these industries are located. As much of the operations of these concerns is in unorganized territory, the Health Regulations are largely under the supervision of your officials. So much of the time of your District Officer is taken up with these matters, in company with the Provincial Sanitary Inspector, that it becomes increasingly necessary that additions be made to the staff in order to protect those employed in unorganized territory; the health of whom is often hazarded negligently, carelessly and inadvisedly by these corporations. The conditions found on the premises of the few concerns that have received some attention have revealed such an alarming state of affairs that your officials surmise that many dangerous conditions exist which only await the inevitable results to have them brought to our attention. The responsibility for these results must be assumed. It is also clear that they cannot be prevented by the limited staff now devoting their time to this work, since if it were possible to see a new work every day for

the whole year not over half would be seen. Second, third and fourth visits are continually required to effect the necessary changes, and hundreds of miles must be travelled to reach them. Indeed, new industries are being established almost, if not quite, as fast as can be supervised.

COMMUNICABLE DISEASES.

The total returns for communicable diseases were as follows:—

	District 6.		District 7.	
	Cases.	Deaths.	Cases.	Deaths.
Smallpox	21	1	10	0
Scarlet fever	20	1	327	6
Diphtheria	55	9	62	8
Measles	126	5	732	2
Robella	0	0	24	0
Whooping Cough	9	1	188	6
Typhoid	50	4	22	3
Tuberculosis	7	11	20	24
Infantile paralysis	0	0	8	1
Cerebro-spinal meningitis	0	2	3	1
Influenza	268	22	1,869	39
Chickenpox	2	0	103	0
Mumps	37	0	54	0

Scarlet Fever.—Fort William and Port Arthur were responsible for almost 90 per cent. of the scarlet fever, but not much more than 50 per cent. of the deaths. The disease has existed in these cities for over a year. Investigation shows the disease to be of very mild form; not more than 50 per cent. developing the rash. Those without the rash are not being reported; so that possibly half of the cases are running at large thus keeping the epidemic going. The missed cases or carriers I have just described are not included in the returns, and therefore the number of cases are not represented by the figures given above. Influenza during the latter part of the year seemed to increase the proportion of those showing rash. This resulted in a great increase in the number of reported cases since rash was the cardinal symptom upon which reporting depended. The mildness of this outbreak presented such great difficulties in the way of control, as evidenced by the length of time the disease has been prevalent, that I discussed the matter with a number of prominent Public Health men both at Hamilton Conference and the Chicago meeting. The best information I could obtain ascribed the perpetuation of the epidemic to the missed case. In order to give them the benefit of this conclusion I decided to proceed to Fort William at an early date.

Diphtheria.—Diphtheria never became a serious problem within either district. First cases were frequently fatal; but as soon as energetic measures were taken the disease was easily eliminated. The mortality varies very noticeably in different sections. Dr. Mason, the efficient Health Officer for Parry Sound, reports a mortality of close to 50 per cent. in that municipality. Fortunately, however, the town has been comparatively free from diphtheria during the year.

Measles.—In District 6, the most serious outbreak occurred in Copper Cliff. Seventy-seven cases and three deaths were reported. I regret that I was not able to visit the town during the epidemic.

In District 7, Sault Ste. Marie and vicinity (Korah Twp.) contributed some 548 of the cases reported; while official notification of smaller epidemics was received from Schreiber, Eagle River and Rainy River. The small number of

deaths reported on the weekly cards does not accurately, nor even approximately, represent the number of deaths from the disease. Two deaths only were reported on the weekly return cards from the Soo, while I distinctly recollect that there were at least nine deaths. I would strongly advise that during epidemics the Department check up the deaths reported on the weekly return cards with those reported on the death cards. A reasonable approximation should be possible which the present facts do not show. One observation made at this place was indeed interesting. A number of school children (20 to 30) claimed to have had measles four times while at least twice that number claimed to have had it three times. Undoubtedly a large proportion of these were cases of *Robella*; but I was convinced that second attacks were hardly to be considered rare. Below is a list of the measures found most useful.

First. Teachers were informed that cough was sufficient reason to suspect measles and that they must on the authority of the Health Officer send all coughing children home. These were reported to the M. O. H. who kept them under observation for a week. Nurses visited the schools to check up the teachers.

Second. Sunday schools and picture shows were closed to children under fifteen years. Prosecutions were required and resorted to, to get strict compliance with these orders. Admitting the difficulty of reaching a conclusion as to the effectiveness of measures adopted in measles, I was convinced that our efforts were important factors in the rapid decline in the number of cases which immediately followed.

Whooping Cough.—The only important epidemic of this disease was in Fort William where over 100 cases were reported with three deaths. It is unfortunate that we have no records at this office to assist us in arriving at the ages which were most frequently responsible for deaths, both for whooping cough and for measles.

Typhoid.—It is gratifying to note the returns for typhoid fever in both districts. There were seventy-two cases and seven deaths reported; not more than three per hundred thousand. The old chronic contributors, such as Parry Sound, Haileybury and Sudbury, were still in evidence with their quota of seven, five and six, respectively.

Tuberculosis.—Tubercular returns are anything but satisfactory. More deaths than cases were reported from both districts. No doubt your officials share in the responsibility for this lack of compliance with the regulations, but the weakness is so general that it will require the combined and thoughtful efforts of all, in order to obtain a reasonably accurate idea of the prevalence of tuberculosis in Northern Ontario.

Influenza.—This was by far the most serious scourge that has visited Northern Ontario during my tenure. The outbreak began in September and was still active at the end of the year. Only a very few municipalities reported their influenza cases, yet there was a total of 2,137 cases and 111 deaths. The outlying unorganized territory suffered greatly from lack of medical aid and nursing attention. Indeed, during each visit to outlying localities your officer was required to spend considerably more time than his official duties demanded in attending the sick. This was unfortunate since his presence was in urgent demand in so many places.

Closing of schools, isolation, reporting and placarding have not proved efficient measures in handling influenza. Vaccination, masks, elimination of crowding and the use of common towels and drinking cups have been more effective and have

received general recommendation and approval. In connection with the danger of the further spread of "flu" in the next year or two I took up the matter of common towels and drinking cups with the Temiskaming and Northern Ontario Commission, who referred the question to the Canadian War Board along with the argument for their elimination. The Railway War Board was so impressed that they ordered the use of these to be discontinued on all the railways in Canada including stations and bunk houses. The Commission of the T. & N. O. kindly sent me a copy of the order complimenting your officer on the success of his efforts. Such approbation will commend itself to the Board, I am sure, since primarily it is their efforts that are producing results.

One important matter was overlooked by Health Officers in a number of municipalities. I refer to the admission of "flu" patients to the general public wards of hospitals where patients were recovering from operations. The explosive nature of the outbreak was largely responsible for this omission, but if lives were sacrificed a severe censure is due both to the Health Officers and also to the institutional management.

WATER SUPPLIES AND SEWAGE DISPOSAL.

The question of the purity of the natural waters of Northern Ontario is closely associated with the question of sewage disposal. For this reason I have decided to couple these two subjects under the one head.

In District 7 the water supplies for Fort Frances, Rainy River, and Kenora have been viewed as potential causes of typhoid since sewage empties into them with little or no treatment. Chlorination is being carried out in each pumping station, but filtration and sewage treatment will also be required in order to remove all the menace to these supplies. The efforts of the citizens of Fort Frances to establish a summer resort at the mouth of the river above the town must be considered another danger added to the previous difficulties. Rainy River, having received permission, intend to remove their intake to a point, not more dangerous, but nearer the town, so as to be used by the new pumping plant.

At Sault Ste. Marie an automatic chlorine plant was found on the ground but not in operation. I strongly recommend that it be installed in the old pumping station and transferred when the new station is ready. The man element is usually not reliable enough to be entrusted with hand mixing for a city of that size, especially when the water is known to be seriously polluted.

In District 6, Parry Sound, Sudbury, Haileybury and Smooth Rock Falls obtain their water supply from polluted waters without the proper safeguards. All are using chlorination systems, but sewage treatment is urgently required at Parry Sound and Haileybury. Recommendation for a safe and sufficient water supply for Parry Sound is in the hands of the Engineers, Chipman and Powers. The work was done over a year ago but no report has been brought down. One cannot help but suspect that the Council do not intend to take action or the report would have been demanded before this. Haileybury has a septic tank which is far from giving satisfaction; in fact, it has been more or less out of repair for some time. For this reason a greater efficiency is required of their filters than can be expected, especially when the wind carries the effluent from the septic tank in the direction of the mouth of the intake pipe. Sudbury and Smooth Rock Falls have chlorination systems too small to handle the quantity of water being pumped. This matter has been brought to the attention of responsible parties in each case, but I fear without results.

The British American Nickel Company have installed an automatic chlorination plant at their works at the old Murray mine outside of Sudbury. A small filter also adds a degree of security to their water supply.

The Canadian Copper Company have agreed to follow the suggestions of our Sanitary Engineer and endeavour to obtain sufficient well water for their roast yards. At Turbine after the menace of their water supply was pointed out their intake was carried above their construction works in order to guard against pollution.

I regret to have to report that the Engineers for one of the northern towns ignored the Board in the matter of getting approval for their plans and specification before work was commenced. The matter was brought to their attention but the work was carried to completion without that approval. They have provided a sewer outlet into a river which is used for a water supply further down. I am strongly of the opinion that a serious menace is added to the dangers already existing in this water.

When the financial conditions resulting from the war reach a state of equilibrium a number of towns in these two districts should be forced to complete disposal works.

PRIVIES.

The method of collection of night soil needs urgent reformation in many northern towns such as Timmins, South Porcupine, Schumacher, Haileybury, New Liskeard and Dryden. In some places where the can system has been established, the cans are removed and no attempt made at collection during the winter months. Unnecessary dangers are thus created by the spring sun.

At Dryden certain thickets in the neighbourhood of the paper plant were in a very filthy condition because of faecal matter deposited there by the employees of the company. A new road which was put through cleaned up part of it and the company promised to remove the rest of the undergrowth.

At Haileybury the nuisance ground became very offensive because of the accumulation of dead carcasses. The municipal authorities were advised to take measures to have them burned.

UNORGANIZED TERRITORY.

The time which has been devoted to camp work in unorganized territory, in support of our capable Sanitary Inspector, has not been inconsiderable. One or two visits were made to the camps of the Mattagami Pulp and Paper Company, along the Mattagami River above Smooth Rock Falls. The camps of a number of other companies were visited along this same river above Timmins. A number of other visits were made into the mining camps in the Kirkland Lake and Boston Creek districts. Two interesting conclusions were made as a result of these visits regarding camps and their sanitary supervision. These were:—

First. The one regulation which permits of no infraction, without which all else is wrong, is that which relates to the location of a camp. It is the cardinal offence.

Second. The reason the physicians do not report on, or look after the sanitary conditions about their camps is to be found in the lack of specific remuneration for this work. They agree to do the sanitary work for nothing in order to get medical contracts for the supervision of the men. But since the company pays nothing for this work and discourages energetic measures, only the medical atten-

dance of the men receives attention. Since the men pay for this they demand reasonable compensation. I would strongly recommend that companies be asked to make provision in their contracts to meet the reasonable expense of sanitary supervision of their camps.

DAIRIES.

In the production of milk the standards of both quality and cleanliness have suffered greatly by the war, since competent help was not available to dairymen. Now the war is over this difficulty has been removed; and it remains for Boards of Health generally to see that they do not make this an excuse for further delay in order to make capital out of their past labour embarrassments. The standards of cleanliness must be raised to a point compatible with safety to infants; and the butter fat to a point of reasonable richness. That the milkmen take advantage of these excuses is demonstrated by the large amount of milk sold during the war below three per cent. of fat which is the standard of the Ontario Milk Act. Special attention was given to dairies at Kenora, Fort William, Port Arthur and Fort Frances. The standards maintained at Kenora were easily the highest. At Fort William I saw four poorly constructed and equipped dairies in the Slate River district. At Port Arthur they had a number of prosecutions for low fat until they began to publish the weekly records. Dairies at Fort Frances show marked degeneration. At the time of my last visit no dairy could be said to be reasonably good.

CONCLUSION.

For the past five years I have provided an office in a prominent business block which was close to my suite of living-rooms. I have decided to move into a house in the residential section and feel that I should not be expected to supply such an office further. The central location and accessibility has made this office important to visitors from out of town. Your officials at this point strongly advise that a general office be provided. Two Sanitary Inspectors are required to meet the obligations of the Provincial Board of Health set out in the early part of this report. Field work has frequently prevented prompt replies to correspondence and this has been a matter of outside complaint to the Department. The increase in staff, the urgency and the increase in quantity of correspondence, the number of business visitors from out of town, make the necessity for an office and stenographer almost imperative. Let me commend this necessity to your careful consideration.

REPORT OF THE BUREAU OF CHILD WELFARE

for the Year 1918

The Chief Officer of Health, Provincial Board of Health, Toronto.

SIR,—I beg to submit herewith the report of the Bureau of Child Welfare for the year ending December 31st, 1918.

EXHIBITS.

During the year's work emphasis has been placed upon the educational aspect, our chief endeavour being confined to the tour of the Exhibit throughout the Province. Owing to the fact that we have but one nurse, we have been unable to send the Exhibit to the following centres from which we received requests: Mount Albert, North Bay, Strathroy, Ayr, Burlington and Caledonia.

The Exhibit was shown in connection with the following events:

- (1) London Child Welfare Week, in February.
- (2) Toronto Household Exhibition, which was held in the Arena Gardens in April.
- (3) Fifth Annual Baby Week in Hamilton, during the meeting of the medical associations in June.
- (4) Ottawa Baby Week, in June.
- (5) Brampton Baby Week, in June.
- (6) Exhibitions and Fall Fairs:
 - Canadian National Exhibition, Toronto.
 - Central Canada Exhibition, Ottawa.
 - Vankleek Hill Fair.
 - Barrie Fair.
 - Patriotic Fair, Napanee.
- (7) Tours:
 - (a) Following London Child Welfare Week in February, the Exhibit visited the following points: Windsor, Tillsonburg, Welland, Niagara Falls, and St. Catharines.
 - (b) In May a short tour included Whitby, Oshawa and Port Hope.
 - (c) In July an itinerary was undertaken as follows: Sault Ste. Marie, Fort William, Port Arthur, and Espanola.

Owing to the influenza epidemic, the Exhibit was not shown during the last three months of the year.

A detailed report written by Miss Knox, nurse in charge of the Exhibit, and covering this portion of the work, is appended herewith.

LECTURES.

During the year the Bureau, upon request, sent a speaker to the following meetings:

- London Child Welfare Week,
- Ottawa Baby Week,
- Annual meeting of the National Council of Women,
- Annual meeting of the Women's Institutes of North Brant District,
- Mount Forest Women's Institute,
- Annual meeting of the W.C.T.U. at Stouffville.



Canadian National Exhibition, 1918.

CONVENTIONS.

The Bureau was granted affiliated membership in the American Association for the Study and Prevention of Infant Mortality, and was represented at the annual meeting in Chicago during the first week of December, by Miss Knox and the Director, who attended also the annual meeting of the American Public Health Association which followed. Representatives of the Bureau were also present at the Medical Congress in Hamilton in June, when joint meetings of the following organizations were held:

- (1) Ontario Health Officers,
- (2) Ontario Medical Association,
- (3) Canadian Public Health Association,
- (4) Canadian Medical Association,
- (5) Canadian Association for Prevention of Tuberculosis.

CHILD WELFARE WORK.

Manitoba Province.—In July a week was spent with the Provincial Board of Health of Manitoba, when your representative was given an opportunity to inspect the work which is being done by the Provincial Public Health Nurses. A rural school section north of Dauphin was visited, also Dauphin town.

Three days were spent in the city of Brandon, where the Provincial Board of Health has established a splendidly equipped Child Welfare Station in the Court House; the Board had also recently organized medical inspection of school children of the city. The Child Welfare Exhibit at the Brandon (Provincial) Fair was very complete and attractive, one building being given entirely to public health and child welfare.

At the time of writing the Provincial Board of Health employs eighteen public health nurses for infant welfare and school nursing, all of which work throughout the Province, with the exception of Winnipeg city, is supervised by the Board.

Winnipeg.—The Child Welfare Station and Dispensary maintained by the city of Winnipeg was visited. The institution has modern equipment and is filling a great need. Formulæ for the city's practising physicians are made up and sent to distributing centres where the mothers call.

Chicago.—Advantage was taken of the conventions in Chicago to see the work which is being done by municipal and private agencies in that city along the line of maternal and child care, medical inspection of school children, "Little Mothers' Leagues," etc.

CLIPPING BUREAU SERVICE.

The Bureau now subscribes to a Clipping Service covering Canada and the United States, which enables us to keep in touch with the various developments of the work.

INFLUENZA EPIDEMIC.

Following a public meeting held in the Parliament Buildings on October 16th, for the purpose of organizing voluntary workers for service during the epidemic of influenza, the registration of the helpers who were known as "Sisters of Service" was undertaken in the office of the Bureau. Approximately 375 volunteers were listed and in 481 cases assistance was supplied.

SUMMARY.

As stated in the report of the Bureau last year, our work is concerned chiefly with the stimulation of local interest in Child Welfare work and giving to the municipalities all assistance possible in connection with the organization of the service on a permanent basis, whether under the supervision of the civic department of health or a private agency.

It is gratifying to be able to report that during the year many new centres have organized for the work, making the present total ten (10) as compared with four (4) a year ago.

ONTARIO MUNICIPALITIES HAVING CHILD WELFARE CLINICS.

1917	1918	Supervision	Clinics
Toronto	Toronto	Local Board of Health	23 per week.
Hamilton	Hamilton	Babies' Dispensary Guild	5 per week.
Ottawa.....	Ottawa.....	Local Board of Health	5 per week.
Ft. William (summer only)	Ft. William.....	Local Board of Health.....	1 per week.
	London	London Child Welfare Association ...	3 per week.
	Brantford.....	Social Service League	1 per week.
	Whitby.....	Victorian Order of Nurses	1 every two weeks.
	Port Hope	Medical Officer of Health.....	1 per week.
	Espanola	Medical Officer of Health.....	1 every two weeks.
	Kingston	Victorian Order of Nurses.....	1 per week.

All of which is respectfully submitted.

MARY POWER,

Director, Bureau of Child Welfare.

REPORT OF NURSE IN CHARGE.

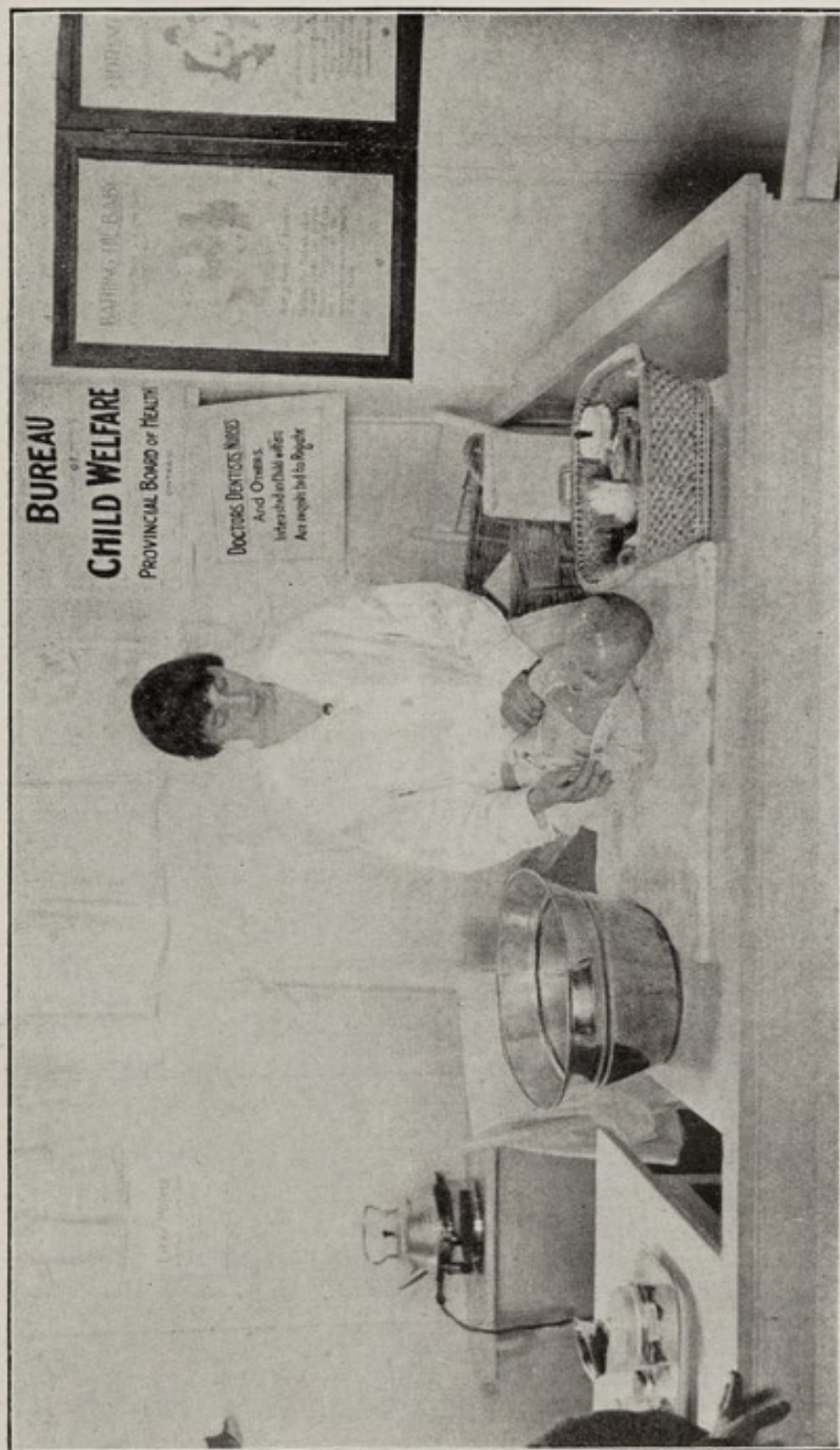
In presenting a report upon the work of the Child Welfare Exhibit during 1918, I may say that the Exhibit was on tour from the first week of February until the outbreak of influenza in October, and was shown on 22 occasions, varying in length of stay from one day to two weeks.

Feeling that the mothers and children derive more benefit if a clinic or conference can be held, this year we requested each centre to make provision for this service in connection with the Child Welfare Exhibit. The table given below shows the number of defects found among the children attending the clinics for which records were available.

The clinic, sometimes called child welfare conference or consultations for mothers, consists of:

- (1) Weighing and measuring of the child by a nurse.
 - (2) Examination by a physician.
- (A sample of card now in use is shown herewith.)

No treatment whatever is given, all cases requiring medical care being referred to the family physician. It does, however, give the mother an opportunity to dis-



Canadian National Exhibition, 1918.

cuss with the doctor matters pertaining to the baby's health. That the service is appreciated is shown by the fact that in every centre without exception mothers have expressed their thanks, and, where the work was not being carried on permanently, a wish that they might have the advice and help always available.

If permanent work is to follow the Exhibit clinic, it will be done by the local medical profession. Our usual procedure is, therefore, to have the committee request the local Medical Society to appoint the medical attendants for the Exhibit clinics. In this connection, I wish to express our appreciation of the splendid co-operation on the part of the physicians throughout the Province, who have given so generously their time and services to the mothers and babies of their respective centres.

.....
(Name of Municipality)

Name:..... Address:.....

Age: yrs.....mos.....days.....

Weight at birth: lbs.....ozs..... Present: lbs.....ozs.....

Measurements—

Height:ins. Abdomen:ins. Head:ins. Chest:ins.

Feeding—

Breast: Yes No from.....to.....No. Mos.

Mixed: Yes No from.....to.....No. Mos. Specify.....

Artificial: Yes No from.....to.....No. Mos. Specify.....

Defects—

1. Eyes

2. Ears

3. Nose

4. Throat

5. Teeth

6. Skin

Clothing

General Physical Examination.

.....
Doctor's Signature.....

(Clinic Card, Bureau of Child Welfare, Provincial Board of Health, Ontario.)

LONDON.

For their first Baby Week, held in Februray, 1918, London's Child Welfare Committee secured the organized assistance of the press, the city's hospitals, physicians and nurses; co-operating with the Bureau of Child Welfare they arranged clinics and exhibits; lectures and entertainments were provided which aroused the interest of the whole community.

The exhibit and clinics held in the Y.M.C.A. Building were well attended. Five hundred babies were weighed, measured and examined by the doctors and nurses during the week. Interest in the work never flagged, the last day having as large an attendance as the first.

The Exhibit was displayed in a large, bright room where it showed to the best advantage. We were much gratified with the interest manifested in the various posters, models and infant's layette.

Various local institutions and committees gave practical demonstrations in the care of the sick. The Victoria Hospital exhibited a contrast in obstetrical rooms. On one side of the partition an aseptic room, efficient, but quite within the means of the average home; on the other side, an example of the too common kind—dark, untidy, unsanitary and dangerous, a breeding-ground for disease.



The dietitian from Victoria Hospital, assisted by the nurses, prepared infant feedings and the proper diets for children from twelve months to six years. Nutritious school lunches were also temptingly displayed. The demonstrators were kept busy answering questions regarding the preparation of the different diets.

St. Joseph's Hospital showed how a mother could use the ordinary articles in her own home to prepare an efficient emergency croup tent.

During the afternoon, in the auditorium, moving pictures provided by the Provincial Board of Health educated the school children along health lines. Musical drills by the children, singing and addresses added to the enjoyment of the entertainment.

Every evening a very interesting programme, including addresses by prominent doctors and music by local talent, was given to enthusiastic audiences.

It was a big week, full of hard work on the part of directors, doctors and nurses, but the result fully justified all the expenditure of time and energy and money.

London now has a permanent Child Welfare Association employing a full-time nurse, and is doing splendid work.

ST. THOMAS.

At St. Thomas the coal shortage made immediate work impossible, but a committee was organized and plans drawn up for the holding of a Baby Week at a later date.

CHATHAM.

Chatham had previously sent a request for the Exhibit, but on our arrival there the Medical Officer of Health had to cancel all arrangements on account of the general smallpox quarantine.

WINDSOR.

Windsor Baby Week was held at the request of the Medical Officer of Health. The Essex County Association of Nurses, the Local Medical Society, and the Women's Auxiliary of the Hotel Dieu combined to make the event very successful. The mothers who attended the clinic urged that the service should be made permanent. A splendid programme was given each evening.

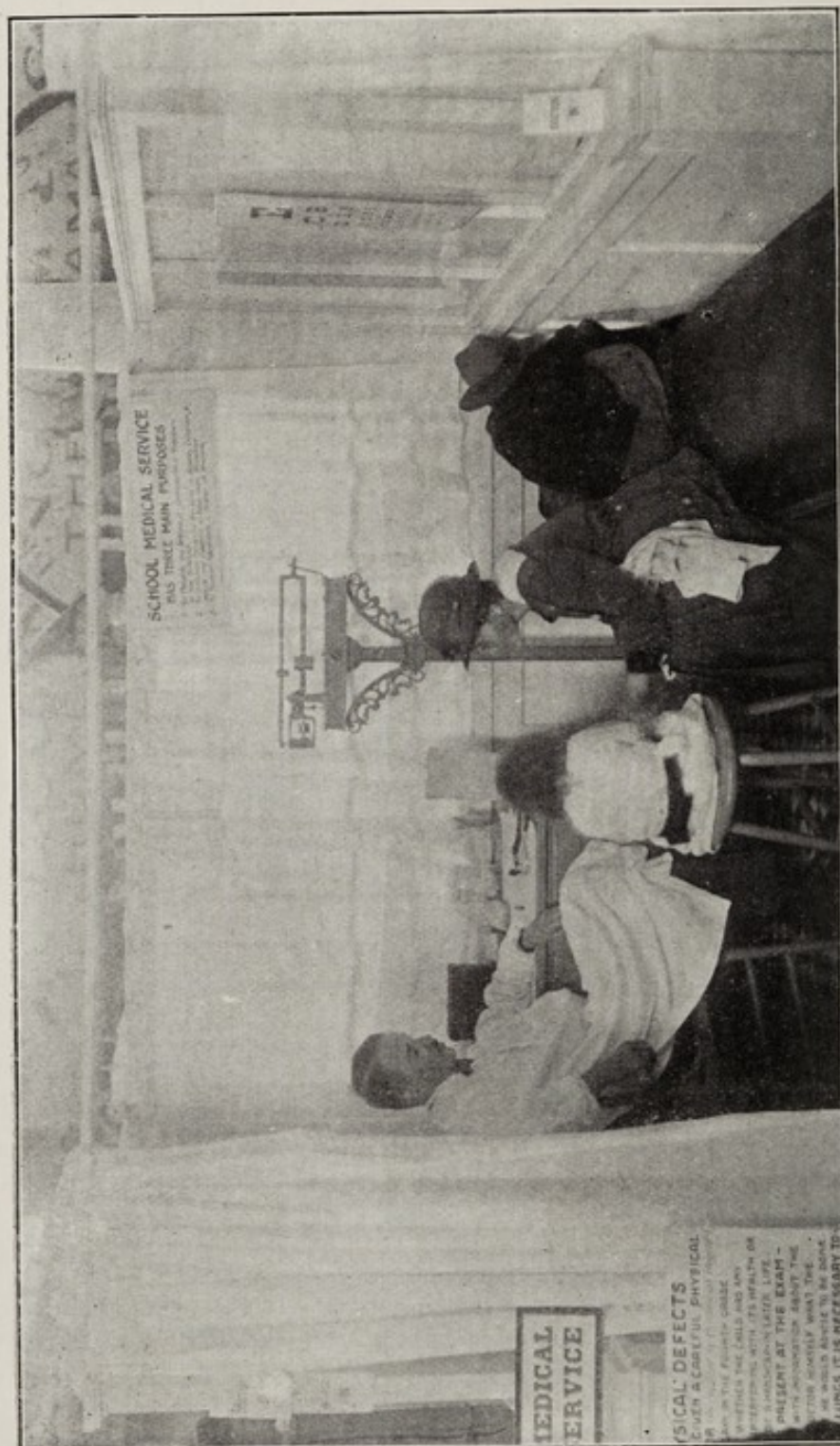
TILLSONBURG.

The Exhibit visited Tillsonburg at the request of the Medical Officer of Health, but owing to severe weather only fourteen babies attended the clinic. Moving pictures, telling the story of various phases of Health work, were shown in the evenings and were thoroughly enjoyed by large audiences.

NIAGARA FALLS.

The Medical Officer of Health in Niagara Falls assisted in every way possible, and although the number of children attending the clinic was small, many interested mothers came to receive advice in regard to the care of their children.

The schools released their pupils during the afternoon to attend the special session held for them each day.



Canadian National Exhibition, 1918.

WELLAND.

The Exhibit and moving pictures were shown in the Town Hall. A clinic was held, but the attendance was small, owing probably to the severe weather. Several companies in Welland are employing industrial nurses for nursing work among the employees and their families, and we hope some permanent child welfare work may be established in the town.

ST. CATHARINES.

The Exhibit was held in the gymnasium of the Collegiate Institute, one of the interesting features being an exhibition of the work of the students in the manual training, art and domestic science classes. The city engineer's department supplied an instructive exhibit illustrative of proper installation of plumbing, sewer connections, etc., while discs used in a recent "dirt test" of the local milk supply attracted a great deal of attention. No clinic was held in connection with the Exhibit. Capt. D. A. McClenahan, District Officer of Health, gave an address in the evening, which was followed by the moving pictures.

WHITBY.

Whitby was visited early in May under the auspices of the Committee of the Victorian Order of Nurses. With the aid of voluntary helpers and Dr. Burns of the Military Hospital, assisted by Dr. McGillivray, very interesting clinics were held on two successive afternoons. The school children exhibited many specimens of their work in art, manual training, etc. Prizes were given for poster work.

Moving pictures were shown to the school children in the afternoons, and the evening programmes were very instructive.

A permanent Well Baby Clinic has been established in Whitby under the Victorian Order of Nurses as a result of this endeavour.

OSHAWA.

Under the auspices of the Children's Aid Society the Exhibit was shown in the Town Hall. A very interesting programme was given on the evening of the first day, when the short play "Prejudice" was staged for the first time in Canada.

The Local Committee discussed the possibility of permanent Child Welfare Work in Oshawa, the Superintendent of the Hospital expressing the desire that a clinic be established in connection with that institution.

PORT HOPE.

The Exhibit was sent to Port Hope for two days in May. Following our preliminary visit, when a committee meeting was held to discuss plans, the Women's Auxiliary of the General Hospital procured lists of children under six years from the Town Clerk and the church cradle rolls. The town was later canvassed and a personal invitation extended to the mothers to attend the clinics. That the results justified the time and energy spent was shown by the attendance at the clinic.

The Exhibit was shown in the Town Hall, where clinics were possible on both afternoons, owing to the co-operation of the local medical men, all of whom helped in the work. The Superintendent of the Hospital, an enthusiastic supporter of the work, generously supplied the nurses for the clinics.



Espanola Baby Clinic.



Port Hope Baby Clinic.

The week following this Exhibit a permanent Baby Welfare Clinic was established in connection with the hospital, the visiting staff of six attending the weekly clinics in rotation.

BRAMPTON.

One of the most attractive exhibits of 1918 was held in Brampton in June. The Agricultural Representative, Mr. Stark, and his assistant, Miss K. McIntosh, were responsible for the success of the campaign. The Exhibit was held on two days, the town and surrounding country being divided into east and west districts, and each allotted its particular day. As a result of the complete organization practically every mother of small children in Brampton and vicinity attended the clinics which were conducted by the local doctors. A splendid programme was given the first evening, including addresses by Col. J. W. S. McCullough, Chief Officer of Health, and Miss Chapman, while the children gave musical drills which showed long and careful preparation.

Small tags as shown below were given to the school children, who wore them upon their coats during the preceding week.



SAULT STE. MARIE.

We arrived in Sault Ste. Marie on July 4th and stayed a week. During that time 96 children attended the clinics, were weighed, measured and examined, and advice regarding their condition given to the mothers. A model obstetrical room and nursery were exhibited by the school nurses. Following the moving pictures provided by the Provincial Board of Health, addresses were given each evening on various health subjects.

ESPANOLA.

On July 5th the first Baby Clinic was held in Espanola. The situation there is rather unique. The Spanish River Pulp and Paper Mills Company own the town and employ a doctor who is the Medical Health Officer as well. In some instances, where it was impossible for the mother to attend the clinic, the service was extended to the homes, seventy-five children being inspected in this way. This was Ontario's first experience in motor clinics. The physician examined the babies, while the nurse weighed and measured them in the home, the equipment being transported in a motor car upon which were displayed attractive posters on Infant Care. In this connection the work of Mrs. Hussey is worthy of mention, because without her assistance it is doubtful whether the preliminary or the permanent work could have been carried on so successfully in view of the fact that there was neither a hospital nor a practising nurse in the town.

The result of this was that a permanent clinic has been established in Espanola, with 200 babies on the roll. The doctor informed us later that the fame of the clinics had become so widespread that mothers bring their babies twenty-five miles on the train to attend the clinics.

FORT WILLIAM.

Previous to the summer of 1918 Fort William employed a Child Welfare nurse, who did splendid work, but was, unfortunately, employed only for the summer months. However, she proved the extreme need of such assistance in Fort William and is now a permanent employee of the local Board of Health. During our visit 62 babies attended the Exhibit clinic. McKellar Hospital was very kind in sending nurses each afternoon to assist in weighing and measuring the babies. Lectures were given on various health subjects every evening by local doctors. Music by local talent and the Board of Health films made the evening sessions interesting and instructive.

PORT ARTHUR.

The clinic was held in the Technical High School, which is situated in the residential section of the city. It was found that the foreign mothers were rather backward in availing themselves of the opportunity to have their little ones examined, on account of the distance between their homes and the Technical School, and a supplementary clinic was opened in a settlement house in the coal dock area. The result was very gratifying, and showed that the people were ready and willing to learn the best methods in regard to caring for their children. The doctors who assisted at the clinic took great interest in the work, and expressed the hope that a local clinic would soon be established.

BLIND RIVER.

Our stay in the next few places visited was necessarily short on account of the approach of the Canadian National Exhibition. We aimed merely to investigate conditions, and while opportunity presented itself to make a plea for Child Welfare Work.

At Blind River we attended a meeting of the Red Cross Society and explained the work of the Bureau. Such work, we were told, is sorely needed in the town and surrounding district.

There is a small but very efficient private hospital in the town, but outside the hospital trained nurses are not obtainable.

SUDBURY.

In the absence of the Medical Officer of Health, the Sanitary Inspector very kindly arranged for us to make at least a superficial survey of the local situation. One institution of special interest was the General Hospital, which is an excellent building and has splendid equipment, including provision for the care of sick children.

The Superintendent gave us assurance of the hearty co-operation of the hospital in the event of the town authorities undertaking a scheme of Child Welfare Work.

PARRY SOUND.

While in Parry Sound we visited the office of the local Board of Health and had an interview with the Medical Officer of Health. We were also able to see the two hospitals. The town authorities are interested in Child Welfare Work, and at that time were contemplating employing a school nurse, and requested that the Child Welfare Exhibit be sent to Parry Sound.

CANADIAN NATIONAL EXHIBITION.

The accompanying photographs will convey some idea of the scope of the Child Welfare Section of the Public Health Exhibit at the Canadian National Exhibition this year. Owing to the fact that the authorities allotted us additional space it was possible to provide for the following:

- (a) Medical clinic for infants and children under six years.
- (b) Medical clinic for children six to sixteen years.
- (c) Dental clinic for children up to sixteen years.
- (d) Rest room for mothers with infants.

In addition to the above, portions of the exhibit were devoted to various branches of infant and child care, while demonstrations of proper methods of bathing, clothing and preparation of artificial food for babies were given each afternoon.

For supervision and service in connection with the work of the clinics our best thanks are due to the splendid co-operation of the Department of Public Health of the City of Toronto, whose physicians, dentists and nurses, by their gratuitous help, made the service possible, two physicians and a dentist being in attendance every day of the Exhibition.

The total number of children handled in the Exhibit was approximately one thousand, five hundred and eleven of which were examined in the clinics.

We were fortunate in securing the services of Miss K. E. Osborne, R.N., to assist us in the work at the Canadian National Exhibition, who also accompanied the Exhibit to several of the Fairs immediately following.

OTTAWA EXHIBITION.

Following the Canadian National Exhibition, the Exhibit went to the Ottawa Exhibition. In this connection we are very much indebted to Daly's, Limited, for their very kind assistance in lending furniture and toys to us, without which we could not have shown a model nursery and play yard.

An attractive display of diets for children from twelve months to six years was arranged by the General Hospital.

Demonstrations in clothing, bathing and preparation of food were given by our nurse every afternoon. There was no clinic in connection with this Exhibition, but a Baby Show was conducted under the auspices of the Victorian Order of Nurses.

VANKLEEK HILL.

From Ottawa the Exhibit went to Vankleek Hill fall fair. Owing to weather conditions it was found impossible to conduct a clinic. Demonstrations were given in the nursing care of children by our nurse.

BARRIE.

Under the auspices of the Simcoe Medical Society the Child Welfare Exhibit was sent to the Barrie fall fair. In addition to the usual nursing demonstrations, a scientific Baby Show was held, members of the County Medical Society examining and judging the babies.

Boys 1 to 6 months.

Boys over 6 months and under 12 months.

Boys over 12 months and under 18 months.

Girls 1 to 6 months.

Girls over 6 months and under 12 months.

Girls over 12 months and under 18 months.

\$60.00 was donated for prizes, \$20.00 of which was contributed by the Simcoe Medical Society. For each section prizes of \$5.00, \$3.00 and \$2.00 were awarded.

The Superintendent of the hospital sent nurses, and trained nurses off duty very kindly volunteered to help in the weighing and measuring. Twenty-eight babies were entered.

NAPANEE.

At the request of the Women's Committee of the Patriotic Fair, a small exhibit was sent to Napanee in October. The local doctors gave their services in connection with the clinics, which were very well attended. The local committee, assisted by the agent of the Children's Aid Society, did splendid work before the Exhibit by advertising, canvassing, etc., and also supplied trained nurses to assist in the work of the clinics.

No exhibits were held after the first week of October owing to the epidemic of influenza.

The statement given below is a summary of defects found upon examination among children attending clinics in connection with the Child Welfare Exhibit for which records were available.

1918.

Table showing defects found among children under six years who attended clinics in connection with Child Welfare Exhibit, Provincial Board of Health of Ontario.

Town	Diseased Tonsils	Decayed Teeth	Adenoids	Enlarged Thyroid	Total No. Defects	Attendance
Windsor.....	4	.....	4	.....	8	76
Tillsonburg .....	.....	.....	.....	.....	.....	14
Niagara Falls.....	.....	.....	.....	.....	.....	9
Welland .....	.....	.....	1	.....	1	6
Whitby.....	2	1	.....	1	4	15
Oshawa .....	.....	.....	.....	.....	.....	7
Port Hope	1	1	4	3	9	45
Brampton	35	9	11	.....	55	157
Sault Ste. Marie	19	10	17	1	47	96
Fort William.....	4	3	7	1	15	62
Port Arthur.....	7	.....	1	.....	8	45
Espanola	7	3	.....	.....	10	163
Canadian National Exhibition (non-residents of Toronto only).....	1	2	1	.....	4	86
Napanee.....	11	6	1	.....	18	31
Total.....	91	35	47	6	179	812

All of which is respectfully submitted.

B. KNOX,

Nurse in Charge.

Report of the Provincial Medical Inspector

DR. R. W. BELL

REPORT *re* PROPOSED OAKLAWN CEMETERY.

To Dr. J. W. S. McCullough, Chief Health Officer, Ontario.

As requested by you I yesterday (October 14th) visited the site of the proposed Oaklawn Cemetery, a short distance beyond Willowdale, on Yonge St., in Township of York, about seven miles north of Bloor St. The site is as yet only farm land and in use as such, and is as described in the description and shown on the plans furnished by the company through the local Board of Health, and is on the east side of Yonge St., with Finch Avenue as a northern boundary. From a sanitary point of view I can see no objection to its establishment, the drainage being provided for to a distant point several hundred yards away from any residence to the east. As to residences, the only ones anyway near-by are one adjoining the south-west corner, two across Yonge St. from this corner and three or four across Yonge St. and Finch Avenue from the north-west corner; none for a long distance north-east or south.

There is now a small cemetery adjoining a church a few yards south on the east side of Yonge St. As to the necessity of another cemetery near Toronto, or its effect on the value of property, I have no means of knowing. A large number of the objecting petitioners live from a half to a mile or more away from the site.

REPORT *re* 510 YONGE ST., TORONTO.

To Dr. J. W. S. McCullough, Chief Health Officer, Ontario.

SIR,—As instructed by you, I visited the premises 510 Yonge St. to-day, where was said to be carried on the manufacture of some medicine by one John McDonald, an applicant to the License Commissioners for a permit to purchase fifty (50) gallons of alcohol. I beg to report that there is no place there which can be characterized as a manufactory. It is simply a dwelling house, where Mr. McDonald, an aged man (71) lives with his daughter and her husband, and any medicine prepared is done in the kitchen and cellar. He states that he prepares a "Rheumatism Cure" from roots and herbs, which he gathers on the south shore of Georgian Bay, where he was a lumberman for many years and learned of their good properties. These he boils in the kitchen and makes an infusion, then adds one quart of alcohol to each gallon, and sells in small bottles to be used only as a liniment. His whole output last year was less than five gallons, and is only sold to those who apply for it. He has no stock of bottles nor labels on hand and no money to buy them.

In the cellar, the full size of the house, I found in one corner two 5-gal., one 2-gal., and half a dozen 1-gal. jars and coal-oil cans, in which was a small quantity of his remedy, an extremely bitter mixture, which I tasted, and is certainly not palatable for a beverage, although he states it was harmless if taken inwardly, but only intended for external use.

The cellar contained nothing else except a dirty chest with a few tools, a few stove-pipes and a broken chair. The place was dirty and unsanitary with a heavy odour, and his jars covered with dust and dirt, an accumulation of many months. He says he is endeavouring "to form a company" to provide means to manufacture his remedy on a larger scale, and should he succeed he might require the quantity of alcohol asked for in his permit. The premises are quite unsuited from a sanitary point of view for the proposed object, and even for the present limited output they require cleaning up, especially the containers.

Herewith is attached an advertising circular which he issues, which indicates the nature of his manufacture.

All of which is respectfully submitted.

REPORT *re* 106 FRONT ST., TORONTO.

To Dr. J. W. S. McCullough, Chief Health Officer, Ontario.

SIR,—As instructed by you I visited yesterday the premises of "The Turner Company," 106 Front St. East, Toronto, which were reported to be in an unsanitary condition. I find one Harry Goodman is now the proprietor and using the name of the Turner Company which he bought out some four months ago. The business consists of the manufacture and bottling of wines, essences, liniments, etc., and is conducted on the ground floor and basement. The latter, about 50 x 20 feet, is used for storage and casks of native wine, empty barrels, boxes, etc. The ground floor, about 120 x 20 feet, is the workroom, with small office, used for bottling and packing. I found all floors very wet and dirty, the stairs particularly so. I do not think the stairs or basement have been cleaned out for years. All floors are of cement. The proprietor says he has the ground floor washed every couple of weeks as a rule, but not done lately, because water would freeze on the floor and make it slippery. The whole place at present is very untidy, damp and unsanitary, and quite unfit for the work carried on. The proprietor promised to have all cleaned up within the next two days. If he does so and keeps the place clean, I should not then say, from a sanitary point of view, that the premises were unfit for the work carried on therein.

REPORT *re* INFLUENZA, ETC., AT BURWASH PRISON FARM.

To Dr. J. W. S. McCullough, Chief Health Officer, Ontario.

As instructed by you I visited the Burwash Prison Farm on Saturday, 9th instant, particularly with reference to the present epidemic of Influenza and the provision made for the care and treatment of those affected.

I find there are five camps on the farm, two of which (Nos. 3 and 4) are not just now in use. No. 5, a logging camp, $3\frac{1}{2}$ miles by winter road from No. 2, the principal camp, is the smallest in use, with 34 inmates, and having no cases of Influenza, was not visited. The site is well isolated and difficult of access. No. 2 camp, the largest and principal camp, one mile east of the C.N.R., has a total of 173 inmates, well provided for in dormitories.

There have been about 100 cases of Influenza here, with 20 deaths, mostly from pneumonia and one complicated with scarlet fever. At present there are 15 cases in the hospital ward, 8 with pneumonic symptoms. This ward is about 75 x 20 x 13, with accommodation for 25 patients. The ward is well lighted, ventilated and clean. Several convalescent patients had been returned to the regular dormitory. In the regular dormitory there are three tiers of bunks, too many to be satisfactory, but a large addition is in course of erection, when there will be accommodation for 200 in two tiers and the third will not be used except in case of emergency. Better hospital accommodation will be provided in this new wing. The sanitary surroundings of this camp are satisfactory, excellent spring water provided and good sewage disposal by tanks and subsoil drainage, $1\frac{3}{4}$ miles of farm tile being used for distribution under the sewage bed.

No. 1 camp, 5 miles east of No. 2, close to C.P.R. line, has 86 inmates. Here there have been about 50 patients, with 4 deaths. At present 5 in hospital ward about 25 x 15 x 13, and well lighted and ventilated. One of these patients has pneumonia; the other 4 convalescent. There has been here 4 cases of mumps in a separate ward, but all now are convalescent. The sanitary surroundings here are also satisfactory, with splendid spring water and good sewage disposal.

The epidemic is evidently abating, as there has only been one new case in past three days. Of the 24 deaths (all within $2\frac{1}{2}$ weeks) I find only 4 were over 30 years of age, 10 were between 20 and 30, and 10 more under 20 years. This corresponds to the reported experience all over the country. The medical care of the patients at No. 2 camp was in the hands of a resident physician, Dr. Butler (just himself recovering from influenza), and two senior students, with a sufficient staff of nurses, two additional nurses arriving on the same train with me. Dr. Hodder is in charge at No. 1 camp, but I missed seeing him, as he had driven over to No. 2, arriving just before I left to go to No. 1, and I was not aware he was there. I have to thank Mr. Neelands, the superintendent of the camp, for courtesies extended and every effort to give me all information required.

REPORT *re* NUISANCE IN TOWNSHIP OF WATERLOO.

To Dr. J. W. S. McCullough, Chief Health Officer, Ontario.

As directed by you I visited Kitchener and Township of Waterloo, adjoining that city, on Thursday, 26th instant, to investigate a nuisance complained of by the township local Board of Health. Accompanied by the members of the local Board and their Sanitary Inspector I viewed the complained of nuisance, located in a woods belonging to Mr. A. B. Campbell, close to the city boundary. This Mr. Campbell has a three years' contract for the removal and disposal of the garbage of the city of Kitchener beginning in April last. Since that date he has been depositing all the city garbage along a roadway and for several yards on each side of it through this bush for a distance of a couple of hundred yards commencing at the entrance from one of the main travelled roads leading into the city. The dump consists of almost every imaginable kind of refuse collectable in the city, such as ashes, cast-off clothing, filthy dirty paper, wire, tin, sheet-iron and enamelled ware, decomposing animal and vegetable matter, such as found in empty fish, meat, fruit and vegetable tins, meat bones, vegetables, fruit from kitchens, waste, etc. Rooting through this were over thirty hogs, old and young, which with their added filth made the worst mess and dump I have ever seen in fourteen years' experience with the Provincial Board of Health. Nothing was covered, burned or buried, and apparently no effort made whatever to prevent causing a nuisance which is becoming daily a greater menace to the health of the community. The odors were, in places, sickening from the horrible mess.

Referring to the report of Dr. T. J. McNally on this same nuisance made on 20th July last, I can say that I can corroborate every word of it, excepting that at the time of my visit there were few flies, the weather being unfavourable, but in other respects the conditions were, if possible, very much worse. I saw Mr. Campbell on the premises, and in reply to my expressed surprise at his method of disposing of the city garbage, he contended that he was justified in so disposing of it so his hogs could fatten on what they could root out of it. He also contended that there were other nuisances as great as his, indicating a nearby slaughter-house just inside the city limit. This I also visited, and found some blood and washings running from it through a sewer pipe into a rivulet which discharged into a small creek running swiftly through Campbell's woods and which also gets the soakage from his garbage dump.

I called later on the City Medical Officer of Health and also the Mayor and drew their attention to the necessity of having the slaughter-house discharge remedied. The latter disavows all responsibility of the city for the nuisances from Campbell's dump, as he thinks their contract with him places all on him. However, the nuisance is such that it should be abated without any delay.

All of which is respectfully submitted.

REPORT *re* NUISANCE IN TOWNSHIP WATERLOO (2ND).

To Dr. J. W. S. McCullough, Chief Health Officer, Ontario.

As instructed by you I visited the Township of Waterloo, adjoining the city of Kitchener, on Tuesday, November 5th inst., to investigate a nuisance caused by disposal of garbage from the city. This same nuisance I examined on September 26th last, and reported on it the following day.

I beg now to report that on my visit yesterday I found the nuisance still existing just as it was in September, with the additional deposits of a largely increased quantity of garbage, similar in nature to that before described, a few yards nearer the city boundary, and much more exposed on the bank of and into the creek which empties a few hundred yards farther down into the Grand River, then flowing through Galt, Brantford, etc. At the more recent deposit a meagre attempt had been made to cover a small section of it with a few shovelfuls of earth, but the hogs were rooting it up so that the covering was scarcely observable. The soakage from the whole dump naturally reaches the creek. If this continues a terribly unsanitary condition will exist next spring, when melting snow carries the filth into the stream, and the following warm weather causes further decomposition. The whole situation is a nuisance, which should be abated at once.

REPORT *re* ALLEGED NUISANCE FROM TURNIP FACTORY AT NEW TORONTO.

To Dr. J. W. S. McCullough, Chief Health Officer, Ontario.

A complaint having been received *re* a nuisance existing in New Toronto I visited that municipality yesterday, November 1st, and found the cause to arise principally from a turnip factory located close to the north side of the Grand Trunk Railway line and situated in Etobicoke Township.

The factory is working on a Government war contract. The water supply is furnished from the New Toronto civic system. The turnips are washed and peeled by machinery, the effluent being discharged into an open tank in rear, where the grosser material is held by a screen and the liquid discharged through a few feet of tile into a small stream which flows underneath the railway track and across a corner of New Toronto, thence through the asylum grounds to the lake. There are a few residents at no great distance, say from fifty to three or four hundred yards, from the stream, which is a mere rivulet, and who complain of the odour arising therefrom. There is certainly a very disagreeable odour in the neighbourhood of the tank and where discharged into the stream. Farther down and where I crossed the stream I did not detect any odour nor was there any complaint of it at the asylum except when wind from direction of the factory.

The waste settlings in the tank are removed, I was told, once a week. As the industry is furnishing food for the troops it would be a hardship to shut off the

water supply and stop the whole work. I would suggest that the nuisance might be remedied by putting in a finer secondary screen to catch more of the solids, and then running the effluent through a charcoal filter bed before discharging it into the creek.

The cost of the screen and filter bed, the town engineer informs me, would only be in the neighbourhood of fifty dollars.

I may here add that adjoining the turnip factory there is a cider mill, and beside it only a few feet from the turnip tank is a large dump of apple refuse from which emanates a very unpleasant odour. This should be removed and not allowed to decompose where it is liable to become or add to the nuisance.

The Board of Health of Etobicoke Township should be notified, as the cause of the nuisance arises in that municipality.

REPORT *re* NUISANCE AT OAKVILLE.

To Dr. J. W. S. McCullough, Chief Health Officer, Ontario.

Complaint having been received concerning various unsanitary conditions existing in Oakville, as instructed by you, I visited that town on Tuesday, 25th instant, and with the Medical Officer of Health and the Sanitary Inspector looked over the premises at the G.T.R. Station, the Basket Factory, along a lane in rear of the Post Office, yards adjoining the "Star" office and the Rubber Factory. At all except the last foul unsanitary pit closets were found. At the rubber factory a tile pipe carried the overflow from a cement cesspool into an open drain which passed close to several private residences, thence into a creek and to the lake. I strongly recommend that the Municipal Council pass a by-law forbidding the installation of any more pit closets within the municipality and the abolition within a reasonable time of those already in existence, and wherever any property abuts on a street having a sewer, connection therewith be required. Where no sewer connection is available that the dry earth and bucket system be compulsory. As the latter can be installed at an expense of only a dollar or two or even less there is no reason for permitting the foul pit system which is so offensive to both eye and nostrils as well as a menace to health. In one yard (west side of "Star" office) a large dump, apparently the accumulation of years, was seen with human excreta on it and wet with slop water. This should be removed. The rubber factory connection with the open drain should be abolished, and I also here advise sewer connection.



Report of the Provincial Sanitary Engineer

F. A. DALLYN, C.E.

To the Chairman and Members, Provincial Board of Health, Ontario.

Gentlemen,—I have the honour to submit the following report upon the work of your engineering department for the year 1918. The following applications were received and approved of:—

Waterworks extensions	52 certificates	\$526,968.38
New supplies and equipment	10 “	353,050.00
Water Purification	3 “	100,000.00
Sewer extensions	75 “	569,892.86
New sewerage systems	3 “	7,259.30
Sewage disposal works	3 “	33,512.85
Re sewerage	81 “	\$610,643.01
Re water	65 “	980,015.38
	146	\$1,590,658.39

The total as above shows a further decline in municipal improvements being the result of the war-time tension. It would be interesting for you to note that the work now undertaken by the Board has reached considerable magnitude as is shown by the following summary for the years 1915 to 1918.

1915—Total applications.....	286;	Total estimated cost	\$4,679,496.94
1916—“	190;	“	2,010,070.42
1917—“	186;	“	2,880,534.72
1918—“	146;	“	1,590,658.39

The work which has been carried on since organization of the engineering department in respect to purification and improvement of water supplies is now beginning to show very satisfactory results, and while there has been a general decline in typhoid rates in the United States as well, for the same period, this also is to be attributed to the improvement of water supplies, installation of filters and in general a more thorough supervision of the quality of waters.

The figures for Ontario are very well shown in the following table:

TABLE NO. 1.—ANNUAL DEATH RATE FROM TYPHOID FEVER PER 100,000 OF POPULATION.
PERIOD 1908-1918.

Rate for	1918	1917	1916	1915	1914	1913	1912	1911	1910	1909	1908
County	5.09	6.58	8.1	9.45	10.0	13.3	10.9	16.1	22.0	25.1	20.5
City	9.6	7.5	12.1	9.43	12.4	17.3	27.7	35.8	51.5	34.3	37.8
Towns.....	17.2	31.4	52.2	38.0	47.4	46.0	47.0	62.3	56.4	67.7	107.1
Average for Prov..	7.52	8.4	12.5	10.7	13.5	16.7	18.7	25.3	31.5	29.9	29.7

In Table No. 2 the individual rates for the cities are set out in detail. Table No. 1 showing general rates for the Province for rural and urban municipalities directs one's attention especially to the continuance of a high typhoid rate for the towns.

1908-1918

ONTARIO CITIES.

TABLE NO. 2.—DEATH RATE PER 100,000 OF POPULATION FROM TYPHOID FEVER.

City.	1918	1917	1916	1915	1914	1913	1912	1911	1910	1909	1908	Remarks.
Belleville.....	0	26	81	63	17	18	37	19	50	40	71	
Chatham	183	21	46	8	16	58	44	30	39	68	49	Filters and
Fort William	0	0	9	22	21	30	33	35	83	106	111	Chlorination
Galt.....	0	0	25	0	17	27	19	31	42	11	43	Springs.
Guelph.....	6	6	0	12	12	6	6	13	27	69	21	
Hamilton.....	5	4	4	6	7	14	8	24	15	16	19	Ok. Lake
Kitchener	10	5	0	5	11	6	19	7	43	15	15	Ontario.
Kingston	22	9	5	28	43	25	32	26	78	31	31	Springs.
London.....	2	5	2	0	9	3	10	17	4	6	12	Springs.
Niagara Falls....	8	8	27	9	34	85	44	90	60	26	84	
Ottawa.....	6	5	18	24	17	19	108	101	28	24	31	
Peterborough	8	0	14	14	25	10	10	17	29	6	18	
Port Arthur	0	20	21	5	50	146	163	121	178	164	138	
Sarnia.....	41	62	60	34	26	45	139	148	101	82	110	
St. Catharines ...	10	6	22	0	6	27	22	71	24	24	0	
St. Thomas	35	31	29	29	0	50	19	19	20	34	49	Filters.
Sault St. Marie ..	26	46	31	24	84	127	85	280	154	90	68	
Stratford.....	0	0	12	17	6	6	20	13	34	34	14	Wells.
Toronto.....	3	4	7	2	9	13	14	24	46	25	21	
Welland	68	172	5	82	128	39	58	85	0	0	0	Chlorination
Windsor.....	18	38	29	35	27	10	38	34	49	56	63	badly
Woodstock.....	10	10	28	10	0	10	30	42	21	21	32	supervised
												Springs.
Cities Ontario..	9.6	7.5	12.1	9.43	12.4	17.3	27.7	35.8	51.5	34.3	37.8	
Towns Ontario..	17.2	31.4	52.2	38.0	47.4	46.0	47.0	62.3	56.4	67.7	107.1	
Rural counties .	5.09	6.58	8.1	9.45	10.	13.3	10.9	16.1	22.0	25.1	20.5	
Ontario Prov....	7.52	8.4	12.05	10.7	13.5	16.7	18.7	25.3	31.5	29.9	29.7	
United States...	*	13.4	13.3	12.4	15.4	17.9	16.5	21.0	23.5	21.1	24.3	
Quebec Prov....	.....	29.15	24.2	21.4	19.9	19.0	24.3	.....	.....	.....	.....	

NOTE.—Heavy line indicates year in which Bacteriologic control took effect.

* Returns not available.

The activities of the Board for the past seven years have almost entirely been directed towards the removal and control of the main sources of typhoid transmission, which heretofore appear to have been the city water supplies. The smaller towns for many reasons have not been brought up to a standard which is at all satisfactory in this respect. The principle reason has been the difficulty of interesting the municipalities in water purification programmes involving considerable expenditure. It would appear that the smaller municipalities are not prepared on their own initiative to undertake such work and, I fear, it will be necessary in the near future for the Board to proceed under some of its mandatory powers and require the work to be done in the interests of Public Health. Such municipalities as Carleton Place, Smith's Falls, Oakville, Gananoque, Hanover, Picton, Sturgeon Falls, should not be permitted to continue to supply water for drinking purposes from the present sources without adequate purification and in some cases without re-locating the source of supply entirely.

It is possible that a considerable portion of the difficulty in dealing with the small municipalities might be overcome should the Government embark upon a policy of guaranteeing debentures with respect to water purification and sewerage and sewage disposal. The small municipalities, unfortunately, are rarely able to dispose of their debentures at a much better rate than $6\frac{1}{2}$ per cent., whereas with the backing of the Ontario Government they would probably be able to obtain their money for between 5 and $5\frac{1}{2}$ per cent. If the Government could handle the loan directly for them on a 5 per cent. basis it might be even a more satisfactory arrangement. This would mean an annual saving on each \$100,000 expended, of \$1,000, or possibly a trifle more. As many of the undertakings for the small municipality do not reach more than from \$60,000 to \$150,000 the saving would be of considerable interest to them and might make all the difference in their behaviour towards an improvement.

The requirements of the Housing Commission with reference to the Government loan has directed the attention of many of the smaller municipalities to the need of sewers, and this in turn has shown to the Board the great need for an extensive survey of the Province to determine to what extent municipal sewers are being taken advantage of and in what way portions of the municipalities can be improved by such services. It would appear that the smaller municipalities and housing generally cannot be better served than by the Board assisting them very directly by engineering services and in the consideration of their drainage and water supply problems.

This also appears to be a question. It is the question of plumbing. There is a very decided need for a general regulation respecting plumbing for the whole Province, subject to amendment by the municipalities now having regulations in force, such as the City of Toronto. The rural areas and many of the smaller towns are being very much exploited by unscrupulous supply houses and the character of the work is so inferior that its replacement is only a matter of a few years. A Provincial regulation would overcome a great many of the difficulties now experienced and would insure a satisfactory type of equipment and fittings for the rural as well as the whole organized urban municipalities. Plumbing has until very recently, been considered one of the paramount health problems. Lately there appears to be a tendency to relegate it to other departments of municipal affairs than that of the department of health. It is rather interesting to note that the plumbers are not in sympathy with this movement and that there seems to be a tendency to request the health bodies to again take over supervision of this matter.

During the year the water purification plants at Amherstburg, Oshawa, Rockland, Hawkesbury, Dundas and Weston and New Toronto have been completed. This is a decided gain, the plants at Amherstburg, Oshawa, Rockland and Hawkesbury being of strategic value in controlling typhoid in their respective areas. In every one of these instances the initiative has been taken by the Board, in some instances the mandatory powers of the Board were exercised but in no instance appears any feeling on the part of the municipality but one of gratitude, that their situation has at least been handled in a thoroughly satisfactory manner and that they need no longer be responsible for the spread of water-borne diseases in their counties and throughout the Province.

During the year visits made at the request of the municipal authorities, to Copper Cliff, Hawkesbury, Vineland, Amherstburg, Chatham and Bracebridge. Mr. DeLaporte's absence and the writer's absence on military duty during the latter portion of the year interfered somewhat with the outside service of the Board. The work of the department, fortunately, was not allowed to suffer greatly owing to the services which Mr. Worthington volunteered during your Engineer's absence.

The work of the Experimental Station especially suffered for lack of laboratory assistants. Some work was attempted to determine the relative fertilizer value of the nitrogen of activated sludge and plot experiments were undertaken with very satisfactory results. It is our intention to hold these results for another year and then bring our Experimental Station reports up to date by a substantial Bulletin.

F. A. DALLYN.

**APPROVALS ISSUED FOR SEWER EXTENSIONS, SEWAGE DISPOSAL WORKS
AND NEW SEWERAGE SCHEMES IN 1918.**

Municipality.	Estimated Cost of			
	No. of Certificates.	Extensions.	Sewage Disposal.	New.
Bonfield	1	.....	.....	\$1,512 85
Burlington	2	\$31,512 20	.....	.....
Collingwood (Hospital) (Dis.)..	1	.....	.....	.....
Cornwall	1	630 00	.....	.....
Crescent Beach (Disposal)	1	.....	.....	.....
Ford City	2	68,802 23	.....	.....
Fort Frances	1	7,041 90	.....	.....
Galt	1	1,175 60	.....	.....
Goderich	1	4,051 16	.....	.....
Guelph	1	1,215 00	.....	.....
Hamilton	5	13,398 75	.....	.....
Hawkesbury	1	.....	.....	32,000 00
Ignace (new)	1	.....	.....	.....
Kingston	1	7,247 40	.....	.....
Kitchener	1	1,441 88	.....	.....
Lindsay	2	2,783 50	.....	.....
London	3	20,540 22	.....	.....
New Toronto	1	1,083 05	.....	.....
Niagara Falls	2	12,588 44	.....	.....
North Bay	2	2,306 16	.....	.....
Oshawa	2	5,093 00	.....	.....
Ottawa	9	47,677 47	.....	.....
Owen Sound	1	908 38	.....	.....
Parry Sound	1	6,590 00	.....	.....
Pembroke	4	22,582 57	.....	.....
Perth	2	7,908 54	.....	.....
Peterborough	1	17,669 24	.....	.....
Preston	1	477 26	.....	.....
Renfrew	2	7,913 67	.....	.....
St. Catharines	2	3,663 22	\$7,259 30	.....
Sandwich	2	28,761 80	.....	.....
Sarnia	2	12,099 80	.....	.....
Sault Ste. Marie	1	20,165 00	.....	.....
Smith's Falls	4	1,345 00	.....	.....
Stratford	1	401 00	.....	.....
Sudbury	1	220 40	.....	.....
Thorold	3	3,783 00	.....	.....
Toronto	2	124,643 92	.....	.....
Walkerville	3	18,054 32	.....	.....
Waterloo	2	1,404 67	.....	.....
Warton	1	2,870 00	.....	.....
Windsor	3	51,561 81	.....	.....
	81	\$569,870 86	\$7,259 30	\$33,512 85
Summary.				
Extensions	75	\$569,870 86		
Sewage Disposal	3	7,259 30		
New	3	33,512 85		
	81	\$610,643 01		

CERTIFICATES ISSUED RE WATER MAINS, PURIFICATION, ETC, 1918.

Municipality.	Estimated Cost of			
	No. of Certificates.	Extensions.	Purification.	New.
Brantford (sale of land)	1	.....	.....	.....
Burlington	1	\$17,338 31	.....	.....
Creemore	1	1,600 00	.....	.....
Crowland Township	1	.....	.....	\$40,000 00
Dundas	3	21,000 00	27,000 00	.....
Fort Frances	1	5,618 00	.....	.....
Fort William	1	10,348 83	.....	.....
Guelph	1	21,903 00	.....	.....
Hamilton	6	15,556 77	.....	.....
Hawkesbury	2	.....	50,000 00	27,000 00
Kingston	3	1,870 00	.....	30,000 00
Leamington	1	.....	.....	40,000 00
Lindsay	1	7,694 12	.....	.....
Matheson	1	.....	.....	43,000 00
Mattagami Pulp & Paper	1	.....	.....	.....
New Toronto	3	35,000 00	.....	.....
Norwich	1	20,000 00	.....	.....
Pembroke	2	14,537 00	.....	.....
Picton	2	14,928 30	.....	.....
Port Stanley	1	1,943 15	.....	.....
Renfrew	1	.....	.....	11,000 00
St. Catharines	2	26,446 90	.....	.....
St. Mary's (new)	1	.....	.....	.....
Sandwich East	1	3,459 10	.....	.....
Sarnia (new source)	1	.....	.....	55,900 00
Sault Ste. Marie	2	11,410 68	.....	86,000 00
Smith's Falls	1	.....	.....	12,900 00
Stratford	2	.....	.....	.....
Sudbury	1	165 28	.....	.....
Tavistock	1	2,200 00	.....	.....
Thorold	2	750 00	.....	7,250 00
Timmins	1	6,398 00	.....	.....
Toronto	4	14,963 74	.....	.....
Weston	2	.....	23,000 00	.....
Windsor	1	40,000 00	.....	.....
York Township	6	231,834 20	.....	.....
	63	\$526,965 38	\$100,000 00	\$353,050 00
Summary.				
Extensions		\$526,965 38		
Purification		100,000 00		
New supplies and equipment.....		353,050 00		
		\$980,015 38		

INGERSOLL WATER SUPPLY.

APRIL 18th, 1918.

Sir,—Following your inquiry, as to what had been done at Ingersoll to improve the condition of the water supply, I went to Ingersoll on Friday, April 12th, and in company with Dr. Canfield, the local Medical Officer of Health, Mr. Gafer, the Chairman, Mr. Muir, a member, and Mr. Hall, the Engineer of the Ingersoll Water, Light and Power Commission, I visited the Head Spring, the Rice drain and the farm at Robinson's to determine the extent of the improvement undertaken.

The only change made by the Commission since Mr. DeLaporte visited the supply in 1916, was the ordering of a chlorinating apparatus. This, I was assured, had been continuously operated since its installation. That protection, much needed as it was, has not, however, eliminated all danger, and our laboratory reports continue to show the frequent occurrence of high B. Coli numbers in the tap water.

The town, since taking over the water supply from a private company, and for which they paid \$125,000.00, have made no major improvements whatsoever in connection with sources of water, except the chlorination referred to. In this the town has been criminally negligent and has assumed responsibility for conditions, which, if generally known to the town's folk, would occasion very considerable censure of the officials responsible.

The report of the Board, August 14th, 1916, called the Commission's attention to a condition with which they were already familiar, that is, the presence of cattle in and about the Head Springs. This has not been corrected and at the time of my visit last Friday, the supply from what is known as the Head Springs was of a yellowish colour, due wholly to the extraordinary amount of faecal matter from cattle, which had accumulated on the soggy ground and which was being carried forward with the flow of the springs, directly to the town supply. There can be no excuse offered for a continuance of this condition.

The area adjacent to the Head Springs can be very easily expropriated by the municipalities, by virtue of existing powers expressed in the Municipal Act, and fences can be maintained so as to prevent cattle breaking through from adjacent fields. The other points shown to be sources of pollution in Mr. DeLaporte's report, are also quite unprotected and one is amazed that more trouble has not been experienced from the unprecedented conditions, in which surface drainage from pastures and barnyards has been so freely admitted to the water supply.

I would urge your attention to the advisability of ordering the town to immediately expropriate and fence off ten or fifteen acres adjacent to and including the Head Springs. I also think it advisable to have this soggy area ploughed up, so as to mix the manure there present with the soil, in order the more readily to accomplish its destruction.

I would also recommend that the dosage of chlorine be very considerably increased and such a quantity used as will maintain the B. Coli content absent in 25cc., this dosage to continue until another source can be obtained, or until filters be added to the existing measures now attempting to cope with pollution.

The Commissioners directed my attention to the fact that they had been recommended to make some investigation of the possibilities of a deep well supply. It seems advisable, and I so recommend that such an investigation be immediately proceeded with. If funds are not available for such work, it seems proper to charge the investigation to engineering services in connection with the necessary improvements, and provide for the expenditure in the same debenture issue.

All of which is respectfully submitted.

F. A. DALLYN.

RE CANADIAN COPPER COMPANY, WATER SUPPLY TO THE ROAST YARDS.

Dr. George, District Officer of Health, visited this property on April 1st and reported that some six to eight hundred employees were dependent upon two wells and a creek for water supply; one of the wells being exposed to pollution he ordered closed. He requested that the Board's Engineer should investigate the matter further and determine the advisability of requiring the Company to obtain a water supply at Vermillion River.

On June 2nd I went to Copper Cliff, met Dr. McAulay and Mr. Jones, Chief Engineer of the Company. I visited Creighton and the Roast Yard in company with the latter and examined the situation complained of and also visited the point on the Vermillion River where it is suggested to locate an intake

I am rather against the proposed supply from the Vermillion River, which will be very expensive, probably costing as much as \$40,000.00 and the water itself will, in my opinion, require filtration as a further protection.

I have suggested that the Company explore the ground water supply immediately adjacent to the existing pump house and sink a casing and learn what quantity of water is available at that point. Such a supply will be much cooler and of a better quality than the water from Vermillion River.

The Company have agreed to filter this water in addition, provided that an adequate supply can be obtained. This will not cost them more than a few thousand dollars and they seem very satisfied that the Board should meet them in this matter.

I think it advisable that water mains be extended more generally about the Roast Yards and taps left near the shacks. The well at the creek near the railway tracks should be closed as it is receiving drainage from the dump near by and the top has been badly damaged by the frost.

Another matter to which my attention was directed was the absence of incinerators about the camps. I think it would be advisable for them to introduce the use of much the same type of incinerator as those now being used in the military camps—those manufactured by A. H. Reid, 69 Rowanwood Ave., Toronto. These would serve for their requirements very well and their use would do away with the unsanitary dumps and a fly nuisance which exists adjacent to the camp. This matter was called to the attention of the Managing Director and he agreed with us and promised to have the condition improved.

F. A. DALLYN.

Report of Sanitary Inspector

NORTH BAY, ONT., March 31st, 1919.

From Alex. R. White, Provincial Sanitary Inspector, North Bay, to the Provincial Board of Health for Ontario.

I have the honour to submit for your consideration my second annual report, covering the year 1918.

While this appointment devolves upon me all the duties of a Provincial Sanitary Inspector, which necessitates my visiting and spending a considerable portion of my time in organized municipalities, sometimes by request of Local Boards of Health, I am nevertheless trying, when time will permit, to make a specialty of carrying out the Public Health Act and the regulations as affecting the unorganized territory. This I am finding increasingly difficult, for two reasons. Firstly, the tremendous territory to be covered, with the resultant waste of time going to and from the work to be visited, and secondly, the enormous duties to be performed which we have knowledge of as requiring attention. This work covers the inspection of lumbering, mining and construction work, and, of course, embraces the inspection of a large number of small towns and villages, which, owing to their hasty formation, oftentimes occasioned by some boom, perhaps the result of a gold discovery, or the construction of a power plant, or paper mill, require frequent and careful attention from your officials, if such diseases as typhoid fever are to be prevented. I have, therefore, knowing that it was impossible to cover the whole district, been devoting much of my time to certain localities which are known to us as *danger spots* and where outbreaks of diseases might be expected if careful inspection and supervision were not provided.

MILEAGE TRAVELLED WITH EXPENSE TO THE BOARD.

During the year I have travelled 17,507 miles, principally in Districts Nos. 6 and 7, at a total expense to the Department, including railroad fares where no passes are provided, of \$890.64.

LUMBERING STATISTICS.

Returns made to the Department by the various Crown Timber Agents throughout the Province, show that we have 135 companies operating during the 1918-19 season, and it should here be noted these figures and statistics cover a period from October 1st, 1918, to March 31st, 1919, known as the lumbering season, and all other matters dealt with in this report, however, cover the year 1918 only.

These 135 companies I find on inquiry, and by reference to the reports of contracting physicians, give us a total of 490 camps; add to this the various concerns who are lumbering on patented lands and so on where no timber dues are paid, and of which we have no reports from these agents, we may possibly have 600, employing roughly 19,000 men. Of this number of companies said to be operating, 117 have supplied the Board with information and have contracted with a qualified physician for the sanitary supervision of the camps, works, etc., in compliance with the regulations governing this class of work, and while the

information received is anything but satisfactory, and necessitates a huge amount of correspondence before acceptance, it still shows a marked improvement over the year 1917.

Under the regulations the contracting physician in unorganized territory is required to make a monthly report to the Board, setting forth conditions at these camps after inspection. Our records show that we have 57 physicians engaged in this work, and from whom we have received 146 reports, but as this total is very largely made up by some 10 physicians who report fairly regularly, it will be seen that there are many who, aside from the short report sent at the commencement of the season, seem to neglect this very important matter for the rest of the year at the Board's expense.

CAMP STATISTICS.

The number of camp inspections made by me during 1918 were 84, as compared with 113 during the previous year. This discrepancy is due to the fact that very few companies were able to start work until late in the year, due, I believe, to the very wet fall, as well as to the prevalence of influenza and the acute labour shortage. Most of my inspections were made, therefore, during the early part of 1918.

Camps visited and inspected were situated at such places as Jacksonboro, Smooth Rock Falls, along the Mattagami River from Timmins, Parry Sound, French River, Osaquon, Coughlan, Bushnell, Mileage 44, T. & N. O. Ry., McLaren's Bay, Osborne, Connaught, Capreol, and Daventry. Mining camps were also visited at Nickleton and Kirkland Lake.

CAMPS OF THE MATTAGAMI PULP & PAPER CO., SMOOTH ROCK FALLS.

I beg to offer, with regard to this company, some further information *re* the transactions of the Board with respect to this company's camps, as a continuation of my 1917 report.

Inspection of this company's camps during the first week in January showed small improvement over the previous season, and in reporting the findings to the Board at Toronto, it was considered advisable by Dr. McCullough, to request the presence of the President, Mr. D. M. Chisholm, at the Board's offices. The meeting took place on or about January 15th when, after the Board's attitude had been explained, an ultimatum was issued providing that all camps which were being operated contrary to the provisions of the regulations, or were in a position where the waters of the streams were being polluted, were to be at once closed, and were not to be re-opened until the said regulations were fully met. This action being designed to protect the men in the camps, as well as the users of river water down stream at Jacksonboro and Smooth Rock Falls, at which latter place several cases of typhoid had broken out the previous year.

This action resulted in eight camps being closed and five larger buildings constructed in very much better locations to complete the season's work; later, however, I found these condemned camps were being used as conveniences by the men passing up and down the river, necessitating the tearing down and burning of the structures. These were practically the only changes effected before the break-up. The company promised, however, that in putting in new camps in the fall an earnest attempt would be made to comply with the Board's requirements.

My next inspection was made during the first week in November, beginning at Timmins and working my way down stream to Sturgeon Falls, a distance of thirty-five miles. Twenty-one camps were visited, and while they were mostly located at a distance of 125 feet from the water, there was generally a gully or ravine behind, or to one side of the camps, which might act as a drain carrying to the river any polluting matter which might be placed upon the ground surface during the run-off.

However, in the construction of the buildings a revolution has taken place, and whereas last year's camps with their pole floors, poor light, no ventilation, and where eating, sleeping, and cooking were carried on in the one building, we now have large well-lighted and ventilated camps built to house forty or fifty, and in some cases seventy-five men. At each of these reasonable closets, properly located, have been built, and deep holes provided for the reception of garbage, which last season was thrown upon the ground.

This reform, while yet incomplete, is highly gratifying, and is, I think, due to two causes. First, to the giving of these bush contracts to a much higher type of contractor than heretofore, and secondly, to the co-operation of the company, coupled with the hard work of a very painstaking and energetic contracting physician, Dr. Wright, one of the very few officials who sends a monthly report covering all camps under his charge.

I, therefore, confidently expect that during the next year there will be very little fault to find with these camps, always provided, of course, matters are carried forward as per statement given.

This operation consists of fifty-seven camps and gives employment to about 1,000 men in the woods.

CONCLUSIONS *re* INSPECTION OF LUMBER CAMPS AND TERRITORY WITHOUT MUNICIPAL ORGANIZATION.

It may be readily noted that there is a decided falling off in the inspections made this year as against 1917. This is partly explained under the head of *Camp Inspections*, and also to my services being urgently required elsewhere adjusting complaints which come to us from time to time, as well as supervising outbreaks of communicable diseases which, of course, must have first call upon my time, therefore, certain conclusions which I had arrived at last year have become even more apparent at the time of my writing.

Knowing as I do the huge amount of work to be performed and the little I am able to do, comparatively speaking, these long trips through the woods, oftentimes travelling forty or fifty miles, perhaps examining many camps, coupled with the fighting which oftentimes requires to be done in order to make an impression on some of these large corporations who appear to have little time or inclination for public health matters, is very hard work, and sometimes after this has been done and conditions brought to light which in applying a remedy no delay can be permitted necessitating court proceedings, but which cannot be undertaken for lack of corroborative evidence, such a case as I have cited has happened, and must happen, with the result sooner or later, outbreaks of typhoid fever will occur which can only be prevented by systematic inspection requiring a much larger staff of inspectors than we now have. This year, therefore, should see the appointment of two additional men.

THE CONTRACTING PHYSICIAN.

This official, for he is an official, in an unorganized territory, has a very important duty to perform, his work being of a similar nature to that of his brother the Medical Officer of Health, but without the backing or the *fixity of tenure* of the latter; therefore, to put the case of this official in a "nutshell," so to speak, regarding the sanitary supervision of the camps, works, etc., under his charge, the clause in his contract which makes him supervisor might as well be left out in 85 per cent. of these contracts, for if he criticizes the operation, or the condition of the same too much, or if his recommendations are likely to cost his employers money, he will perhaps be told to take care or someone else will be hired to replace him who will not be quite so exacting. This being the case, if the contract is a fairly *lucrative one*, he is likely to travel along the line of least resistance and say little, with the result that he does not even get a monthly report, as the receipt of this would bring one of the Board's officials to see what the trouble was, which is not at all desired.

The contracting physician, then, should not be at the mercy of these companies, if we expect results, but should be placed in a position where his removal can only take place with the approval of the Board. He should then be forced to carry out the provisions of his contract and of the regulations; failing this the Board should require his employers to contract with another physician who will.

The circulars sent out by the Board at the commencement of the season have been successful. The early reporting by a large number of concerns I consider due to this cause.

COMMUNICABLE DISEASES.

Outbreaks of communicable diseases occurred at the following places and required my personal attention.

Smallpox:

	Cases.
Townships of Hanmer and Capreol	35
Pickerel River	1
Byng Inlet	6
Foleyet	2
Sturgeon Falls	8
Warren	Unknown
Verner, Township of McPherson	2
	54

Diphtheria:

Township of Capreol	3
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Scarlet Fever:

Kirkland Lake	5
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Typhoid Fever:

Georgian Bay Lumber Camps, Township of Blythe	11
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Total	73
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None of these outbreaks were of a serious nature, or assumed large proportions except smallpox at Hanmer and Capreol, where we had 35 cases with no deaths. The disease for the most part was of a mild character and had been prevalent in these villages for at least two months previous to my visit, having been mistaken for chickenpox. This was especially true in the village of Capreol where evidence

was not wanting to establish this fact. In Hanmer (organized) I found it advisable to take the matter out of the hands of the local officials, who showed little inclination to cope with the outbreak. I obtained the services of a sanitary constable to take charge and results were very good.

The eleven cases of typhoid occurring at the Georgian Bay camps, we believe, were due to the faulty location of the principal well, which was in a position to receive the drainage from two large sleep camps. The closing up of these, coupled with a liberal use of typhoid-vaccine by the contracting physician Dr. McKee, quickly brought results.

During the year I was compelled to take police court proceedings against four lumber companies, the charge being neglect to provide the Board with information required under the regulations and to contract with a qualified physician for the sanitary supervision of the camps. The companies were:—

	Fine.
Reemsbottom & Edwards	\$20 00
Porcupine Pulp & Lumber Co.	20 00
Jas. Horrigan & Co.	20 00
St. Maurice Lumber Co.	5 00
Total	\$65 00

In addition I visited the following places:

	Visits		Visits
Smooth Rock Falls	3	Cochrane	2
Copper Cliff	1	Point Au Baril	1
Parry Sound	3	MacTier	1
Foleyet	2	Cobalt	2
South River	1	Nickelton	2
Capreol	5	Raymore	1
Iroquois Falls	3	O'Donnell	1
South Porcupine	1	Sault Ste. Marie	1
Mattawa	2	Total	32

I also visited once the principal towns and lumbering centres in western end of the Province, but was unable to devote much time owing to the pressure of business at this end.

All of which is respectfully submitted.

ALEX. R. WHITE,
Provincial Sanitary Inspector.

Laboratory Reports for the Year 1918

Laboratories of the Provincial Board of Health, Toronto

Branch Laboratories at Kingston

Branch Laboratories at London (Institute of Public Health)

Laboratory Reports for the Year 1918

Published by the National Bureau of Health Statistics

United States Department of Health

Washington, D. C., 1919

REPORT OF THE LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH, TORONTO

To the Chairman and Members of the Provincial Board of Health.

I have the honour to submit herewith a tabulated statement of the work performed in these laboratories during the year 1918. The total number of specimens examined was 13,458. The following table showing a comparison of the number of specimens examined in the years 1911, 1917, 1918, indicates the growth of this department.

	1911		1917		1918	
Diphtheria (Swabs)		1,068		3,964		2,758
Release from Quarantine	173		1,440		970	
Positive	91		412		352	
Negative	82		1,028		618	
Diagnosis	895		2,524		1,788	
Positive	226		465		399	
Negative	669		2,059		1,389	
Tuberculosis (Sputum)		1,650		2,159		2,091
Positive	402		385		431	
Negative	1,248		1,774		1,660	
Typhoid (Blood)		749		835		820
Positive	70		214		178	
Negative	679		621		642	
Syphilis—						
Colloidal Gold Reaction				5		29
Wasserman Reaction				569		3,846
Very Strongly Positive			148		653	
Strongly Positive			7		140	
Positive			22		237	
Negative			392		2,816	
Treponema Pallida				3		39
Positive					8	
Negative			3		31	
Gonorrhea				111		624
Positive			44		347	
Negative			67		277	
Rabies (Brains of Animals)		70		79		35
Negri bodies present			34		6	
Negri bodies absent			45		29	
Milk		168		54		76
Water		1,718		2,757		2,213
Bacteriological	1,668		2,732		2,200	
Chemical	50		25		13	
Liquor (for License Department)		241		895		594
Miscellaneous Specimens (including Coal for Public Institutions)		86		327		333
		5,750		11,758		13,458

Tabulated statement of Vaccines and Pasteur Treatments is appended. The total number of doses of Typhoid and Paratyphoid Vaccine was 534,629. Of this the Canadian Militia received 518,021 doses.

The Influenza Vaccine distributed for civilian use amounted to 153,217 doses. The Militia received 95,390 doses.

The increase in the volume of work has taxed the capacity of the present laboratories to the utmost. New and larger quarters are greatly needed.

H. M. LANCASTER,
Acting Director of Laboratories.

REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH

Municipalities	Diphtheritic Swabs.				Tubercu- lous Sputa		Typhoid Bloods.		Syphilis						
	Release		Diagnosis						Wassermann Reaction				Treponema Pallida.		
	+	-	+	-	+	-	+	-	Colloidal Gold Reaction	Very Strongly Positive	Strongly Positive	+	-	+	-
Addington—															
Wilton	1	2													
Algoma—															
Blind River			1	1											
Bruce Mines			1		1	2	1	3		1				3	
Chapleau				1	1	4		1						1	
Crean Hill					1	4									
Creighton Mine						5								2	
Espanola						2	1	2							
Foleyet															
Hornepayne								2						3	
Jellicoe															
Kapuskasing					3	4	1	3							
Levack								1							
Little Current						1									
Massey			3			2									
Nickelton															
Sault Ste Marie	2	4	2	8	9	20		1						1	
Schumacher						1									
Spragge				2											
Steelton West						2							1	1	
Thessalon			2	1			1	1							
Timmins	1	3	1	8		1	1	3			1	1			1
Webbwood			3			7		3		1					
Wiarton						2									
Worthington											1		1		
Brant—															
Brantford				1	11	42	1	2		4	1	2	24	1	3
Kelvin							1	2							
Paris				3	2	9		2							
St. George				1						2			1		
Bruce—															
Cargill				1		2									
Chesley	1	6	5	4		8	2	4							
Elmwood		1	1		1	7									
Hepworth					2										
Kincardine			3	4		1		4							
Lucknow					1	4									
Mildmay								1							
Paisley						1	1	1							
Pakesley															
Port Elgin		1	1	4		18	2	5							
Ripley						5									
Southampton															
Tara	2	9	2	16	1	2		2							
Teeswater					1		1	2							
Tiverton			1			1	1	2							
Walkerton					1	3	1	1							
Wiarton					1	7									
Carleton—															
Ashton			1	2	1	11									
Carp	1	1			2	2		1							
Kinburn															
Manotick			1	3											
Metcalf					3	2									
North Gower					2	6	1	4							

OF ONTARIO AT TORONTO FOR THE YEAR 1918.—SPECIMENS EXAMINED

[illegible]

REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH OF

Municipalities	Diphtheritic Swabs.				Tuberculous Sputa		Typhoid Bloods.		Syphilis							
	Release		Diagnosis						Wassermann Reaction						Treponema Pallida.	
	+	—	+	—	+	—	+	—	Colloidal Gold Reaction	Very Strongly Positive	Strongly Positive	+	—	+	—	
Carleton—Continued																
Stittsville						2	1									
Westboro																
Dufferin—																
Grand Valley					1											
Orangeville	1	5	2	6	1	7	1									
Rosemont																
Shelburne																
Dundas—																
Morrisburg	10	6	3	1	1	9	1	3							1	
Durham—																
Bethany				1		3	3	8								
Blackstock						1		1								
Bowmanville				5	2	12	1	8				1				
Eaniskillen		1	1		2	6		1								
Millbrook				2		6	1	6								
Newcastle	7	3	1													
Orono		3		2	1	3	1	2								
Port Hope				4	4	26	2	6					3			
Pontypool		2		1		4		2								
Elgin—																
Aylmer						1										
Baynham																
Corinth																
Iona Station																
Rodney						2										
St. Thomas								1								
Straffordville						1										
Essex—																
Amherstburg					1											
Belle River					1	5										
Comber						2										
Essex					1	19		1								
Kingsville								3								
Ford				3	1	4		3								
Ojibway																
Leamington	3	6		16	1	4	2	1					1			
Sandwich								1					1			
Tecumseh				1		4		2					1			
Walkerville			6	2	3	9	1	2		2	2		7			
Windsor				134	12	45	3	15		27	2	10	67			
Frontenac—																
Kingston																
Glengarry—																
Alexandria				2	3	9	3	1								
Apple Hill						1		1								
Dalhousie Mills					3	3	1	2								
Dunvegan					1	2										
Martintown							1	1								
Maxville					2	1	2	3								
Grenville—																
Cardinal				1		2										
Kemptville			1	1	2	4	1	8								
Prescott					2	1										
Spencerville					3	1		1								

ONTARIO AT TORONTO FOR THE YEAR 1918.—SPECIMENS EXAMINED.—*Con.*

Gonorrhea		Rabies Diagnosis				Milk										Waters		Liquors for License Department	Miscellaneous Specimens	Total for Year	
+	-	Animal	Negri Bodies		Animal Inoculations	Food Content		Preserv- atives		Bacteriological				Count	Extraneous Matter	Number of Milk Samples	Chemical	Bacterial			
			+	-		Fats	Total Solids	+	-	Tubercle Bac		Pus Cells									
										+	-	+	-								
																		3			
		1																	2		
		dog																	1		
		dog		1																	
		1	2															4			
																		5			
		dog		1														4			
																		4			
		9	3	dog	1													3	1		
																		3	5	2	
																		3			
																		2			
																		3			
																		1			
																		2	2		
																		1	4	1	
																		1			
																		6			
																		1			
																		2			
		2																1			
		3	3															14	13	1	
																				5	
																		4			
																		4			
																		4			

REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH OF

Municipalities	Diphtheritic Swabs.				Tuberculous Sputa		Typhoid Bloods.		Syphilis						
	Release		Diagnosis						Wassermann Reaction				Treponema Pallida.		
	+	-	+	-	+	-	+	-	Colloidal Gold Reaction	Very Strongly Positive	Strongly Positive	+	-	+	-
Grey—															
Annan.....							2								
Clarksburg.....							3								
Chatsworth.....	26	20	2	2	1										
Desboro.....							4								
Dornoch.....				1	1		1								
Dromore.....							1								
Dundalk.....				1	2		4		1						
Durham.....				2	2		1		1						
Feversham.....															
Flesherton.....				2	1		6		3						
Hanover.....					2										
Harran.....															
Heathcote.....					2		1		2						
Holstein.....							1		2						
Markdale.....				2	2		3								
Meaford.....					1		6	3	4						
Neustadt.....															
Owen Sound.....	8	34	12	58	7	20	7	8		6	1	4	6		
Rocklyn.....							1								
Thornbury.....							3		1						
Haldimand—															
Caledonia.....				1			1								
Canfield.....							2								
Cayuga.....					2		1		2						
Dunnville.....					3		4	1	4						
Fisherville.....									1						
Hagersville.....				1			3			3			6		
Jarvis.....				2	1		4		3				1		
Haliburton—															
Harcourt.....															
Minden.....				1			3								1
Halton—															
Acton.....					1		1								
Bronte.....															
Burlington.....				3	1	7		1		16	1	4	200		
Freeman.....															
Georgetown.....				1	1	4		2							
Milton.....	9	18	3	6	1	10		1		1		1	1		
Oakville.....				1		2		4		3		1	5		
Palermo.....		1	1												
Hastings—															
Bancroft.....		1			10	11	1	5					3		
Belleville.....															
Deseronto.....					2	8		4		1		1	3		
Eldorado.....							1								
Foxboro.....				1	1	2		1							
Frankford.....							1								
Madoc.....				1		11		1							
Marmora.....				5	1	3		3		1			1		
Maynooth.....				2											
Stirling.....		3		1	1	1	1	1							
Springbrook.....					1	6	2	4							
Trenton.....	2		1	3	3	9	3	4		8	1	4	14		
Tweed.....					1	2									

ONTARIO AT TORONTO FOR THE YEAR 1918.—SPECIMENS EXAMINED.—*Con.*[illegible]

REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH OF

Municipalities	Diphtheritic Swabs.				Tuberculous Sputa		Typhoid Bloods.		Syphilis						
	Release		Diagnosis						Wassermann Reaction.				Treponema Pallida.		
	+	—	+	—	+	—	+	—	Colloidal Gold Reaction	Very Strongly Positive	Strongly Positive	+	—	+	—
Huron—															
Auburn						2									
Blyth					1	1									
Brucefield						1									
Brussels.....						4	1	2							
Clinton															
Crediton.....					1										
Dungannon						1									
Ethel						1		1							
Exeter					1	2									
Fordwich				1		2		1						1	
Goderich.....				1		1	1	2				1		1	
Kintail						2		2							
Seaforth	3	2		4	1	2	2	1		1				1	
Wingham	1	2	1	13		1									
Kenora—															
Dryden						1									
Keewatin						3									
Kent—															
Blenheim					2	2		3							
Chatham			1	2	6	19	4	10		2	3	3	19		
Dresden					4	8									
Merlin		1		4	1	2				2	1	3	8		
Thamesville					1	2				1			2		
Tilbury				1		3		1		3		1	1		
Wallaceburg.....					3	6		1		1		1	1		
Lambton—															
Alvinston.....	1					2									
Forest	3	5		2		2									
Inwood															
Petrolia					1	1									
Port Lambton						1	1								
Sarnia						1					1			5	
Sombra				1		1								3	
Thedford						1									
Watford						1									
Wyoming.....	1					1		2							
Lanark—															
Almonte.....	1	1		3	1	7									
Carleton Place.....					1										
Lanark							3	1							
Maberley															
Middleville					1	1		1							
Pakenham		5	1	5	1	2								1	
Perth						6									
Smith's Falls															
Leeds—															
Brockville.....	4	6	1		4	7		6		1				5	
Gananoque.....															
Lyn						2									
Mallorytown.....						1		1							
Lincoln—															
Beamsville				1	3	3	1								
Grimsby.....				2		3		8							
Hamilton					1					10	2	1	16		
Jordan			2	1		3									
Merritton					1	1		2							

ONTARIO AT TORONTO FOR THE YEAR 1918.—SPECIMENS EXAMINED.—*Con.*

[illegible]

Municipalities	Diphtheritic Swabs.				Tuberculous Sputa		Typhoid Bloods.		Syphilis							
	Release		Diagnosis						Wassermann Reaction						Treponema Pallida.	
	+	—	+	—	+	—	+	—	Colloidal Gold Reaction	Very Strongly Positive	Strongly Positive	+	—	+	—	
Lincoln—Continued																
Niagara-on-the-Lake.....		1		1		10	1	2		1	1	1	2			
Smithville.....				2												
St. Catharines.....	4	6	3	10	24	62	1	12		8	3	4	24	1	1	
St. David's.....																
Wellandport.....						1										
Vineland.....																
Middlesex—																
Ailsa Craig.....		1	2	3	2	2										
Lobo.....								2								
London.....		1		1		1				1			1			
Mt. Brydges.....		2		2		2										
Newbury.....																
Strathroy.....						6		2								
Muskoka—																
Bala.....								2								
Bracebridge.....				2	1	11		1		1	1	1	3			
Port Carling.....						1										
Gravenhurst.....			1	1	1	7	1	1		1			11			
Huntsville.....			1	3	7	15		3								
Severn Bridge.....		2	1	4		3		3								
Nipissing—																
Bonfield.....						1										
Burwash.....					1	6							4			
Capreol.....				2		1										
Coniston.....				1	1	3		2		1			1			
Garson.....																
Gowganda.....				2		1		1								
Haileybury.....				3	2	4		3		1			1		2	
Iroquois Falls.....																
Kirkland Lake.....								1								
Mattawa.....			1			1										
New Liskeard.....	3	2		4	4	5										
North Bay.....	3	3		3	2	11	3	3		3		1	19			
North Cobalt.....																
Smooth Rock Falls.....																
Sturgeon Falls.....			3	2	4	6										
Whitney.....								4								
Verner.....				1												
Norfolk—																
Delhi.....	1	4	3	9	4	9		10		1			2			
Port Dover.....				1	2	9		3					4			
Port Rowan.....		2			3	2		3					3			
Simcoe.....	1	5	6	8	3	11	1	5					2			
Vittoria.....																
Waterford.....				2	3	3	1	1					1			
Northumberland—																
Brighton.....					3	7		1								
Campbellford.....						1	1									
Castleton.....					1	3		3								
Cobourg.....				3	3	23		6		4	2	4	24			
Colborne.....			1	2	1	3		3								
Grafton.....						5										
Warkworth.....				1	1	6										
Wooler.....						1										

ONTARIO AT TORONTO FOR THE YEAR 1918.—SPECIMENS EXAMINED.—*Con.*

[illegible]

ONTARIO AT TORONTO FOR THE YEAR 1918.—SPECIMENS EXAMINED.—*Con.*

Gonorrhea		Rabies Diagnosis				Milk										Waters		Liquors for License Department	Miscellaneous Specimens	Total for Year																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
+	-	Animal	Negri Bodies		Animal Inoculations	Food Content		Preserv-atives		Bacteriological				Count	Extraneous Matter	Number of Milk Samples	Chemical				Bacterial																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
			+	-		Fats	Total Solids	+	-	Tubercle Bac	Pus Cells	+	-																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH OF

Municipalities	Diphtheritic Swabs.				Tubercu- lous Sputa		Typhoid Bloods.		Syphilis						
	Release		Diagnosis						Wassermann Reaction				Treponema Pallida.		
	+	—	+	—	+	—	+	—	Colloidal Gold Reaction	Very Strongly Positive	Strongly Positive	+	—	+	—
Perth—															
Atwood.....				1			1								
Dublin.....					1			1							
Fullarton.....						2									
Listowel.....		1		1											
Mitchell.....						1									
Sebringville.....						2									
St. Mary's.....					1										
Stratford.....	2	1	2	10	5	17							3		
Peterboro—															
Baillieboro.....				1		3		2							
Ennismore.....						1									
Hastings.....			1	1	3	2									
Havelock.....				1											
Keene.....								1							
Lakefield.....				2			1	2							
Norwood.....															
Peterboro.....	7	16	4	15	9	27	7	11	6			1	24		
Prescott—															
Alfred.....					1	2									
Fournier.....							1	1							
Hawkesbury.....					4	5	3	8					1		2
L'Orignal.....															
Riceville.....		1													
St. Eugene.....	1														
Prince Edward—															
Bloomfield.....															
Consecon.....						3									
Picton.....		1	1	1		6		2							
Wellington.....						1		1							
Rainy River—															
Dryden.....															
Fort Frances.....						3									
North Pines.....						1						1	1		
Renfrew—															
Arnprior.....						1						1	1		
Beachburg.....						1									
Eganville.....					8	7									
Pembroke.....			2	5		2	1						2		1
Renfrew.....	2			3	5	5		1							
Westmeath.....								1							
Russell—															
Bourget.....	39	45	8	20	4	5		3					3		
Rockland.....				1	1		1	1							
Russell.....					1										
Simcoe—															
Aurora.....				1		1									
Barrie.....		3		7	3	12	1	8	2				1		
Belle Ewart.....															
Bond Head.....				3		1									
Bradford.....			1	3											
Churchill.....	9	3	1			2		1							
Cookstown.....															
Coldwater.....															
Collingwood.....			2	4		4	1		2			3	6		
Creemore.....					1	4		4			1		1		
Edgar.....				1			1	1							

ONTARIO AT TORONTO FOR THE YEAR 1918.—SPECIMENS EXAMINED.—*Con.*

Gonorrhea		Rabies Diagnosis*					Milk										Waters		Liquors for License Department	Miscellaneous Specimens	Total for Year
+	-	Animal	Negri Bodies		Animal Inoculations	Food Content		Preserv- atives	Bacteriological				Count	Extraneous Matter	Number of Milk Samples	Chemical	Bacterial				
			+	-		Fats	Total Solids		Tubercle Bac	Pus Cells											
								+	-	+	-	+	-								
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REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH OF

Municipalities	Diphtheritic Swabs.				Tuberculous Sputa		Typhoid Bloods.		Syphilis							
	Release		Diagnosis						Wassermann Reaction						Treponema Pallida.	
	+	—	+	—	+	—	+	—	Colloidal Gold Reaction	Very Strongly Positive	Strongly Positive	+	—	+	—	
Simcoe—Continued																
Elmvale.....					2	7										
Hillsdale.....				1	2		1	1								
Midland.....		2	6	9	2	15	1	1								
Orillia.....	26	51	15	38	5	26	18	20								
Penetang.....				1	5	7	1	1								
Phelpston.....				2		4	1									
Port McNicoll.....				2												
Stayner.....	1		1	2				3								
Thornton.....						3										
Victoria Harbor.....				2		1								1		
Waubashene.....					1	2										
Stormont—																
Aultsville.....						1										
Avonmore.....						1										
Cornwall.....		1		1	1	4	2	2		1				1		
Crysler.....		2	2		1	2	1	3								
Mille Roches.....					2	2		1								
Osnabrock Centre.....						3		1								
Wales.....																
Sudbury—																
Copper Cliff.....				4		1	2	2		1				6		
Sudbury.....			3	3	8	35		1		14	3	3	20	2	2	
Temiskaming—																
Cobalt.....			4	8	4	21		4		11	8	2	18			
Cochrane.....			2	4	1	6	3	2								
Englehart.....																
Gowganda.....						1		1								
Haileybury.....					2	7	1	3				1	1			
Hearst.....				1												
Iroquois Falls.....						3										
Kapuskasing.....				2												
Kirkland Lake.....													1			
New Liskeard.....		3		3		1										
Schumacher.....																
South Porcupine.....																
Smooth Rock Falls.....																
Swastika.....																
Timmins.....																
Thunder Bay—																
Fort William.....							1	4		8	1	8	22			
Nipigon.....																
Port Arthur.....	4	8				8		5		2			4			
Schreiber.....																
Victoria—																
Bobcaygeon.....		2				1		1								
Coboconk.....	1	10	3	4												
Fenelon Falls.....				1	1			2								
Kinmount.....		1		1		2										
Kirkfield.....	1	1	2	3		1		1								
Lindsay.....	3		1	5	5	28	4	12				1	1			
Little Britain.....				1		1		2								
Oakwood.....	2	1	1													
Omeme.....				4	2	13		4								
Raeboro.....								1								
Woodville.....		1			1		1	1								

ONTARIO AT TORONTO FOR THE YEAR 1918.—SPECIMENS EXAMINED.—*Con.*

Gonorrhea		Rabies Diagnosis				Milk										Waters		Liquors for License Department	Miscellaneous Specimens	Total for Year
+	-	Animal	Negri Bodies		Animal Inoculations	Food Content		Preserv- atives	Bacteriological				Count	Extraneous Matter	Number of Milk Samples	Chemical	Bacterial			
			+	-		Tubercle Bac			Pus Cells											
						+	-		+	-										
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ONTARIO AT TORONTO FOR THE YEAR 1918.—SPECIMENS EXAMINED.—*Con.*

[illegible]

REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH OF

Municipalities	Diphtheritic Swabs.				Tubercu- lous Sputa	Typhoid Bloods.		Syphilis								
	Release		Diagnosis					Wassermann Reaction						Treponema Pallida.		
	+	—	+	—				+	—	+	—	Colloidal Gold Reaction	Very Strongly Positive	Strongly Positive	+	—
York—																
Agincourt				1		1										
Aurora	2		2	4	1	4										
Downsville																
Humber Bay.....																
Islington.....				1				1								
Keswick.....			1	1		1		1								
King	1			1		2	1	3								
Kleinburg.....																
Lambton.....																
Leaside.....																
Long Branch.....				1												2
Markham.....				1		4										
Milliken						1										
Mimico			115	389		4		4		2		1	4			
Mount Albert.....				1		3		2								
Mount Dennis.....		1	1	1				2				1				
Mount Joy																
Newmarket.....		3	3	2	1	2			4	10	3	3	17			
New Toronto.....		2	2	2	1	2										
Pine Grove																
Richmond Hill	16	11	2	17	2	5	1			1			1			
Scarboro Jct.....																
Schomberg					1	2		2								
Stouffville													2			
Sutton West				2			1	1								
Swansea.....	1	2	2													
Todmorden	4	6	2	3												
Toronto	22	44	18	47	6	27	6	24	24	289	60	118	1557	3	14	
Unionville			1		1											
Weston	20	26	30	106	2	11	1	7		2			37			
West Hill																
Woodbridge																
York.....																
Totals.....	352	618	399	1389	431	1660	178	642	29	653	140	237	2816	8	31	

ONTARIO AT TORONTO FOR THE YEAR 1918.—SPECIMENS EXAMINED.—*Con.*

Gonorrhea		Rabies Diagnosis				Milk										Waters		Liquors for License Department	Miscellaneous Specimens	Total for Year
+	-	Animal	Negri Bodies		Animal Inoculations	Food Content		Preserv- atives	Bacteriological				Extraneous Matter	Number of Milk Samples	Chemical	Bacterial				
			+	-		Tubercle Bac			Pus Cells		Count									
						+	-		+	-										
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Total number of specimens examined during the year 1918, 13,458.

Municipalities	Outfits sent out								Doses of Typhoid- paratyphoid Vac- cine supplied	Whooping Cough Vaccine	Silver nitrate for prevention of Ophthalmia	Pasteur pre- ventive treatment	
	Syphilis (Wassermann)	Syphilis (Treponema Pallida)	Gonorrhea	Water	Diphtheria	T. B.	Typhoid	Total				cases	No. of Injec- tions
Algoma—													
Blind River.....					12								
Bruce Mines.....	6												
Chapleau.....	2		6		6	5							
Copper Cliff.....				12		25	12		60		60		
Creighton Mine ..			6						9				
Espanola.....	3		3	17	6	10	12						
Foleyet.....	3		3	18	6	5	6		133	28	10		
Hornepayne.....	6												
Jellicoe.....				4									
Kapuskasing					12	10							
Levack.....				12							15		
Massey.....					12								
Sault Ste. Marie.					108	55				420	15		
Schumacher.....					24								
So. Porcupine					12				450				
Spragge.....											30		
Timmins.....	7	1	13	36	18	10	18		120	308	10		
Webbwood.....	3	3	3		6	5	6						
Worthington.....	3			12									
Brant—													
Brantford.....	94		28	24	75	55	18		457	726	130		
Burford.....									18	42			
Kelvin.....									18	38			
Onondaga.....										42			
Paris.....	3									190	60		
St. George.....	4				6					154			
Bruce—													
Cargill.....						15							
Chesley.....									18	20			
Elmwood.....	6		12	1			12				15		
Hepworth.....						10							
Kincardine.....					6								
Lion's Head.....					6	5				42			
Paisley.....				6									
Port Elgin.....						25			45				
Ripley.....				6							25		
Tara.....	1	1	1	6	36	5	6		9	40			
Teeswater.....	6			3	6	5	6		9	24	5	2	48
Tiverton.....				4					9				
Walkerton.....	1	1	1		6	5	6						
Carleton—													
Ashton.....						20				10			
North Gower.....				6									
Ottawa.....	500												
Dufferin—													
Grand Valley									24				
Orangeville.....	1	1	1		18	5	6						
Dundas—													
Morrisburg.....				16	24	35	12						
Durham—													
Bowmanville	12	2	6		12	10	12			98			
Enniskillen.....										25	10		
Millbrook.....				10	12	25	12		24	56			
Orono.....	6		12	12					9	114	10		
Pontypool.....					12	15	18						
Port Hope.....	12		12	45	36	45	24			84	90	4	96

YEARLY REPORT.

Outfits, Vaccines and Treatments supplied by Laboratory at Toronto during
the year 1918.—Continued.

Municipalities	Outfits sent out							Doses of Typhoid- paratyphoid Vac- cine supplied	Whooping Cough Vaccine	Silver nitrate for prevention of Ophthalmia	Pasteur pre- ventive treatment	
	Syphilis (Wassermann)	Syphilis (Treponema Pallida)	Gonorrhea	Water	Diphtheria	T.B.	Typhoid	Total			cases	No. of Injec- tions
Elgin—												
Bayham				3								
St. Thomas							6					
Essex—												
Amherstburg									81			
Belle River									72			
Essex						75			90	42		
Ford City					720		6					
Harrow				3					18			
Kingsville						10			90			
Leamington	3		3	1	12	5	6		309	222		
Ojibway				15								
Pelee Island									27	212	15	
South Woodslee ..				6	18							
Stony Point										82	5	
Walkerville					1,372	25						
Windsor	170	6	8		3,482	85	120		1,160	63		
Frontenac—												
Cataraqui									12	28	5	
Kingston									5,220			
Mountain Grove ..									60			
Sharbot Lake									18			
Glengarry—												
Alexandria					6	15			9			
Apple Hill				5					18			
Maxville					12							
Grenville—												
Cardinal				3								
Kemptville									18		20	
Merrickville									36			
North Augusta					12							
Prescott											100	
Spencerville	1	1	1	1	6	5						
Grey—												
Chatsworth				4	48				12	112	10	
Dromore						10						
Durham				3		10	12		18	76		
Flesherton	1	1	1		6	5	6				10	
Heathcote						10						
Markdale				4	6	10						
Meaford				12		10	12		6			
Owen Sound	16	7	45		192	40	36		36	457	75	
Thornbury	1	1	1		6	5	6					
Haldimand												
Caledonia					6	5						
Canfield	1	1	1		6	5	6					
Cayuga									6			
Dunnville						35	30		45			
Fisherville									30			
Hagersville	26				12				30		5	
Jarvis	8			3					18	56		
Halton—												
Acton						5						
Burlington	42			36		60						

N.B.—Walkerville, Jan. 19: 360 Culture Media, to Dr. Allison.

“ Jan. 17: 250 Culture Tubes, to Dr. Allison.

YEARLY REPORT.

Outfits, Vaccines and Treatments supplied by Laboratory at Toronto during the year 1918.—Continued.

Municipalities	Outfits sent out								Doses of Typhoid-paratyphoid Vaccine supplied	Whooping Cough Vaccine	Silver nitrate for prevention of Ophthalmia	Pasteur preventive treatment	
	Syphilis (Wasserman)	Syphilis (Treponema Pallida)	Gonorrhea	Watr	Diphtheria	T.B.	Typhoid	Total				cases	No. of Injections
Halton—Con.													
Freeman				1									
Georgetown	3		3			10							
Milton	7	7	7		66	55	6					30	
Oakville	10		12	24	12				58			15	
Hastings—													
Bancroft				15						15			
Belleville	6		20	42	36	55	48			28			
Deseronto	24		14	6	18	40					20		
Eldorado					12	10	12						
Madoc	1	1	1		6	5	6						
Marmora	4	2	10	38	24	10							
Maynooth				2	6	5	6			70	20		
Springbrook			6			5	12						
Sterling	6				12		6		15				
Trenton	96	3	10	30		10				28	50		
Tweed									32	38	5		
Huron—													
Crediton									12	34	25		
Ethel										30			
Goderich					12		24		9				
Seaforth	3						12				20		
Varna										50	25		
Zurich					12								
Kent—													
Blenheim									258				
Chatham	132		12	124		60	84		6,475	84	240		
Dresden				31	12	35			378		20		
Merlin	12			3					150				
Ridgetown					12	20	12		180				
Thamesville				6	24	5					25		
Tilbury							12		206				
Wallaceburg	6			30		10			18				
Lambton—													
Alvinston					12	30				42	10		
Camlachie						20				14	30		
Inwood				2									
Oil Springs									9				
Petrolia	5		4		12	10			42				
Sarnia	35			49					204		245		
Thedford	1	1	1		6	5	6						
Watford						10				84	10		
Wyoming						5	6		9	14	5		
Lanark—													
Almonte				12		30	1						
Carleton Place				18									
Lanark									162				
Maberley				3									
Middleville	6	6	6			10							
Pakenham						5							
Smith's Falls				72					200	24			

YEARLY REPORT.

Outfits, Vaccines and Treatments supplied by Laboratory at Toronto
during the year 1918.—Continued.

Municipalities	Outfits sent out.								Doses of Typhoid-paratyphoid Vaccine supplied	Whooping Cough Vaccine	Silver nitrate for prevention of Ophthalmia	Pasteur preventive treatment	
	Syphilis (Wassermann)	Syphilis (Treponema Pallida)	Gonorrhea	Water	Diphtheria	T.B.	Typhoid	Total				cases	No. of Injections
Leeds—													
Bellamy									12				
Brockville	18					45			36				
Elgin	6	3	6	3	6	5			9	28	5		
Lansdowne							30				25		
Mallorytown					12								
Westport													
Lennox—													
Napanee				26							10		
Newburg										38			
Odessa										24			
Tamworth	6				12					56	15		
Lincoln—													
Beamsville	6		6	6		10			12				
Grimsby				6						30	5		
Niagara-on-the-Lake	5			6		30				56			
Port Dalhousie				3							15		
St. Catharines	77	1	7	36	36	135	18		293	855	155	2	48
Vineland				6									
Middlesex—													
Ailsa Craig					12	30							
Ilderton										20	5		
Lambeth	8		8		24	20	24		28		10		
London	200			160	482	100	200		33,100	84	100		
Parkhill				2						84	10		
Strathroy				1	24	20	12		108				
Muskoka—													
Bala				8					18	336			
Bracebridge	4					10	12						
Elgin House					6								
Gravenhurst	12			16	144				3		30		
Huntsville				6		20							
Port Carling				1	6								
Port Sydney				1									
Severn Bridge					24	20							
Windermere										28			
Nipissing—													
Bonfield						10							
Burwash	24		24										
Capreol	3	3	2	12	6	5	6		9	14	5		
Cobalt	36			102	24	30			24				
Cochrane				8					150	84	80		
Coniston	8		20	36						182			
Elk Lake									24		15		
Englehart											60		
Garson Mine				6									
Gowganda	1	1	7	6	6	10	12		54		5		
Haileybury	14		22	36	18	15							
Iroquois Falls				6					4,500				
Kirkwood Lake				18			6				15		
Matheson										62	10		
New Liskeard					6	35			6		50		
North Bay	24		24	54					591				
North Cobalt				4			5						

YEARLY REPORT.

Outfits, Vaccines and Treatments supplied by Laboratory at Toronto
during the year 1918.—Continued.

Municipalities	Outfits sent out							Doses of Typhoid- paratyphoid Vac- cine supplied	Whooping Cough Vaccine	Silver nitrate for prevention of Ophthalmia	Pasteur pre- ventive treatment	
	Syphilis (Wassermann)	Syphilis (Treponema Fallida)	Gonorrhea	Water	Diphtheria	T.B.	Typhoid	Total			cases	No. of Injec- tions
Nipissing—Con.												
Smooth Rock Falls				24					337			
Sturgeon Falls									42			
Sudbury	55	5	1	96	12	60	12		335	28		
Swastika				12					60			
Whitney				6			12		22			
Norfolk—												
Delhi	12		12	2	24	40	12		328			
Langton									54	168		
Port Dover	36		3									
Port Rowan	6	6				5			54			
Simcoe	4								54		35	
Waterford	11	1	1		6	15	6					
Northumberland—												
Brighton						10			52			
Campbellford					18	10	6			30		
Castleton	2	1	3						9			
Cobourg	90		6	12	24	25	24		85	358	1	24
Colborne						5	6		34	10		
Grafton					6	5	6					
South Monaghan									18			
Warkworth	1	1	1		6	15	6			30		
Ontario—												
Beaverton				4								
Cannington									18			
Oshawa	61		12	24			42		27			
Pickering						5						
Port Perry						10			18			
Uxbridge	1	1	1		6	5	6		33			
Whitby	6			12								
Oxford—												
Drumbo	4					10			59			
Embro									200	50	25	
Ingersoll			6	27	24	45	12		18			
Mount Elgin					6							
Norwich				6		10			9	200		
Otterville	12	6	24			25			78	182	35	
Tavistock				4								
Tillsonburg	8									194		
Woodstock	8				18	30			36			
Parry Sound—												
Burk's Falls					36	40			72	120		
Depot Harbour	2											
Kearney											15	
Mowat Sta.				6								
Nobel	1	1	1		6	5	6					
Pakesley				6								
Parry Sound	44	2	14	39	18	35			9	28	35	
Sprucedale										28		
Sundridge	6					5			27	38		
Troat Creek									18			

YEARLY REPORT.

Outfits, Vaccines and Treatments supplied by Laboratory at Toronto
during the year 1918.—Continued

Municipalities	Outfits sent out							Doses of Typhoid- paratyphoid Vac- cine supplied	Whooping Cough Vaccine	Silver nitrate for prevention of Ophthalmia	Pasteur pre- ventive treatment	
	Syphilis (Wassermann)	Syphilis (Treponema Pallida)	Gonorrhea	Water	Diphtheria	T.B.	Typhoid	Total			cases	No. of Injec- tions
Peei—												
Bolton	10				12				30			
Brampton	1	1	1	6	6	5	6		20			
Caledon									56			
Caledon East				1								
Clarkson									9			
Cooksville				4								
Palgrave									60	30		
Port Credit					12	10						
Streetsville											1	24
Perth—												
Atwood										15		
Listowel				18				28	15			
Mitchell				8						35		
St. Mary's						10		24		5		
Stratford	2			12	30	45	84					
Peterboro—												
Bailieboro				3					56			
Hastings					6	5	6					
Keene							6		14			
Lakefield	1	1	1		6	5	6					
Peterboro	72	6		18	6	5	12	789	448	105	5	102
Prescott—												
Fournier									100			
Hawkesbury	6		12	10	12	20	48			345		
St. Eugene				12								
Prince Edward—												
Bloomfield	6	6	6							25		
Rainy River—												
Dryden									14			
Ft. Frances								18		5		
Kenora									140			
North Pines				3								
Rainy River								150				
Renfrew—												
Arnprior	4							36				
Beachburg					6	5						
Eganville						20				20		
Jewellville								27				
Pembroke	7	4	1	72	6	5	6	42	42	70		
Renfrew					72	65	72			10		
Westmeath					6	5	6	6	39	35		
Russell—												
Bourget	4			5	144	10	12	30				
Russell						10		18	14	25		
Simcoe—												
Barrie			36		36	35	12	36				
Bond Head	1	1	1		6	5	6		14			
Corley						10						
Churchill				6	6	5			28			
Coldwater										10		
Collingwood	12			20	12	10				10		
Cookstown	6				6			3				
Edgar								24				
Elmvale				2		5			28			
Hillsdale				1				18				
Midland	14	7	1		30	45	6	12	356	15		

YEARLY REPORT.

Outfits, Vaccines and Treatments supplied by Laboratory at Toronto
during the year 1918.—Continued.

Municipalities	Outfits sent out							Doses of Typhoid- paratyphoid Vac- cine supplied	Whooping Cough Vaccine	Silver nitrate for prevention of Ophthalmia	Pasteur pre- ventive treatment	
	Syphilis (Wassermann)	Syphilis (Treponema Pallida)	Gonorrhea	Water	Diphtheria	T.B.	Typhoid	Total			cases	No. of Injec- tions
Simcoe—Con.												
Orillia.....	13	1	13	336	132	55	42	.....	120	.....	.....	.....
Penetang.....	.....	.....	.....	.....	12	15	.....	.....	.....	.....	.....	.....
Phelpston.....	.....	.....	.....	.....	.....	10	.....	.....	.....	48	.....	.....
Shanty Bay.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....
Stayner.....	7	1	1	6	12	5	6	.....	36	.....	.....	.....
Victoria Harbor..	3	.....	.....	2	.....	.....	.....	.....	18	98	.....	.....
Waubaushe..	.....	.....	.....	.....	.....	.....	.....	.....	106	.....	.....	.....
Stormont—												
Cornwall.....	6	6	6	24	12	20	12	.....	.....	.....	.....	.....
Crysler.....	3	.....	2	.....	18	5	6	.....	.....	.....	.....	.....
Osnabrock Centre.	.....	.....	.....	4	.....	5	.....	.....	.....	.....	.....	.....
Thunder Bay—												
Fort William....	143	1	1	.....	6	5	6	.....	48	1,220	90	.....
Port Arthur.....	1	1	1	.....	42	30	42	.....	48	908	150	.....
Schreiber.....	.....	.....	.....	4	.....	.....	.....	.....	.....	58	.....	.....
Victoria—												
Bobcaygeon.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	28	.....	.....
Coboconk.....	1	1	1	.....	30	5	6	.....	.....	.....	.....	.....
Kinmount.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	28	.....	.....
Lindsay.....	.....	.....	12	37	12	10	60	.....	.....	.....	.....	.....
Little Britain....	.....	.....	.....	.....	.....	.....	.....	.....	18	.....	.....	.....
Waterloo—												
Ayr.....	6	5	.....	4	12	15	6	.....	27	10	15	.....
Elmira.....	.....	.....	.....	8	6	5	6	.....	.....	.....	.....	.....
Galt.....	19	7	7	.....	48	5	18	.....	6	42	5	.....
Hespeler.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kitchener.....	96	36	72	36	288	40	6	.....	.....	.....	50	.....
New Hamburg....	.....	.....	.....	.....	.....	.....	.....	.....	27	.....	15	.....
Preston.....	.....	.....	.....	2	.....	.....	.....	.....	18	.....	10	.....
St. Jacobs.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	.....
Waterloo.....	4	.....	.....	.....	6	5	6	.....	.....	.....	.....	.....
Wellesley.....	.....	.....	.....	.....	.....	15	.....	.....	.....	.....	.....	.....
West Montrose...	.....	.....	.....	.....	.....	.....	6	.....	6	.....	.....	.....
Welland—												
Bridgeburg.....	.....	.....	.....	.....	6	10	6	.....	.....	.....	2	48
Chippawa.....	5	.....	5	18	6	25	6	.....	30	.....	20	.....
Fenwick.....	6	6	6	.....	.....	.....	.....	.....	.....	.....	30	.....
Fort Erie.....	.....	.....	.....	.....	.....	10	.....	.....	.....	.....	.....	.....
Humberstone.....	.....	.....	.....	.....	.....	.....	.....	.....	90	.....	.....	.....
Niagara Falls....	11	1	1	33	6	5	18	.....	30	.....	205	.....
Port Colborne....	4	.....	.....	.....	12	10	12	.....	108	.....	.....	.....
Port Robinson....	.....	.....	.....	.....	6	5	6	.....	.....	.....	.....	.....
Ridgeway.....	.....	.....	.....	.....	.....	.....	.....	.....	72	.....	.....	.....
Stevensville.....	.....	.....	.....	.....	6	5	6	.....	.....	.....	.....	.....
Thorold.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	40	.....	.....
Welland.....	19	1	1	12	6	5	6	.....	93	112	110	.....
Wellington—												
Arthur.....	6	.....	.....	.....	12	10	12	.....	6	.....	.....	.....
Drayton.....	6	.....	.....	.....	24	10	.....	.....	.....	28	.....	.....
Elora.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	20	734	.....
Erin.....	.....	.....	.....	12	.....	10	.....	.....	.....	.....	.....	.....
Fergus.....	9	1	1	.....	6	25	6	.....	.....	.....	.....	.....
Guelph.....	61	1	1	45	18	30	6	.....	18	50	.....	.....
Harriston.....	.....	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	.....
Hillsburg.....	.....	.....	.....	.....	.....	.....	.....	.....	6	.....	.....	.....
Mount Forest....	.....	.....	.....	4	.....	15	.....	.....	.....	136	.....	.....

YEARLY REPORT.

Outfits, Vaccines and Treatments supplied by Laboratory at Toronto
during the year 1918.—Concluded

Municipalities	Outfits sent out							Doses of Typhoid-paratyphoid Vaccine supplied	Whooping Cough Vaccine	Silver nitrate for prevention of Ophthalmia	Pasteur preventive treatment		
	Syphilis (Wassermann)	Syphilis (Treponema Pallida)	Gonorrhea	Water	Diphtheria	T.B.	Typhoid				Total	cases	No. of Injections
Wellington—Con.													
Palmerston	5	1	1	.....	18	15	18	.....	.....	15	.....	.....	
Puslinch				4	.....	.....	.....	.....	.....	.....	.....	.....	
Rockwood	6		6	.....	6	5	.....	.....	39	.....	.....	.....	
Wallenstein .....				.....	6	5	.....	.....	.....	.....	.....	.....	
Wentworth—													
Binbrook .....				.....	.....	.....	.....	.....	28	.....	.....	.....	
Dundas	6			6	18	10	12	.....	.....	.....	.....	.....	
Hamilton	462			.....	.....	10	.....	342	2,364	105	.....	.....	
Lynden				3	12	5	.....	.....	.....	.....	.....	.....	
Rockton .....				.....	6	5	.....	.....	.....	.....	.....	.....	
Stony Creek				2	.....	.....	.....	.....	.....	.....	.....	.....	
York—													
Aurora .....				.....	24	.....	.....	.....	38	75	.....	.....	
Downsview				1	.....	.....	.....	.....	.....	.....	.....	.....	
Fairbank				2	.....	.....	.....	.....	.....	.....	.....	.....	
Humber Bay				1	.....	.....	.....	.....	.....	.....	.....	.....	
King .....				.....	6	.....	.....	.....	.....	.....	.....	.....	
Kleinburg				4	.....	.....	.....	.....	.....	.....	.....	.....	
Lambton Mills .....				.....	.....	.....	.....	.....	14	10	.....	.....	
Locust Hill				1	.....	.....	.....	.....	.....	.....	.....	.....	
Long Branch	6	6		19	.....	.....	.....	.....	6	.....	.....	.....	
Maple	6			.....	.....	.....	.....	.....	6	56	.....	.....	
Markham	12		12	2	.....	5	.....	.....	.....	10	.....	.....	
Mimico	24			2	528	.....	18	840	.....	10	.....	.....	
Mount Albert .....				.....	.....	5	6	.....	.....	.....	.....	.....	
Newmarket	64			.....	6	.....	6	.....	.....	.....	.....	.....	
Pine Grove				1	.....	.....	.....	.....	.....	.....	.....	.....	
Queensville .....				.....	12	.....	.....	14	.....	.....	.....	.....	
Richmond Hill	6		31	.....	36	10	.....	.....	.....	35	.....	.....	
Roche's Point				1	.....	.....	.....	.....	.....	.....	.....	.....	
Scarboro'				1	.....	.....	.....	.....	.....	.....	.....	.....	
Stouffville	6			.....	.....	.....	.....	.....	.....	25	.....	.....	
Sutton West				12	12	.....	.....	.....	.....	.....	.....	.....	
Thornhill .....				.....	.....	.....	.....	.....	378	15	.....	.....	
Todmorden				6	12	.....	.....	.....	.....	.....	.....	.....	
Toronto	1254	27	315	31	90	25	.....	116360	11717	180	8	192	
Unionville .....				.....	6	5	.....	.....	25	20	.....	.....	
Weston	72			16	204	25	18	24	.....	.....	.....	.....	
Woodbridge				1	.....	.....	.....	.....	.....	.....	.....	.....	
Wychwood				1	.....	.....	.....	.....	.....	.....	.....	.....	
The Provinces—													
Montreal, Que. ....				.....	.....	.....	.....	.....	48	.....	.....	.....	
Quebec, Que. ....				.....	.....	.....	.....	5,500	.....	.....	.....	.....	
St. John, N.B. ....				.....	.....	.....	.....	8,610	.....	.....	.....	.....	
St. John's, Nfld. ....				.....	.....	.....	.....	5,590	.....	.....	.....	.....	
Saskatoon, Sask. ....				.....	.....	.....	.....	.....	140	.....	.....	.....	
Victoria, B.C. ....				.....	.....	.....	.....	16,500	.....	.....	.....	.....	
Winnipeg, Man. ....				.....	.....	.....	.....	46,475	.....	.....	.....	.....	
Totals.....	4,635	207	1,039	2,659	9,875	3,155	1,845		534,629	35,596	6,554	25	582

REPORT OF THE BRANCH LABORATORY OF THE BOARD AT LONDON (INSTITUTE OF HEALTH)

The number of examinations made by the Branch Laboratory of the Provincial Board of Health at London (Institute of Public Health) in 1918 were as per table:

EXAMINATIONS.

Diphtheria:—

Swabs for Release	897
Positive	290
Negative	607
Swabs for Diagnosis	2,340
Positive	305
Negative	2,035
Sputums for Tubercle Bacilli	1,045
Positive	124
Negative	930
Blood for Typhoid Reaction	267
Positive	77
Negative	190
Colloidal Gold Reaction	83
Syphilis—Wassermann Reaction	1,200
Very Strongly Positive	270
Strongly Positive	72
Positive	68
Negative	790
Treponema Pallida	4
Positive	2
Negative	2
Gonorrhea	103
Positive	29
Negative	74
Rabies Diagnosis	5
Food Content	287
Preservatives Negative	14
Milk for Examinations	131
Extraneous Matter	2
Water for Bacteriological Analyses	729
Miscellaneous Specimens	411
Total	7,527

REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH OF

Municipalities	Diphtheritic Swabs.				Tubercu- lous Sputa		Typhoid Bloods.		Syphilis						Treponema Pallida.	
	Release		Diagnosis						Wassermann Reaction							
	+	-	+	-	+	-	+	-	Colloidal Gold Reaction	Very Strongly Positive	Strongly Positive	+	-	+	-	
Algoma—																
Hornepayne.....										1				1		
Brant—																
Brantford					3	3		1			1			2		
Paris				1		7		1								
Bruce—																
Elmwood																
Kincardine						2										
Lucknow					1	1	1	1								
Mildmay			1	2		5	1									
Paisley																
Port Elgin.....																
Southampton.....							1							3		
Teeswater.....				1		1										
Elgin—																
Aylmer						1										
Dutton	1		2	6		3										
Lawrence.....			1	1												
St. Thomas.....			1	6	1		1	2		11		3	26	1		
Union											2					
Wallacetown.....	2															
West Lorne.....	1			4												
Essex—																
Amherstburg						1										
Comber.....						1	3									
Essex.....						1										
Ford City.....		1		11	1		1	3								
Belle River.....														1		
Harrow.....						3										
Kingsville	1					2	2									
Sandwich.....				2												
South Woodslee								1								
Walkerville.....	9	3	39	119	1	3		2				1	3			
Wheatley.....						1	2	4								
Windsor	8	48		78	1	1		6		1	1	3	5			
Halton—																
Burlington					1											
Haldimand—																
Dunnville.....				1	1	3		4								
Hastings—																
Marmora																
Huron—																
Blyth				1		1										
Clinton								3								
Crediton.....				1												
Exeter				1												
Goderich.....	1	5	1	7		1		2		4		1	4			
Hensall			1	2		1										
Kirkton				1			1									
Seaforth.....																
Wingham					2											
Zurich.....											1					
Kent—																
Blenheim				3	6	18	2	3								
Chatham				2	1	10	4	15		9	3	5	12			2
Dresden						1										
Duart					3	6								1		

ONTARIO AT LONDON FOR THE YEAR 1918.—SPECIMENS EXAMINED.—*Con.*

[illegible]

Municipalities.	Diphtheritic Swabs				Tuberculous Sputa.		Typhoid Bloods		Syphilis.						
	Release		Diagnosis						Wasserman Reaction				Treponema Pallida		
	+	-	+	-	+	-	+	-	Colloidal Gold Reaction	Very Strongly Positive	Strongly Positive	+	-	+	-
Kent—Continued															
Merlin.....			1							1		1	6		
Ridgetown.....		3	4	3		4	2	6			1		2		
Thamesville.....	1	1	1	10	2	4	1	2							
Lambton—															
Arkona.....								1							
Camlachie.....	1	5	1	5		4									
Courtright.....					1	2									
Florence.....				2		1									
Inwood.....				6		9					1				
Oil Springs.....				2											
Petrolia.....					3	1		3							
Pt. Lambton.....							1	1							
Sarnia.....				2	4	5					2		1		
Sombra.....							2								
Watford.....				2		4		4							
Wyoming.....		1	1	1			2	4							
Lincoln—															
Beamsville.....												1			
St. Catharines.....												1	1		
Middlesex—															
Ailsa Craig.....						1									
Byron.....				4	7	40		7		2			10		
Dorchester.....				5		1				2	1		2		
Glencoe.....						2									
Granton.....				2		4									
Hyde Park.....						2									
Ilderton.....		1	2	4		1	1								
Komoka.....															
Lambeth.....						4		1							
Lobo.....				1											
London.....	264	539	245	1695	62	529	24	64	82	213	48	46	625		
Lucan.....					1	1	1								
Mt. Brydges.....						1		1	1		1		1		
Newbury.....				4		2									
Parkhill.....					2	3		1							
Poplar Hill.....	1			2											
Strathroy.....					3	10		5							
Thorndale.....								1							
Belmont.....						3									
Christiana.....					1										
Norfolk—															
Lakeville.....				1											
Simcoe.....								2							
N'thumberland & Durham—															
Millbrook.....						5									
Ontario—															
Lake Couchiching.....						1									
Oxford—															
Embro.....					1	1	1	1							
Ingersoll.....			1	6	1	14	4	9		1			2		
Innerkip.....				2											
Mount Elgin.....				1		1									
Lakeside.....			1	1											

REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH OF

Municipalities	Diphtheritic Swabs				Tubercu- lous Sputa		Typhoid Bloods		Syphilis							
	Release		Diagnosis						Colloidal Gold Reaction	Wassermann Reaction				Treponema Pallida		
	+	-	+	-	+	-	+	-		Very Strongly Positive	Strongly Positive	+	-	+	-	
Oxford—Continued.																
Thamesford						1	2									
Tillsonburg							1	2								
Woodstock			1	2	2	1	1	3		1		2	2			
Peel—																
Brampton				1												
Perth—																
Listowel				2				5								
Mitchell										1						
St. Mary's				2	3	3	4	6								
Stratford			1	3	1	7		1		1	2		6			
Prescott—																
Hawkesbury													1			
Simcoe—																
Collingwood										3				1		
Oro													1			
Timiskaming—																
Smooth Rock				1			1			1			2			
Thunder Bay—																
Fort William													2			
Waterloo—																
Baden					1	2										
Galt						1										
Hespeler																
Kitchener				5			11	11		7	5	3	36			
New Dundee								1								
Preston						1										
Welland —																
Erie Beach																
Wellington—																
Clifford																
Drayton				1												
Guelph				5	2	180	1			10	2	1	26			
Harriston											1					
Palmerston													1			
Wentworth—																
Hamilton ¹										1			2			
York—																
Mimico				2												
Stouffville													1			
Toronto													2			
Grand Total	290	607	305	2035	124	930	77	190	83	270	72	68	790	2	2	

ONTARIO AT LONDON FOR THE YEAR 1918.—SPECIMENS EXAMINED.—*Con.*

Gonorrhea	Rabies Diagnosis				Milk										Waters		Liquors for License Dept.	Miscellaneous Specimens	Total for Year	
	Animal	Negri Bodies		Animal Inoculations	Food Content		Pre-servatives	Bacteriological				Count	Extraneous Matter	Number of Milk Samples	Chemical	Bacterial				
		+	-		Fats	Total Solids		+	-	Tubercle Bac.										Pus Cells
							+			-	+									-
+	-	+	-					+	-	+	-									
1	1																3			
	1															1	6			
																	16			
																	1			
																1	8			
																	1			
	4	5												3	3		24			
																2	33			
																	1			
																	4			
																	1			
																2	7			
																	2			
	2																3			
	2																3			
	2															2	2			
																	82			
																	1			
																	1			
														3	3		6			
																2	2			
																2	3			
																	227			
														4	4		9			
																	1			
																	3			
																	2			
																	1			
																	2			
29	74	5				230	57	14					131	2		344	385	411	7527	

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REPORT OF THE BRANCH LABORATORY OF THE BOARD AT KINGSTON

The Chairman and members of the Provincial Board of Health:

GENTLEMEN.—I have the honour to submit the report of the work done in the Local Laboratory of the Provincial Board of Health during the year 1918.

In this year 4,700 specimens were examined as per appended table.

Diphtheria:—

Swabs for Release from Quarantine		365
Positive	137	
Negative	228	
Swabs for Diagnosis		868
Positive	120	
Negative	748	
Sputums for Tubercle Bacilli		932
Positive	146	
Negative	786	
Blood for Typhoid Reaction		650
Positive	168	
Negative	482	
Syphilis—Wassermann Reaction		658
Positive	312	
Negative	346	
Treponema Pallida		4
Positive	2	
Negative	2	
Gonorrhea		375
Positive	72	
Negative	303	
Water for Bacteriological Analyses		564
Miscellaneous Samples		284
Total		4,700

REPORT FROM BRANCH LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH

Municipalities	Diphtheritic Swabs.				Tuberculous Sputa		Typhoid Bloods.		Syphilis							
	Release		Diagnosis						Wassermann Reaction						Treponema Pallida.	
	+	—	+	—	+	—	+	—	Colloidal Gold Reaction	Very Strongly Positive	Strongly Positive	+	—	+	—	
Algoma—																
Richard's Landing....				3		1										
Brant—																
Mohawk.....		1														
Bruce—																
Paisley.....				1				4								
Carleton—																
Galetta.....																
Kinburn.....																
Manotick.....				2		1		2								
Ottawa.....											8		12			
Richmond.....						1										
Metcalf.....				3		1										
Dundas—																
Brinston.....					1											
Chesterville.....					1	4		1								
Winchester.....					2	7		3								
Essex—																
Essex.....						1										
Frontenac—																
Barriefield.....					1	2				31	21	22	59			
Inverary.....			1	3												
Joyceville.....							1									
Kingston.....	110	201	98	616	46	523	123	316		51	101	44	224	2	1	
Kingston Mills.....																
Portsmouth.....		2		3	8	21	5	8		4	3	2	6			
Parham.....								1								
Sydenham.....			1	2		4		2								
Verona.....			1			2	2	6								
Wolfe Island.....								3								
Glengarry—																
Alexandria.....																
Dalkeith.....						3										
Dalhousie Mills.....						1										
Lancaster.....					1	1										
Maxville.....					1	4		1								
Williamstown.....					3	3										
Grenville—																
Algonquin.....																
Cardinal.....																
Jasper.....						2		2								
Kemptville.....					1	1										
Merrickville.....					1	1	1	1								
North Augusta.....							1									
Prescott.....			1				1	3								
Haliburton—																
Minden.....											1		1			
Hastings—																
Bancroft.....						9		1								
Belleville.....				8	24	16	1	22			1	1				
Deseronto.....	1		3	42	1	6		1		2	2	2	19		1	
Foxboro.....								1	2							
Marlbank.....					2	2	1	2								
Roslin.....			2	2		5										
Shannonville.....						2	1									

REPORT FROM BRANCH LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH

Municipalities.	Diphtheritic Swabs.				Tubercu- lous Sputa		Typhoid Bloods.		Syphilis.							
	Release		Diagnosis						Wassermann Reaction				Treponema Palida.			
	+	-	+	-	+	-	+	-	Colloidal Gold Reaction	Very Strongly Positive	Strongly Positive	+	-	+	-	
Prescott.—Con.																
Riceville				1												
Vankleek Hill.....					1											
Prince Edward—																
Picton						1	1									
Renfrew—																
Arnprior					2					1				1		
Calabogie						1										
Cobden					2	9		1								
Killaloe						1										
Pembroke				2	5	7								1		
Petawawa						2								2		
Renfrew	9	9	5	10	4	9		2						1		
Westmeath						1										
Simcoe—																
Barrie								3								
Stormont—																
Cornwall	2	3	2	6	7	11	2	2			1					
Finch				1	1											
Newington				1	2	2	1	8		1						
Osnabruck Centre....				1			1	2								
Grand Total	137	228	120	748	146	786	168	482	....	90	145	77	346	2	2	

OF ONTARIO AT KINGSTON FOR THE YEAR 1918.—SPECIMENS EXAMINED.—*Con.*

Gonorrhea		Rabies Diagnosis				Milk										Waters		Liquors for License Department	Miscellaneous Specimens	Total for Year		
+	-	Animal	Negri Bodies		Animal Inoculations	Food Content		Preserv-atives	Bacteriological				Count	Extraneous Matter	Number of Milk Samples	Chemical	Bacterial					
			+	-		Fats	Total Solids		+	-	Tubercle Bac										Pus Cells	
											+	-									+	-
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1				
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1				
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	3				
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	..	9				
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1				
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	12				
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2				
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	15				
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	..	11				
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	49				
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1				
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3				
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	1				
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	40				
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2				
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	15				
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	5				
72	30	3	..	..	..	..	..	..	..	..	..	..	..	..	..	564	..	284	4700			

THE SANITATION OF ISOLATED RESIDENCES AND INSTITUTIONS.

PETER GILLESPIE, M.E.I.C.

(Read before Canadian Public Health Association, Toronto, May, 1919.)

Community health can be preserved only when sources and modes of infection are well understood, for only then can preventative and remedial measures be intelligently planned. The danger in an impure water, for example, lies in the presence therein of germs possessing well-known characteristics. To remove filth and to admit sunlight is to banish those germ carriers that do not thrive in dry, clean and sunlit environments. Present-day methods of combating typhoid and Asiatic cholera are based on the knowledge that these diseases are contracted through food and drink and in no other way. While the habit of committing decaying organic matter to the earth is almost an instinct with human kind, it is not always realized that the capacity of soils to mineralize such matter is limited. Less frequently is it understood that only as the bacterial life in the surface layers is promoted can mineralization proceed. To remove and destroy organic waste, then, in addition to being an act normally suggested by sentiment, is to eliminate a cause of soil and water pollution sometimes unsuspected and little understood. As such it becomes a duty enjoined by the great law of self-preservation.

Of 400 farm homes in the Province of Ontario included in a rural survey conducted by the Commission of Conservation, Canada, and reported by it in 1915, only 2.5 per cent. were provided with a complete sanitary service including running water, water closets and bathrooms of the kind usually found in urban residences. These conveniences are unfortunately too rare in our rural communities. No single reform would mean more in the alleviation of the housewife's drudgery or would contribute more to her comfort than their general introduction. Then, I suspect, we should hear less of the decline of rural population, the rural church and the rural school. One might wish that that gallantry which inspired a great gathering of toilers convened, according to Mr. Kipling, at the instance of a gifted monarch, now fallen and disgraced, might afford light and leading to Canadian men on whom the responsibility rests:

"They passed one resolution: Your sub-committee believe
You can lighten the curse of Adam when you've lightened the curse of Eve,
But till we are built like angels—with hammer and chisel and pen,
We will work for ourself and a woman, forever and ever, Amen."

The object of this paper is to describe briefly a few methods of sewage treatment for isolated residences or institutions, adapted to somewhat varying conditions. They may be installed at moderate cost and when given a little intelligent supervision afford permanent solutions for their respective problems. Through them, the pollution of soil and ground waters and the nuisance offensive alike to sight and smell may be satisfactorily avoided.

PLUMBING ESSENTIALS.

The water carriage system is, of course, the one contemplated, since it is the cleanest and most sanitary. The drainage system should be so constructed as to convey to a place of treatment, quickly and completely, everything emptied into it. It should be everywhere watertight and airtight. The vertical portion of the soil

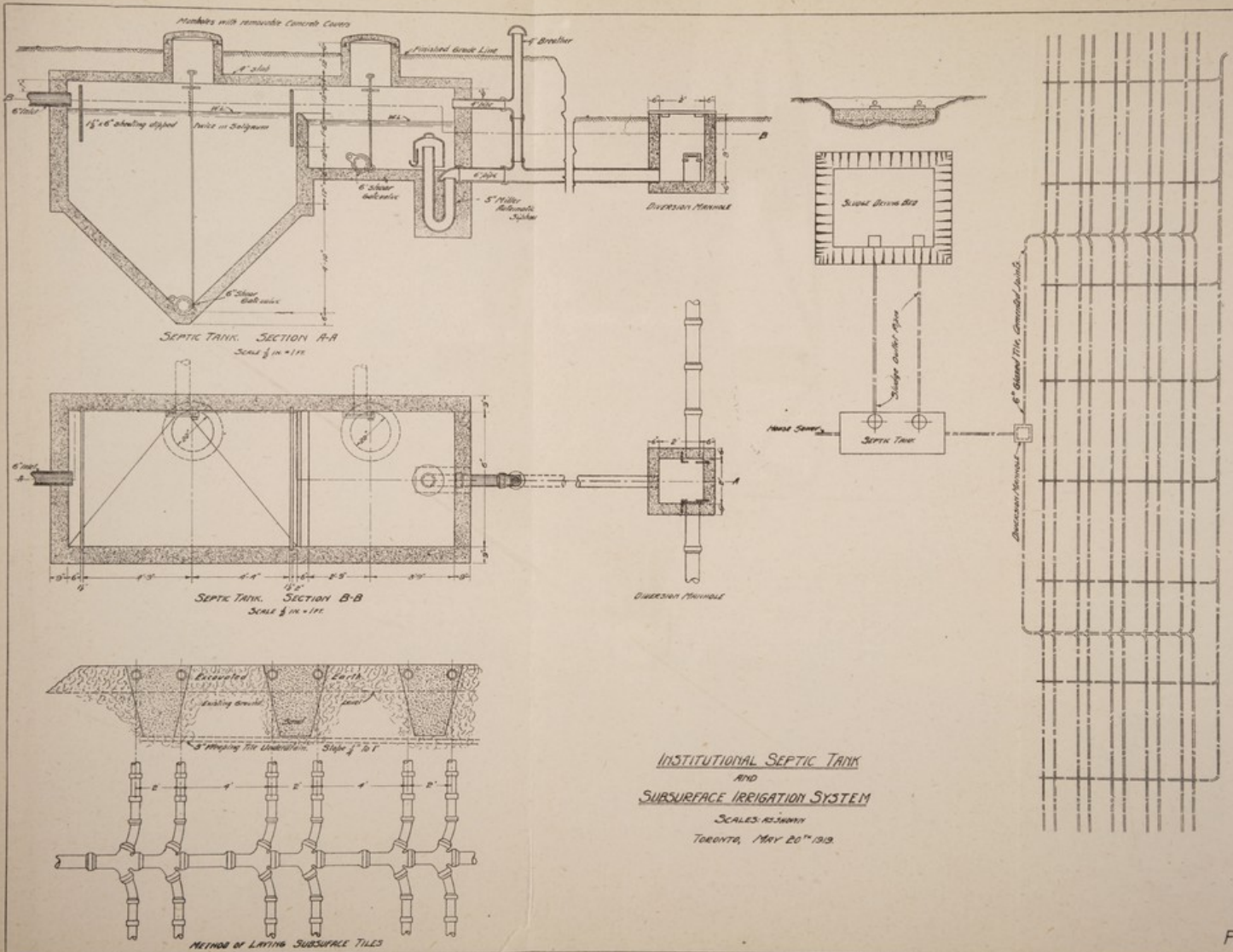
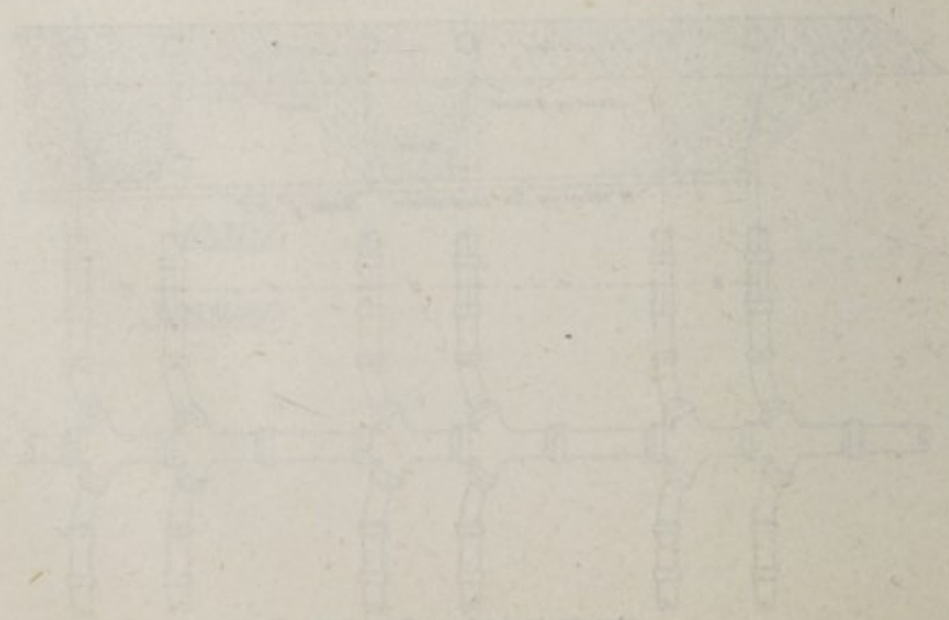
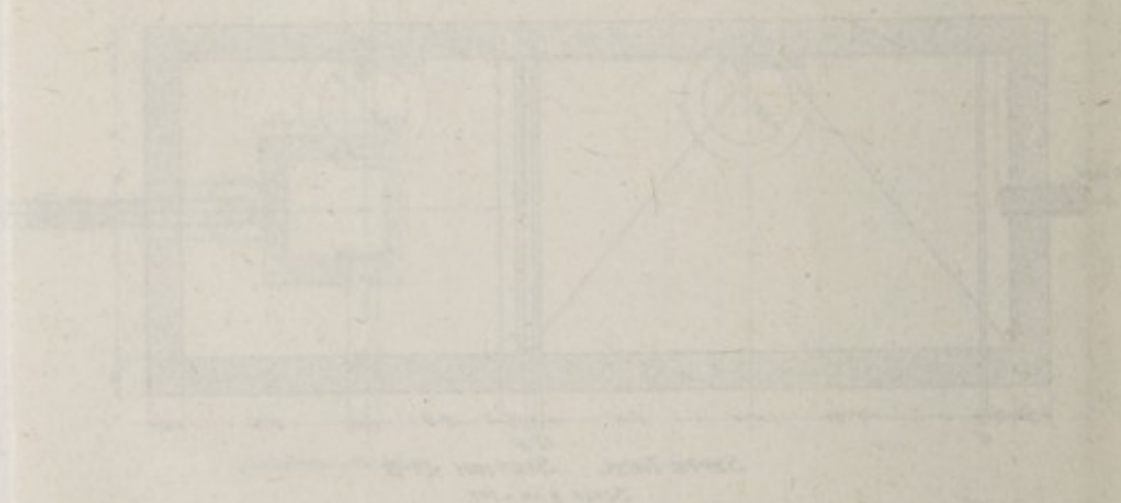
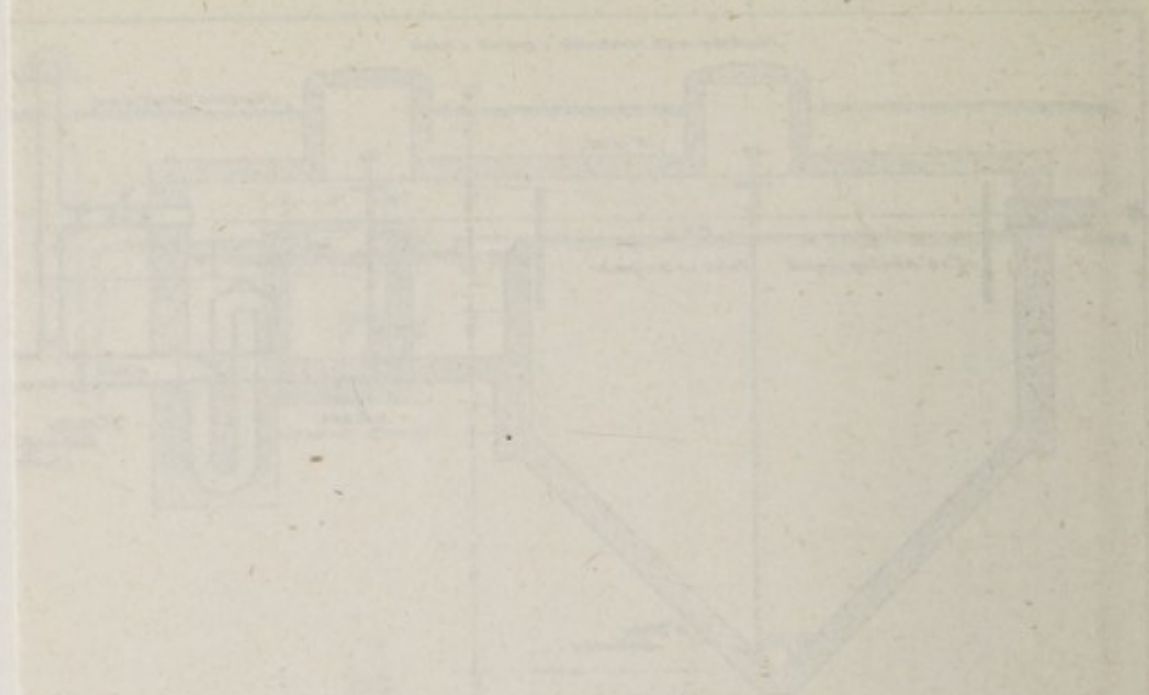


Fig. 1.



pipe should pass through the roof for ventilation and should be as nearly plumb as possible. The horizontal portion to a point outside the basement wall, as well as the upright portion, should be of cast iron. Every fixture should have a trap with water seal to prevent the foul air escaping into the rooms. To prevent the siphonage of these seals, all traps should be vented into a vent pipe connecting with the soil pipe above the highest fixture and also usually below the lowest. Various types of so-called non-siphoning traps, not requiring venting, are in the market. The use of these when permitted, reduces somewhat the cost and complexity of the plumbing installation, but, it is generally conceded, with some impairment in performance. The inlet to the bath-tub should not be lower than the water level when full, otherwise there is a possibility of the bath water siphoning over and appearing at some faucet lower down. All plumbing should be accessible for repairs, and all fixtures for bathroom and kitchen should be open, permitting free access of light and air. The house sewer leading to the place of treatment should be of 6-inch vitrified tile carefully laid on a falling grade of from $\frac{1}{4}$ in. to $\frac{1}{8}$ in. per foot, preferably the former. Carelessness in laying sometimes results in pockets being left in the sewer line in which solids are stranded and serious frost troubles are likely to occur. If changes in either alignment or grade between the house and the treatment plant are necessary, these should be marked by inspection manholes. All joints should be caulked with Portland cement mortar to prevent escape of sewage outward or leakage of ground water inward. Roof water should be excluded from the house sewer.

The treatment of sewage from residences and institutions where no system of public sewers exists, is governed by the same principles that apply in the case of larger projects. There are, notwithstanding, certain differences. In the former the fluctuation in flow, hourly and daily, is more marked, and in order to secure some uniformity in quality of sewage and to allow sufficient time for solids to settle out, somewhat greater storage capacity in sedimentation tanks should be provided when such are employed. All appliances should be as simple, automatic and fool-proof as possible.

A common and obvious method is to discharge the sewage directly into the nearest watercourse. In some cases this is justifiable. Indeed, dilution either as a sole or as a finishing process is very generally employed. But the growing appreciation of the necessity of safe water supplies, the wish to avoid the creation of nuisances offensive to sight and smell, an increasing realization of the responsibilities incident to community life and the fact that the beneficent stream is often not available, have led to the development of alternative methods. Indeed the alternative method is the usual one in the case of the residential or institutional problem.

CESSPOOLS.

Leaching cesspools are really excavated pits walled in by open stone-work so that the liquid contents are free to enter the soil if porous. Sooner or later the solids fill the cesspool and a new one must be constructed. The depth is usually such that practically no oxidation takes place in the surrounding soil, and as putrefactive and anaerobic changes are very offensive, pollution of the soil is inevitable and of adjacent wells very probable. There is on record the case of a town on the western plains which for years had made general use of cesspools for the reception of its wastes and of surface wells for its water supply. It found itself finally with a serious outbreak of typhoid fever on its hands. An

examination of the surroundings disclosed the fact that there was in some cases free communication between privy vaults and shallow wells, and the report of the health officer conducting it closed with the remark, more truthful than complimentary, that it seemed almost an extravagance to have two holes in the ground when, without greatly adding to the existing danger, one might have served both purposes.

If the soil on the other hand be impervious, or if the vault be lined with watertight masonry, the chamber soon fills with liquor which putrefies and overflows on the surface if no other outlet be provided. If from the outlet, open jointed tiling be laid near the surface, surrounded by porous soil, gravel or cinders, a partially aerated absorption area is created in which limited oxidation may proceed. But since the outflow is trickling and continuous, the first portion of the area gets the major portion of the liquor and the rest scarcely any. Aeration is in consequence much hampered, for soil filtration in order to be effective must be intermittent.

The leaching cesspool pollutes the soil surrounding it because there is neither intermittency nor aeration. By it, filth is buried without being reduced to stable and innocuous forms. An eminent physician has said, it is a relic of mediaeval shiftlessness and carelessness for which little excuse can be found. The tight cesspool on the other hand was something of an improvement. Both were precursors of the two-chambered septic tank with automatic siphon whereby the settled sewage is held back until a pre-determined quantity has accumulated. This is discharged at one flush through tiles to the absorption area, insuring something like uniform distribution and providing between doses sufficient opportunity for aeration of the soil so necessary for satisfactory nitrification. The net result is that there has been enlisted the combined purifying resources of a large area of surface soil and an ample supply of atmospheric oxygen together with an intermittency in application which makes the process capable of indefinite repetition. This is the sub-surface irrigation method, sometimes spoken of as the Waring system since it was first employed by the late Col. George E. Waring for his residence in Newport, R.I., fifty-one years ago. It is usually the least expensive to install and the least troublesome to maintain, and where the topography, soil and environment are favourable has been successfully employed for contributing populations exceeding 100 persons.

FALL REQUIRED FOR A SUB-SURFACE IRRIGATION INSTALLATION.

It is a great convenience in a residence or an institution to have laundry and water closet facilities in the basement and to be able to drain the basement floor into the house sewer. This necessitates laying the latter sufficiently below the basement floor to permit of the installation of these conveniences. The invert of the house sewer at its junction with the vertical soil pipe will lie about 15 inches below the basement floor and the plan for sewage treatment will have to take this into account. Where the fall is ample the solution is easy, but where the ground adjacent to the building is very flat, difficulties occur. If the septic tank is to lie 100 feet from the vertical soil pipe and the sub-surface drainage area is 60 feet farther on; if the house sewer is to have a fall of $\frac{1}{4}$ inch per foot and if the inverts of the sub-surface drains are to be 12 inches below the surface of the soil as is usually recommended, the least difference in elevation between the basement floor and the sub-surface drainage area will be found as below:

Difference in elevation between basement floor and invert to house sewer..	1 ft. 3 in.
Drop in 100 feet of sewer, $\frac{1}{4}$ -in per foot	2 ft. 1 in.
Difference in water level in tank and H.W.M. in siphon chamber	2 in.
Drop from H.W. mark in siphon chamber to invert of siphon	1 ft. 8½ in.
Drop in 60 ft. of sewer, $\frac{1}{4}$ -in. per foot	1 ft. 3 in.
Total	6 ft. 5½ in.

From this total, one foot is to be subtracted owing to the fact that the sub-surface drains are 12 inches beneath the surface. For the conditions assumed it is therefore necessary that the drainage area be 5 ft. 5½ in. below the basement floor. The gradients for the house sewer and the effluent line could be lessened slightly thus reducing the figure given. In flat districts therefore, the building site should, if possible, be on the highest available ground and the basement excavation should be shallow. In some cases it may be necessary to construct the plant partially above ground where the necessary fall cannot be obtained otherwise. Sanitary conveniences in the basement would, of course, have to be sacrificed if this course were adopted.

Fig. 1 is a design of a septic tank and a sub-surface irrigation system for an institution occupied by about forty people. The buildings stand on the bank of a small stream, the ground being probably fifteen feet above mean low water level. The sedimentation tank has a hopper shaped bottom and the sludge outlet is controlled by a 6-inch shear gate operated from the manhole above. The siphon chamber is equipped with a 5-inch Miller siphon drawing about 23 inches of water. This chamber, too, is provided with a shear gate so that accumulations of sludge may be drawn off to the drying bed from time to time. The septic tank is provided with a breather. The main trap was purposely omitted on the house sewer. The breather, in consequence, normally acts as a fresh air inlet and the soil pipe through the roof performs the functions of a chimney to the septic tank.

The soil is a rather heavy clay loam and was not considered suitable of itself to act as an absorption and aeration area. Trenches were dug in the soil as shown and the excavated soil ridged up between adjacent trenches. The underdrains were laid transverse to the distribution tile, and spaced about 18 feet apart. They led to an outlet near the stream. The trenches were filled with sand, near the surface of which the distribution tile were laid with open joints. A shallow covering of sand completed the operation.

The absorption area was divided into two parts and a diverting manhole was provided so that the respective areas could be dosed alternately.

The sludge drying area consisted of a plot 14 ft. by 18 ft. covered with a foot of sand and underdrained. The sludge capacity in the septic tank is in excess of 6 months' accumulation.

THE PERCOLATING FILTER.

Where the soil is not suitable for sub-surface irrigation, where its improvement is not feasible owing to a scarcity of sand or gravel, or where the area of land necessary for the less intensive methods is not available, the percolating or sprinkling filter, together with certain preparing and finishing accessories, will suggest itself. Filters of this type will treat 80 times as much sewage on a given area as the sub-surface system, the rates being 20,000 and 250 people to the acre respectively.

Fig. 2 shows a design for a percolating filter plant capable of treating the sewage from a population of 40 persons. The sewage is first passed through a
9 B.H.

sedimentation tank of the 2-storey or Emscher type during which passage 75 per cent. of the contained solids settle out through the slot leading to the sludge digestion chamber below. The 2-storey tank possesses two advantages over the type previously described. It gives a fresh effluent, since the incoming sewage is not permitted to mix with the septic contents of the lower chamber, and it produces an inoffensive sludge. It is generally conceded that a fresh sewage is more easily treated on a sprinkling filter than is a septic sewage.

It will be noticed that the sewage in the settling or upper chamber passes beneath two baffles and upward through an excelsior filter lying just beyond the second of these baffles. This is intended to screen out the larger particles in suspension which might clog the distributors above the main filter. The excelsior mat is about 3 inches thick, is supported on horizontal wooden bars 1 in. by $\frac{1}{2}$ in. spaced 1 in. in the clear, and is kept from floating by a close mesh heavy galvanized wire screen laid on top. The excelsior is easily removed from time to time and replaced by new. It will be seen that accumulations on the lower side of this filter, which in the course of time lose their buoyancy, will gravitate through the slot into the sludge chamber below. To some extent, then, this filter is self-cleansing.

The settled sewage next passes over a weir into the siphon chamber which is equipped with a 3-inch Anthes or Miller siphon. When 2.3 cubic feet of liquor have accumulated, the siphon automatically discharges into a main wooden trough and 18 galvanized iron laterals having $\frac{1}{4}$ inch perforations at the sides spaced 3 in. centre to centre. It was intended that the filter would receive, on the average, a dose of sewage at 20-minute intervals.

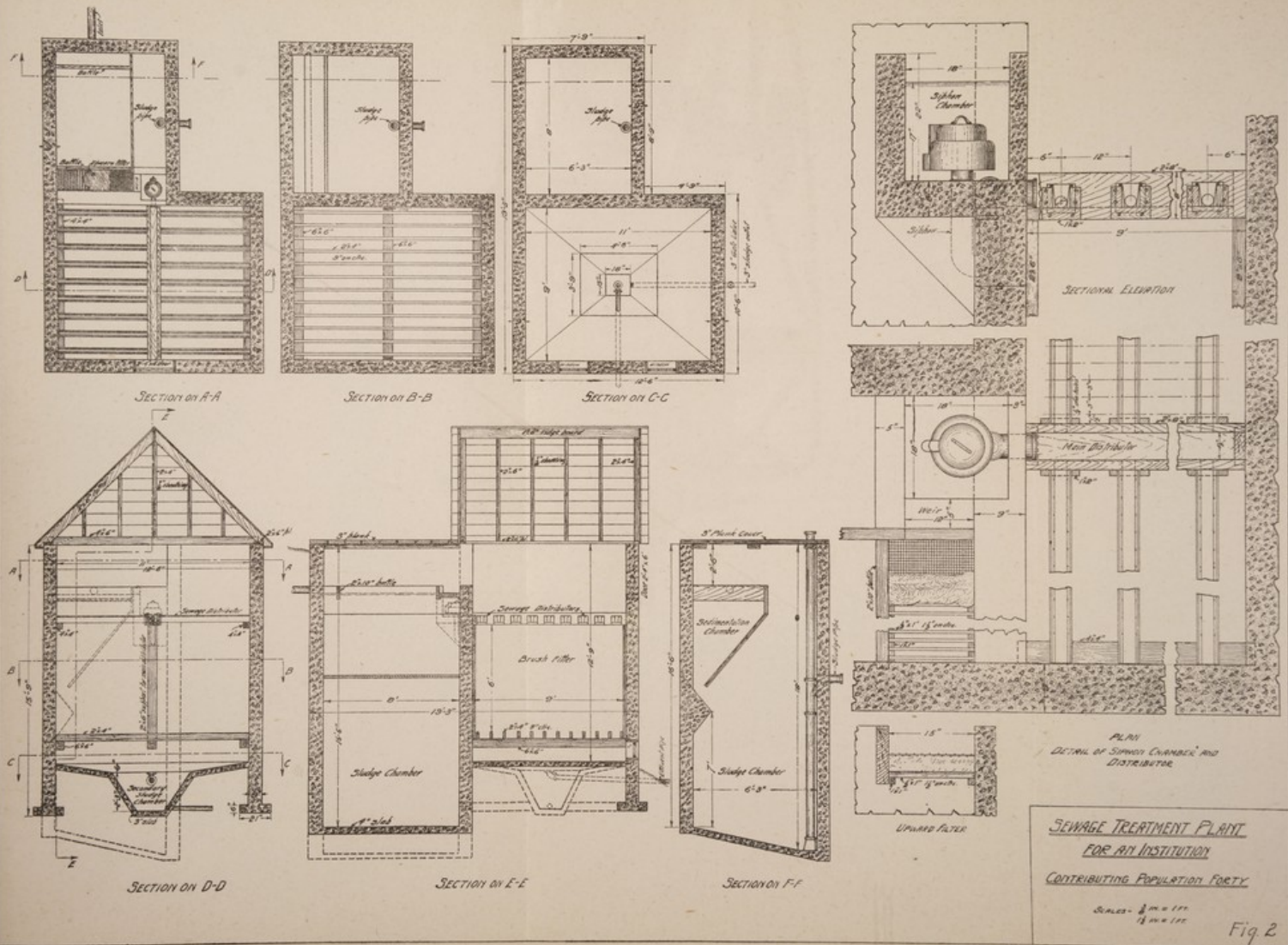
The filter medium is of brush twigs varying in size from $\frac{3}{8}$ in. to $\frac{3}{4}$ in. bundled and tied together in sheaves about 9 in. diameter and 3 ft. long. The effluent from this percolating filter collects in a concrete lined hopper-like tray at the bottom. The sludge, always present in this effluent, is permitted to collect in the bottom of the hopper and is drawn off from time to time to drying beds through the lower of the two outlets. The upper 3-inch effluent pipe, terminating in an upward turned ell in the centre of the basin, conveys the effluent to the grass outside, where it runs away without producing offence. Provision for aeration and inspection is made through two lower windows and an upper door. The effluent should be non-putrescible if everything is working normally. The attendant should be trained to make the methylene blue test to check the character of the effluent and the efficiency of the filter.

The sludge from the sludge digestion chamber is discharged through a 4 in. cast iron pipe by hydrostatic pressure due to 4 ft. of head, to a drying bed.

The plant was designed for a hillside location where the fall was ample.

GREASE TRAPS.

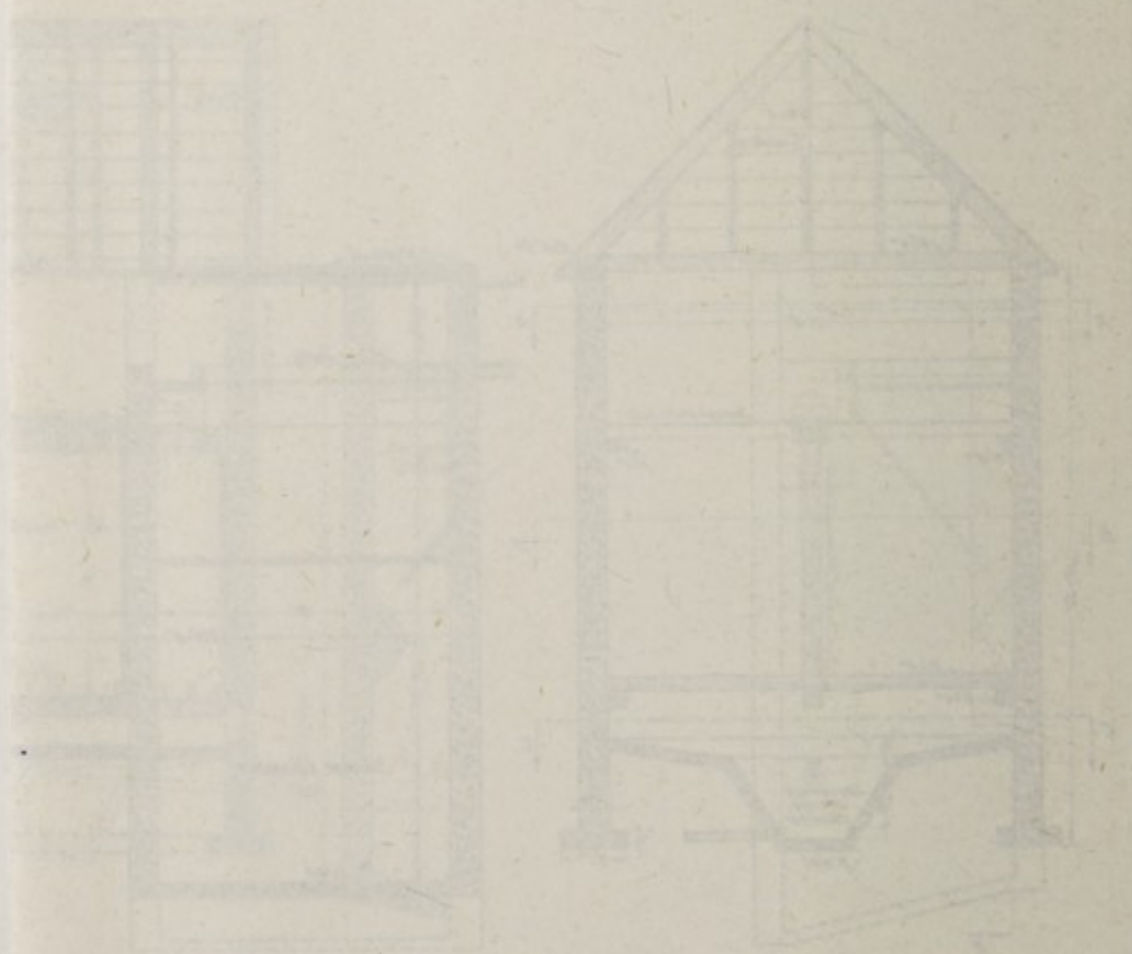
Animal fat is essentially a mixture of stearine, palmitine and olein. The two former are solid at ordinary temperatures having melting points of 160° and 150° F. respectively. Olein is a liquid with a melting point of 23° F. The actual melting point of a fat or grease obviously depends upon the relative proportions therein of these three constituents. If the melting point were, say, 80° F. and the prevailing temperature of the sewage were 60° F., it is clear that the fats would congeal and could be separated in the solid state. In general this condition obtains and because of the fact that fats obstruct house sewers, disintegrate very slowly in the sludge chamber and choke filtering materials whether





Section of the building

Section of the building



Section of the building

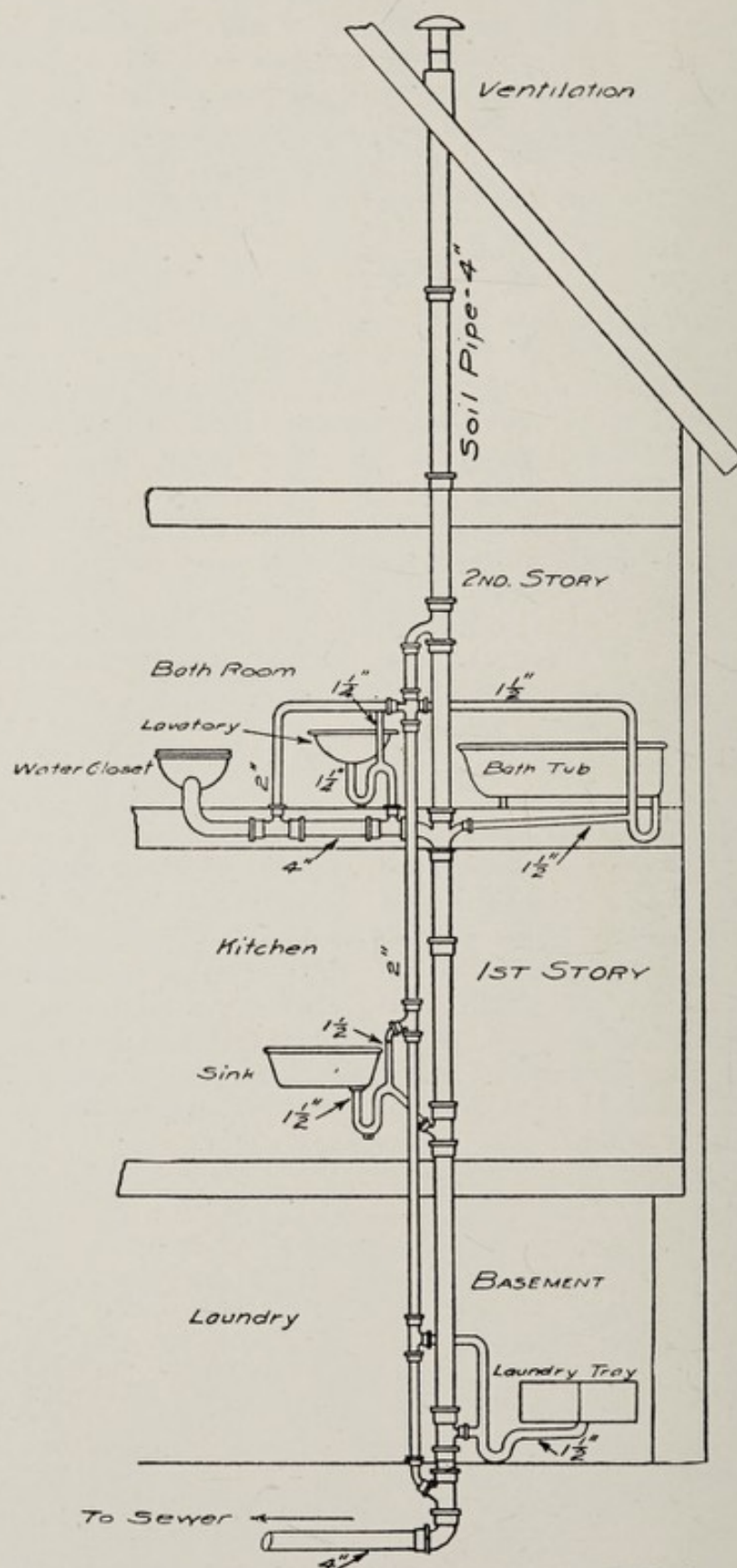
Section of the building

coarse or fine, their removal is highly desirable. Grease traps should be installed between the kitchen sink and the sedimentation tank and should be cleaned out periodically. They may be of simple construction or of the more elaborate type shown herewith in which the congealing of the grease is assured by passing the cold water for the kitchen requirements through a jacket surrounding the trap. In all cases, the sewage outlet should be well below the prevailing water line in the trap so that none of the floating fats may be carried away.

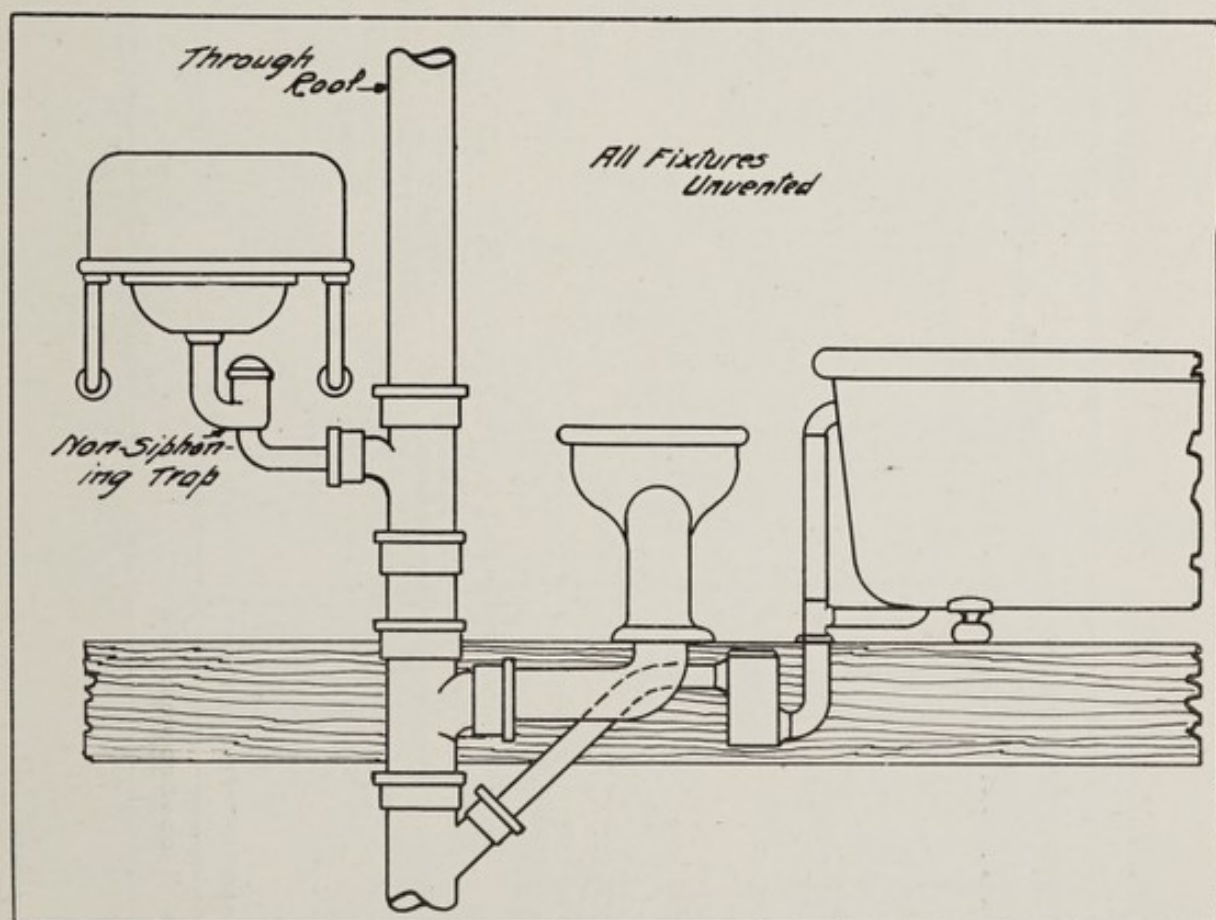
SEWAGE PUMPING.

If the topography be such that sewage has to be lifted, a choice between methods must be made. Either the crude sewage will be raised, then treated and in the process will gravitate to a final outfall, or it will be permitted to gravitate through underground filters, after which the effluent will be raised to the final outfall. The second method possesses the advantage that the liquor to be lifted is comparatively clear, a consideration of some importance when small pumps are to be employed. As to appliances, a choice will lie among the centrifugal pump operated by gasoline engine or, better still, electrically operated and float controlled, the hydraulic lift, the air lift and the sewage ejector. The automatic electrically operated pump is almost ideal but supposes an available electric supply. For the operation of the two last mentioned, a supply of compressed air is necessary. The hydraulic lift requires for its operation water under pressure or at an elevation of vantage. Sewage from a higher level has been employed through the use of the hydraulic lift to elevate other sewage from a lower level to a place of discharge.

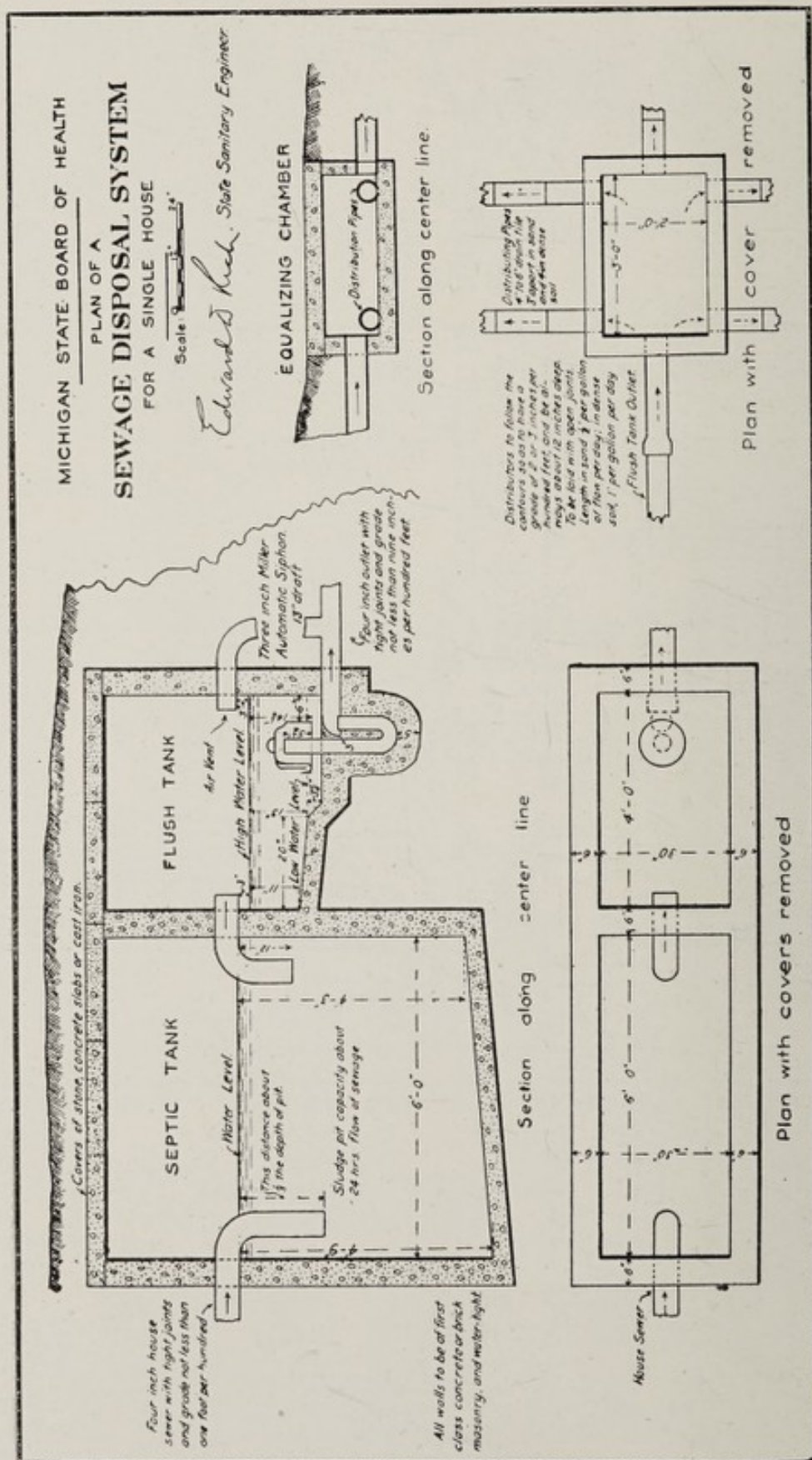
In conclusion, let it be said that methods of treating the sewage wastes of rural residences and institutions are now available which at moderate cost give good service and avoid conditions that seriously pollute soil and water and are a menace to health. These methods vary with the conditions and no one process will be suitable for all situations. The selection of that method which is best suited to a given case will require the exercise of intelligent judgment and a study of the local settings. Finally when the plant has been constructed it should receive such attention as will enable it to perform the work for which it was designed, for no system, however carefully planned, can be expected to operate satisfactorily without some supervision.



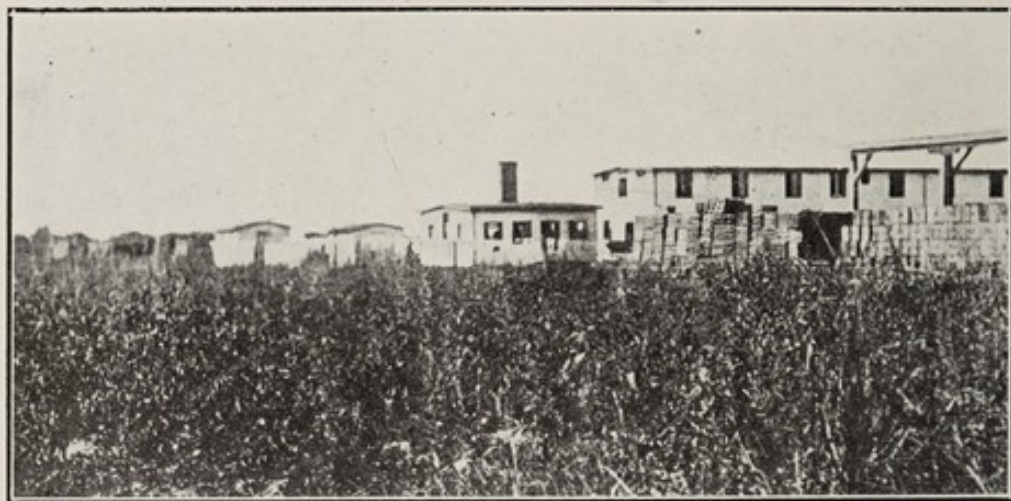
House plumbing with all fixtures vented. Bulletin
No. 57, U. S. Dept. of Agriculture.



House plumbing fixtures not vented. Adapted from Starbuck's "Modern Plumbing."



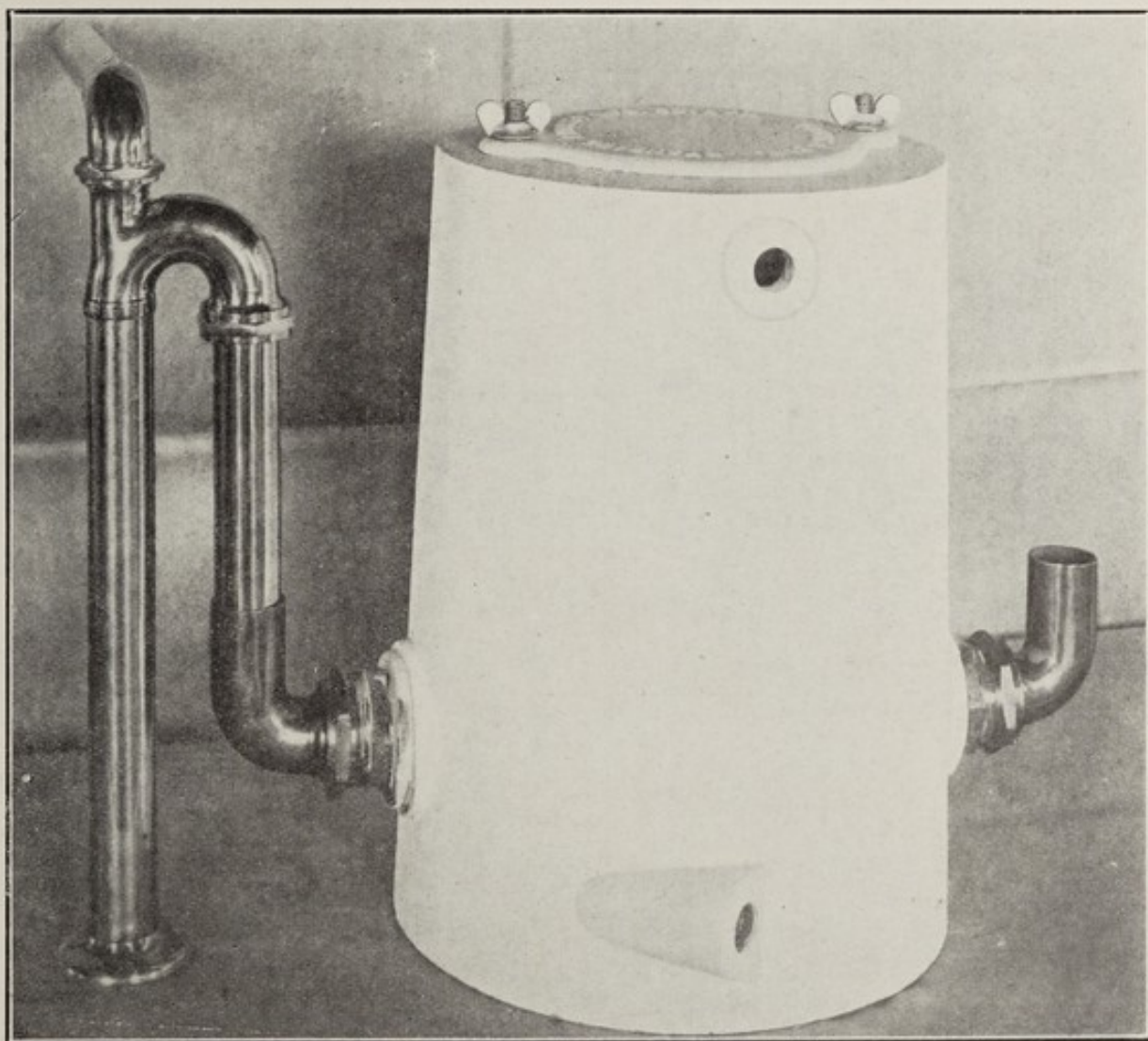
Sewage disposal system for a single house. Michigan State Board of Health.



A tomato patch under which sub-surface tiles have been laid.



Evils of a defective siphon illustrated. The sludge has escaped into the sub-surface tiles which have been uncovered.



A modern water-cooled grease trap. Courtesy of Standard Sanitary Manufacturing Co., Toronto.



APPENDIX "A"

The reports appearing in this Appendix were received from the Secretaries of the Local Boards of Health of the cities and towns of the Province of Ontario, in conformity with section 23, ss. 3, of the Public Health Act, and have been edited by the Secretary of the Board.

BRANTFORD.

BRANTFORD, December 5th, 1918.

Board of Health, Brantford.

GENTLEMEN,—We beg to submit the following report of the Medical Health Office for the year ending November 1st, 1918:—

MORTUARY STATISTICS.

During this period there was a total of 523 deaths, including 35 cases of still births, leaving 488. Taking the assessor's report of the city's population at 28,725, it gives us a death rate of 17 per 1,000. This compares favourably with other years. However, included in the above list are 159 deaths due to influenza, and it is fair to say that if it had not been for this epidemic in October our death rate would have been 329, or 11.3 per 1,000.

Also included in the list are a number of deaths at the Brantford General Hospital of people from outside the city.

The following tables give the death rate in the various age periods:—

DEATHS REGISTERED FROM ALL CAUSES DURING YEAR ENDING 31ST OCTOBER, 1918.

Males	273	Sex unknown.....	6
Females	244		
		Total	523

AGES OF DECEASED.

Still born	35	35 years to 39 years	28
Under 1 year	72	40 years to 44 years	17
Under 2 years	21	45 years to 49 years	21
Under 3 years	15	50 years to 59 years	41
Under 4 years	4	60 years to 69 years	50
Under 5 years	5	70 years to 79 years	49
5 years to 9 years	8	80 years to 89 years	34
10 years to 14 years	10	90 and over	3
15 years to 19 years	15	Age unknown	3
20 years to 24 years	25		
25 years to 29 years	34	Total	523
30 years to 34 years	33		

CAUSES OF DEATHS.

Auto toxæmia	1	Cholera infantum	5
Abscess of liver	1	Concussion of brain	2
Asthma	1	Carcinoma	4
Apoplexy	5	" (uterus)	1
Arterio sclerosis	12	" (stomach)	8
Anuria	1	" (bladder)	1
Anorexia nervosa	1	" (tongue)	1
Appendicitis	4	" (breast)	4
Anæmia	4	" (liver)	1
Alcoholism (acute)	1	" (colon)	1
Accidents	6	Convulsions	7
Atelectasis	1	Congestion of lungs	1
Blood poisoning	3	Cerebral hemorrhage	7
Bronchitis (acute)	4	Cerebro-spinal meningitis	1
" (chronic)	1	Cardeo tascular renol	1
Bright's disease	3	Cerebral abscess	1
Cardiac paresis	1	Cappaloule (from birth)	1

CAUSES OF DEATHS.—Continued.

Dysentery	1	Myocarditis (senile)	1
Decline of age	19	Morbus caeculim	1
Drowning	3	Meningitis	7
Diphtheria	4	“ (tubercular)	1
Dropsy	4	Mitral disease	1
Dementia senile	1	Measles	1
Dilated heart	4	“ (broncho pneumonia)	1
Diarrhœa	1	Neurasthenia	1
Diabetis	3	Non-closure of oremen	3
Epilepsy	1	Not known	2
Endocarditis (ulceratum)	1	Nephritis (chronic)	5
“ (chronic)	3	Organic heart disease	3
Eclampsia puerpural	1	Operation (removal of prostrate) ..	1
Ectopia gestation	1	Otitis media (chronic)	1
Exposure	1	Perforation (intestinal)	1
Embolism	1	Pulmonary ordena	1
Fatty degeneration of heart	2	Peritonitis	3
Fractured skull	1	Paralysis agitans	1
“ spine	1	Poisoned (cyanide of potassium) ...	1
Gall stones	1	Prematurity	1
Gastric enteritis	1	Pneumonia	78
Gangrene of lungs	2	“ (broncho)	7
Goitre (cystic)	1	“ (pleuro)	1
“ (exoplithalime)	1	“ (lobar)	1
Hydrocephalocle	1	“ (tubercular)	1
Hemorrhage (stomach)	1	Pulmonary plutusis	1
“ (internal)	1	Rickets	1
“ (post partum)	1	Rheumatism	1
Humphegia	1	Senility	12
Heart failure	20	Senile gangrene	1
“ (operation)	1	Sclerosis of spinal cord	1
Hæmoptysis	1	Shock, from burns	2
Hanging	1	Septicæmia	3
Intestinal la grippe	1	Sarcoma	3
“ infection	2	Septic infectum	1
“ obstruction	3	“ ardititis	1
Indigestion	4	Strangulated hernia	1
Influenza	81	Typhoid fever	4
Inanition	11	Tuberculosis	11
Infectum cystitis	2	“ (lungs)	6
Lymphatic lukæmia	1	“ (stomach)	3
Leakage of heart	1	Ulcer of stomach	1
Marasmus	1	Uræmia poisoning	2
Malformation of births	1	Whooping cough	5
Myocarditis	8	Weakness	1
“ (chronic)	1	Still births	35

CONTAGIOUS DISEASES.

Of reportable diseases there have been 286 cases. This, in comparison with 105 cases for the previous 12 months, seems like a big increase, but this was due in great measure, to the outbreak of measles during the summer, from which 182 cases were reported, there being two deaths.

COMMUNICABLE DISEASES REPORTED.

YEAR ENDING 31ST OCTOBER, 1918.

Cerebro spinal meningitis	1
Diphtheria	44
Infantile paralysis	1
Measles	182
Scarlet fever	38
Smallpox	1
Typhoid fever	19

Total 286

DEATHS FROM COMMUNICABLE DISEASES.

Cerebro spinal meningitis	1
Diphtheria	4
Infantile paralysis	0
Measles	2
Scarlet fever	0
Smallpox	0
Typhoid fever	4

Total 11

In regard to typhoid fever there were only 19 cases with 4 deaths. In 2 cases the source of infection was well water; some others contracted it at a summer resort; a couple of cases were from outside the city; and the remainder were city cases.

Diphtheria—44 cases, with 4 deaths.

Measles—182 cases, 2 deaths, 1 due to pneumonia.

Infantile paralysis—Very fortunate; 1 case and no deaths.

Scarlet fever—38 cases, no deaths.

Meningitis—1 case, 1 death.

Smallpox—1 case, no deaths.

We find that there have been no cases of tuberculosis reported, but there have been some 20 deaths from it during the year. In October we were visited by the influenza epidemic, which has swept over the country with such disastrous results. It was impossible for us to ascertain the exact number of people affected, but a conservative estimate would be at least 35% of the total population, or about 10,000, with a death rate of 204. Brantford was hit particularly hard, but by the closing of schools, churches, and theatres, all public gatherings, and the establishing of an emergency hospital, where the worst cases could be segregated, and with the active co-operation of the public generally, the outbreak was brought under control.

One distressing and outstanding feature of the epidemic was the fact of its attacking so many of the younger people, in whom there was a very high mortality, the ages 21 to 40 being those in which the death rate was the highest, being about 50% of all the deaths from influenza. Although this report has to deal with matters up to October 31st only, we feel that we might briefly state a few statistics.

EPIDEMIC SPANISH INFLUENZA.

Returns of deaths 1st October, 1918, to 30th November, 1918.

Males	115	Females	91
		Total	206

AGES OF DECEASED.

Under 12 months	16	40 years to 44 years	9
" 2 years	13	45 " 49 "	5
" 3 "	6	50 " 54 "	5
" 4 "	2	55 " 59 "	3
" 5 "	1	60 " 69 "	4
5 years to 9 years	1	70 " 79 "	2
10 " 14 "	4	80 " 89 "	2
15 " 19 "	9	Ages unknown	2
20 " 24 "	21		
25 " 29 "	33	Total	206
30 " 34 "	39		
35 " 39 "	29		

CAUSES OF DEATH.

Spanish influenza	23
" " and pneumonia ...	121
Pneumonia	56
Broncho pneumonia	6
Total	206
Number of non-city cases unknown.	
50% of deaths 20 to 40 years of age.	

CASES, EMERGENCY HOSPITAL.

Admissions	259
Discharges	169
Deaths	80
In hospital	10
Death rate	30.9

BRANTFORD GENERAL HOSPITAL. INFLUENZA CASES.

Admission	59
Discharges	47
Deaths	12
Death rate approximately 20%.	

The difference in death rate at the two hospitals was due to the fact that a great many of the worst cases in the city were sent to the Emergency. Some on admission were in a dying condition.

In connection with the Emergency Hospital great credit is due those who undertook it and worked so well to equip and organize it and bring it up to its present condition. Also Miss McNeill, the superintendent, who gave herself unhesitatingly to the work; to Mr. K. V. Bunnell and Ald. Kelly; Mr. Hutching, secretary of the G.W.V.A.; Mrs. Geo. Watt, and the nurses and orderlies who gave their lives, and all the other workers who at great personal sacrifice came forward to succor those affected with the disease. We would recommend that some official recognition from the City Council be paid to all those who have "done their bit" during the epidemic.

In conclusion, we would like to mention that our present condition as regards influenza is very good. We have only twelve cases in the Emergency Hospital and none at Brantford General Hospital, and throughout the city there are a few isolated cases, but we may safely say that the epidemic has subsided. However, in order to avoid a recurrence such as they are now having in the city of Hamilton, it behooves every citizen to be careful and particularly to refrain from going to or receiving visitors from those places where the disease is still prevalent.

Respectfully submitted,

NORMAN W. BRAGG,

M.H.O.

CHATHAM, ONT.

Dr. J. W. S. McCullough, Chief Officer of Health, Toronto, Ont.

I herewith submit my annual report on public health matters for the year 1918 as follows. As regards contagious diseases the following have been reported to me since 1st of December, 1917:—

Scarlet Fever—Three cases with no deaths.

Measles—We had almost an epidemic. Two hundred and six reported and quarantined for the regulation period or until well. There were three deaths due to pneumonia complications.

Chickenpox—Thirty-three reported, and am sure there were other cases; no deaths.

Smallpox—We had eleven cases, with no fatalities. One of these cases was from a neighbouring municipality, sent in to one of our hospitals as an appendix case, and was operated on when the rash was well out on the face and hands and body before it was diagnosed. After diagnosis was made the patient was removed to the Isolation Hospital, with a trained nurse in charge, but not before many of the nurses had been exposed and who were not vaccinated at the time. The nurse who had charge of the case before diagnosis was made was taken down with smallpox just fourteen days after exposure and developed a moderately severe type. By this mistake in diagnosis here was one of our two hospitals shut out from serving the public for the full quarantine period of fourteen days. The above case proved a great incentive to all nurses to protect themselves through vaccination. Not one of the eleven cases had been previously successfully vaccinated. After a general proclamation for vaccination had been issued by the mayor and city council, upon the request of the local Board of Health, there were over 3,000 persons vaccinated with splendid results from the use of provincial vaccine. Many were vaccinated by the puncture method when the reaction was not as severe or as prolonged nor produced as sore arms as by the old scarrification method.

Whooping-cough—Only four cases, three being in one family; no deaths.

Diphtheria—Twenty-three cases, with two fatal cases; one of these was complicated with measles. Splendid results are being obtained from the antitoxin sent out by the Department in combatting this dread disease.

Tuberculosis—Only one case reported, though there have been four deaths from it during the year. It seems almost a crime that it is necessary for general hospitals to admit this class of cases upon application, else their Government grant may be withheld. It matters not in what stage of the disease the applicant may be in at the time. Would it not be possible for the Provincial Board of Health to make such representations to our Legislative Assembly, that they would give relief by changing the Health Act?

Typhoid Fever—One hundred and sixty-two cases from the city, with sixteen deaths; while sixty-three outside patients were treated in our hospitals, with eight deaths. The first case developed on July 23rd, and by the end of August 131 in the city had developed; the remaining thirty-one cases appeared as follows: Twenty-six in September, two in October, and three in November. The last reported to-day where contaminated well water was being used altogether. I believe most of our cases can be traced to the use of well water which is contaminated. Last March and April the city water became very turbid, and looked almost repulsive even to bathe in let alone drink it. This

turbidity was likely due to the strong thick ice on the river from whence the water is taken, with the strong current of water tearing up the bed of the river during the spring freshet. This condition of water turned many to seek water from wells that had not been used for years. Samples of water were sent to the department from thirty-four wells. Of these twenty-seven were intensely contaminated and were closed by the M.O.H. after a resolution by the local board. The week previous to the typhoid outbreak there were some hundreds of cases of gastro enteritis, lasting for from twenty-four hours to a week. In some cases there was a recurrence of the diarrhoea after an interval of quietude of the bowels. In most of these cases a good dose of oil was all that was needed to clear them up. Not many of these cases developed typhoid. Whether this was caused by typhoid bacillus or by some of the infernal food substitutes that were distributed in this district and used in making bread, much of which was unfit for food, and for relief the local Board and M.O.H. appealed to the food controller to investigate. An inspector was sent up, when the food conditions soon improved. During the epidemic the Provincial Board of Health gave great assistance in the persons of Drs. McNally, Bell, and Mr. Dallyn, provincial sanitary engineer, in detecting the cause and giving advice as to the management of so serious an outbreak. Many samples of water, milk, and ice-cream were collected and sent away for a bacterial analysis, as well as blood tests made from every person in the city handling either milk or ice-cream. Splendid work was done by every local physician in using precautions to stamp out and control its spread, while the staffs of the two hospitals did almost superhuman service for many weeks with no cases among themselves, having been previously protected through vaccine. The local board, after consulting with Dr. McNally, made arrangements with one of the local physicians to inoculate all citizens presenting themselves at the expense of the city. By this means about 1,400 persons additional were immunized, besides the large number who went to their own family doctor for the inoculations. The water furnished by the commissioners through the city mains has been more or less turbid all summer, though of good quality otherwise and quite safe for domestic purposes. However, public opinion was aroused on the water question, so that the commissioners were compelled to act in the matter of giving the citizens better water if possible, and that at the very earliest moment. They have obtained advice and counsel from some of the foremost water experts on the continent, and are moving in the right direction. The appointment of an analyst to make daily tests of the water will go a long way in restoring public confidence in the purity of water furnished the public. This, with other extensive changes in the purifying process, will be made as soon as possible. The city water is good now, and has been for most of the year, outside the turbidity.

Spanish influenza, or flu, immediately following the typhoid, proved to be quite serious. Cases reported 1,500; possibly 2,200 or 2,300. Quite a number were complicated with pneumonia of a lobular type, with a great tendency to unusual bloody sputum, accompanied by great prostration. There were many fatal cases among the strong, healthy adults between the ages of 18 and 35 years, and among the pregnant women. This latter class were seldom sick more than two or three days. Considerable prophylactic vaccine was used, with seemingly good results, few being attacked that had been inoculated.

A decided step in advance has been made by the School Board in the appointment of a school nurse, a long-felt need. Good results should be the outcome of this action of the School Board.

Just now the citizens of Chatham have an opportunity of getting rid of one of the greatest menaces to public health, particularly after an epidemic of typhoid fever, in using their influence with the members of the city council to have them pass a by-law compelling the installation of inside closets in all parts of the city dwellings, etc., where proper water and sewer facilities are to be had, and thus get rid of outside closets. Few citizens probably are aware that it was necessary to have over 1,300 of these outside closets cleaned during the year. This, with our common enemy the fly, supply the link for an epidemic for another year or succession of years. The immediate doing away with these is the first and greatest preventative measure at our command. The age in which we live demands this to be done.

All of which is respectfully submitted.

T. L. McRITCHIE,
M.O.H.,

CHATHAM, ONT., November 30th, 1918.

SANITARY INSPECTOR'S REPORT FOR THE YEAR ENDING NOVEMBER 30TH, 1918.

GENTLEMEN,—I beg to report as follows: There were 280 cases of contagious diseases reported to the M.O.H. to be placarded, and most of them were disinfected before being released from quarantine. The Public Library was disinfected; all the public schools,

Collegiate Institute, the News Building, St. Joseph's School, and the Business College; also all the factories, a number of times, more particularly in regard to toilet accommodations; a number of changes recommended in this respect in some factories have been made. Now the system seems to be much improved and working most satisfactorily.

Seven different houses were placarded as being unfit for human habitation. Most of these places have been thoroughly overhauled, and modern conveniences installed, making them very comfortable dwellings. The different farmers' premises, and cows that supply milk to the city milk vendors, were inspected, and found considerable improvement in their manner of caring for both their stock and milk. Inspected and had closed 1,323 outside closets; also examined all the cellars on King street and other business places; found most of them kept in better condition than in former years. Inspected slaughter houses and butcher shops frequently, and found them all in good condition. Some were in excellent shape. The laundries were each inspected every week during the year, which I wish to report O.K. Reported to the city garbage men 104 dead animals on the streets, and they were promptly removed. Seven horses were ordered to be put off duty until found in fit condition again, and ordered one to be killed. Kept in touch with all cafes, and insisted upon "swat the fly," with excellent results. The manure box nuisance has been much lessened owing to the more extensive use of motor-trucks, while those still in existence are more particular about how they are kept. Condemned a carload of hogs for being overloaded, and had them reloaded and made comfortable; also two different lots of poultry, there being too many in a crate. Additional crates were ordered, and the overcrowded condition was relieved.

Gathered 104 samples of milk for testing purposes, and assisted the M.O.H. in making the tests. Shipped 150 samples of water for analysis by the Provincial Board of Health. The samples were obtained from many different taps and wells about the city. The lanes about the city are being kept in fairly good condition, as are the alleyways also.

Since the typhoid fever broke out I have been calling on each doctor personally for their reports on new cases weekly at the request of the M.O.H.

What with typhoid and influenza I have had a very busy year.

DAVID HOLMES,
Sanitary Inspector.

FORT WILLIAM.

FORT WILLIAM, ONT., November 1st, 1918.

To the Chairman and Members, Board of Health, Fort William, Ont.

GENTLEMEN,—In accordance with the provisions of the Ontario Public Health Act I beg to submit herewith my annual report for the year ending October 31st, 1918.

VITAL STATISTICS.

Estimated population	20,560
Death rate per thousand population (excluding still-births)	10.55

This rate includes all deaths reported in the municipality whether residents or not.

Birth rate per thousand population (excluding still-births)	36.91
Infant mortality rate per thousand births	108.03

The death rate is 2.25 lower than last year.

The birth rate is 4.31 lower than last year.

The infant mortality rate is 25.39 lower than last year.

This showing with regard to infant mortality is very encouraging. A few years ago there were three great problems here, viz., typhoid, infant mortality and tuberculosis. The first is conquered. We have not had a death in two years; the second is coming down; but I am sorry to say we have made little or no impression on the last.

Venereal diseases became reportable in July. From that month till the end of our year there were reported: Syphilis, 29 cases; gonorrhœa, 48 cases; and chancroid, 1 case.

On account of the persistent epidemic of scarlet fever, and in the last month of the year the "flu," it was found necessary to re-fit the annex of the isolation hospital in May to accommodate scarlet fever cases.

Thirty-four persons were summoned to court during the year for the following causes:—

Breaking quarantine	6
Failing to report a communicable disease	7
Breach of milk by-law	6
Failure to abate nuisances	14
Selling milk without license	1

The following products and supplies from the Provincial Board of Health were distributed:—

Diphtheria antitoxin	764,000 units
Tetanus antitoxin	18,000 "
Meningitis serum	3,000 "
Pertussis serum	410 C. C.
Typhoid vaccine	12 doses
Smallpox vaccine	120 tubes
Silver nitrate solution	25 "
Wasserman tubes	25
Culture tubes	39

MEASLES.

There were twelve cases of measles reported, with no deaths. Statistics follow:—

Year.	Cases Reported.	Deaths.
1914	279	1
1915	8	0
1916	581	7
1917	338	3
1918	12	0

WHOOPING COUGH.

There were two hundred and fifty-nine cases of whooping cough reported, with three deaths.

Year.	Cases Reported.	Deaths.
1914	0	1
1915	33	2
1916	196	17
1917	10	1
1918	259	3

ERYSIPELAS.

There were four cases of this disease reported with no deaths. Statistics for the last five years follow:—

Year.	Cases Reported.	Deaths.
1914	11	4
1915	5	0
1916	6	1
1917	13	1
1918	4	0

CHICKENPOX.

Year.	Cases Reported.	Deaths.
1915	3	0
1916	13	0
1917	97	0
1918	75	0

RUBELLA.

Year.	Cases Reported.	Deaths.
1917	181	0
1918	25	0

MUMPS.

Year.	Cases Reported.	Deaths.
1915	3	0
1916	16	0
1917	90	0
1918	92	0

PULMONARY TUBERCULOSIS.

There were fifteen cases reported, including six from out of town and nine deaths, two of which were non-residents.

Year.	Cases Reported.	Deaths.
1914	17	11
1915	28	23
1916	19	18
1917	15	12
1918	15	9

SMALLPOX.

There were no cases of this disease reported. Statistics for the last five years follow:—

Year.	Cases Reported.	Deaths.
1914	0	0
1915	8	0
1916	3	0
1917	2	0
1918	0	0

SCARLET FEVER.

There were three hundred and thirteen cases of scarlet fever reported. There were three deaths, one being that of a non-resident.

Year.	Cases Reported.	Deaths.
1914	110	2
1915	18	0
1916	4	0
1917	110	3
1918	313	3

Below appears the statistics by month, age, sex, recovery and death.

Month.	Cases.	M.	F.	Under 5 yrs.	5-9 years.	10-14 years.	15-19 years.	Over 19 years.	Re- covery.	Death.	
1917											
Nov.	26	14	12	9	13	3	.....	1	26	.....	
Dec.	28	18	10	9	9	5	2	3	28	.....	
1918											
Jan.	15	10	5	6	6	1	1	1	15	.....	
Feb.	31	12	19	6	12	5	1	7	31	1	Out of
Mar.	15	9	6	5	7	.....	3	.....	15	.....	town.
April....	23	10	13	8	12	3	.....	.....	23	.....	
May	47	21	26	21	18	2	3	3	46	1	
June	35	17	18	12	16	4	2	1	35	.....	
July.....	25	10	15	13	8	2	1	1	25	.....	
Aug	13	7	6	3	6	2	1	1	13	.....	
Sept.....	26	14	12	11	7	4	3	1	26	.....	
Oct.	29	12	17	9	10	8	1	1	28	1	
Total..	313	154	159	112	124	39	18	20	311	3	

DIPHTHERIA.

There were twelve cases of this disease reported. There were two deaths.

Year.	Cases Reported.	Deaths.
1914	24	2
1915	25	2
1916	33	5
1917	13	1
1918	12	2

TYPHOID FEVER.

There were five cases of typhoid fever reported, four of which were people who had been in town but a few days from other cities. There were no deaths.

Year.	Cases Reported.	Deaths.
1914	33	5
1915	23	7
1916	18	2
1917	11	0
1918	5	0

A general resumé of the communicable diseases reported follows:—

Disease.	Cases Reported.	Deaths.
Measles	12	0
Rubella	25	0
Mumps	92	0
Scarlet fever	313	3
Whooping cough	259	3
Chickenpox	75	0
Erysipelas	4	0
Typhoid fever	5	0
Smallpox	0	0
Diphtheria	12	2
Tuberculosis	15	9
Poliomyelitis	1	0
Cerebro-spinal meningitis	1	0
	814	17

ISOLATION HOSPITAL REPORT.

Patients admitted.....	166
Scarlet fever	163
Diphtheria	3
	166
Hospital days	6,236

ACCOUNTS.

Salaries	\$2,324 77
Maintenance account	1,350 08
Total	\$3,624 85
Credits: Collection of accounts	1,166 00
Cost per patient per day	\$2.458 85
There was spent also \$625.30 on capital account.	58.1 cents

MEDICAL RELIEF.

The following is the report of medical relief work for the year:—

Month.	Visits. Made.	Office Consultations.
1917—November	8	4
December	2	1
1918—January	6	0
February	2	0
March	6	2
April	2	1
May	3	1
June	0	1
July	1	1
August	4	1
September	7	1
October	2	0
	43	13

LABORATORY REPORT.

The following examinations were made:—

Milk samples from dairymen for dirt and butter fat	175
Samples from householders	42
Samples of breast milk	15
Samples of cream	21
Swabs for diphtheria	43
Smears for gonococci	6
Sputa for T. B.	25
Blood to Toronto for typhoid	2
Sundry examinations	8

A detailed report of this work follows:—

Dealer.	Number of Tests.	Fat Average.	Clean.	Soiled.	Dirty.
F. Scollie	7	3.38	3	1	3
J. A. Kellough	35	3.07	24	7	4
D. R. Thompson	21	3.26	13	5	3
Jas. Otway	21	3.52	20	1	.....
City Dairy	21	3.01	16	4	1
Ed. Otway	19	3.24	9	6	4
H. Crabtree	16	3.41	14	2	.....
B. Webster	14	3.30	11	2	1
F. McCarthy	21	3.22	17	3	1

Of the one hundred and seventy-five samples examined, one hundred and twenty-seven were clean, thirty-one soiled, and seventeen were dirty. The fat average is 3.15, a very poor showing. There are but two dealers who sell what I call real good milk, viz.: Jas. Otway and Henry Crabtree.

REPORT OF VISITING HEALTH NURSE.

Dr. E. B. Oliver, Medical Officer of Health, Fort William, Ont.

DEAR SIR,—I beg to submit herewith my report of the work done during the months of April to September:

Month.	Number of Visits.	New Babies Visited.	Breast Fed.	Mod. Milk.	Cons. Milk.	Patent Foods.	Miscellaneous.
April	139	139	104	13	2	8	12
May	53	24	21	3	.....	.....	.....
June	380	32	26	6	.....	.....	.....
July	403	51	40	6	2	.....	3
August	335	.....	.....	.....	.....	.....	.....
September	228	69	52	7	.....	10	.....
	1,538	315	243	35	4	18	15

The total number of visits made was one thousand five hundred and thirty-eight.

In addition to this, I made a number of visits relative to communicable diseases, mostly scarlet fever. Also I made a number of school inspections, looking for possible cases of scarlet fever.

Respectfully submitted,

F. K. FISHER,

Visiting Health Nurse.

BIRTHS REGISTERED IN THE CITY OF FORT WILLIAM.

For the year ending October 31st, 1918.

Month.	Males.	Females.	Total.	Twins.	Triplets.
1917					
November	27	30	57	.....	.....
December	21	25	46	.....	.....
1918					
January	26	36	62	.....	.....
February	32	41	73	.....	.....
March	27	41	68	.....	.....
April	41	29	70	1	.....
May	39	32	71	2	.....
June	43	45	88	2	.....
July	23	38	61	.....	.....
August	37	23	60	.....	.....
September	25	31	56	3	.....
October	23	24	37	2	.....
	364	395	759	10	.....

STILL BIRTHS.

Month.	Males.	Females.	Total.
1917			
November.....	.....	.....	.....
December.....	1	.....	1
1918			
January.....	.....	2	2
February.....	.....	.....	.....
March.....	.....	.....	.....
April.....	3	.....	3
May.....	1	3	4
June.....	.....	1	1
July.....	2	2	4
August.....	1	1	1
September.....	1	2	3
October.....	3	.....	3
	11	11	22

REPORT OF SANITARY INSPECTOR.

Dr. E. B. Oliver, Medical Officer of Health, Fort William, Ont.

DEAR SIR,—I beg to submit herewith my annual report for the year ending October 31st, 1918.

NUISANCES.

During the year the city has been systematically inspected for the abatement of nuisances. The privy situation has been the greatest evil with which I have had to deal. The financial situation has again prevented any work being done in regard to their conversion into water closets. The bulk of the work lies in the coal docks district, and I have made a house to house inspection. The condition of many of these places was in many instances deplorable.

Notices have been served upon all the owners to repair or renew the privies, and in most instances the work has been done. I hope to have the whole of the privies in the city put into a sanitary condition before next summer.

The manure disposal has been fairly satisfactory, although some receptacles are showing signs of wear and tear, especially those built in a flimsy manner. There is no improvement in the storage of garbage and rubbish before collection; this state of things is not only a nuisance but an eyesore. In my opinion, no system of dealing with this matter will be found satisfactory until the city authorities themselves provide the receptacles and charge the cost to the owners.

Nuisances from the keeping of hogs has become more acute than ever. The recommendation of the Food Controller to raise hogs in the city has resulted in hundreds of them being housed at the rear of dwellings and within the limits allowed. The keeping of cows is almost as big a nuisance. Serving notice to remove these animals is of no use, and in my opinion the matter should be dealt with on broader lines. I would suggest that no hogs or cows be allowed to be stabled within the line of the C. N. P. main line and Empire Avenue (except that licensed dairymen be permitted to carry on their usual business). A more drastic enforcement of the building by-laws with regard to the erection of back buildings would do much to prevent the nuisance.

I have on many occasions called attention to the unsanitary condition existing in the coal docks section, arising from the open ditches both in the lanes and streets into which the sewage is discharged from the houses. The conditions are worse in the spring and fall of the year when the ditches overflow and many lots and the ground under the houses are flooded with a mixture of storm water and sewage. These conditions are nothing short of disgraceful, and improvement seems as far away as ever. The effect upon the health of the people, especially of infants, is shown in the mortality statistics.

Thirteen prosecutions were instituted during the year for neglect in the abatement of nuisances. Three thousand five hundred and sixty-six (3,566) inspections were made.

Six hundred and fifteen (615) written notices were served for the abatement of nuisances.

SEWER CONNECTIONS.

During the year forty-two sewer connections have been installed, one by notice and forty-one by request.

DAIRIES AND COWBARNES.

The dairies and cowbarns have been kept under constant supervision. Conditions on the whole have been good. The dairymen are slowly but surely improving their barns and plants. In the coming year I expect to see most of the barns, if not all, fitted with iron stanchions and other improvements.

The cost of feeding stuffs is seriously affecting the supply of milk, and if there is no reduction I am afraid the milk supply will be somewhat inadequate.

There are now only eight licensed dairymen. Two of these receive their supplies wholly from the farmers. The disposal of the manure from the barns has somewhat improved and no serious nuisance is now complained of.

There were collected 179 samples of milk for testing purposes.

Two prosecutions were instituted, one for low standard of butter fat and one for selling milk without a license. Six hundred and twenty-eight inspections were made during the year.

The illicit sale of milk has been considerably reduced during the year. The number of cows kept by the foreign population is not as large as it was a few years ago. This is probably due to the increased cost of feed.

RESTAURANTS, STORES AND FOOD SUPPLIES.

All the stores dealing in food have been regularly inspected and have been kept in a cleanly manner. Apart from meat, only five gallons of mixed pickles have been condemned during the year.

I have weighed bread frequently and have found same of standard weight. The restaurants have been kept in good order and the number increased by one. Several applications have been received but refused on account of insufficient sanitary arrangements.

Seven hundred and twenty-three (723) inspections were made.

INFECTIOUS DISEASES.

Owing to the prevalence of whooping cough and influenza, a great deal of time was occupied in placarding. Nine hundred and fourteen (914) visits were made.

SUMMARY.

Date.	Butchers.	Dairies.	Bakeries.	Candy Stores, Cafes.	Nuisances.	Communi- cable Diseases.	Total.	Milk.	Nuisances and Notices.
1917									
November	56	53	14	26	354	.....	503	23	1
December	93	68	36	54	165	19	435	10	.....
1918									
January	86	65	22	42	136	47	398	5	3
February	116	73	25	36	122	75	447	10	5
March	125	68	29	42	143	72	479	15	7
April	115	63	15	56	356	24	629	18	8
May	72	47	20	43	430	73	685	22	116
June	84	36	18	42	365	47	592	13	158
July	83	43	12	78	343	15	574	11	59
August	95	36	16	29	326	10	512	24	68
September ...	92	54	6	32	310	6	500	16	53
October	94	22	4	26	135	526	807	12	90
Total	1,111	628	217	506	3,185	914	6,561	179	568

ABATTOIR AND BUTCHER STORES.

During the year the abattoir has been in constant operation. Owing to the exposed position of the water supply, we are every winter put to considerable expense in thawing out. Expenses this year are the same as last within a few cents. Had it not been that the power plant had to be renewed, they would have been considerably less.

The year has been a very satisfactory one from a financial standpoint. The receipts were one hundred and twenty-five dollars and thirty-eight cents (\$125.38) in excess of the expenses.

The working of the plant is amply justified from the fact that considerably more than one thousand animals are slaughtered annually compared to a very few before the board undertook the management. Moreover, the danger from the sale of diseased and unwholesome meat is practically eliminated.

The butcher stores have been inspected from time to time and are fairly well kept. Three additional stores have been opened.

The following meats were condemned and destroyed: 120 pounds of sausages; 1,150 pounds of beef.

SUMMARY OF WORK DONE AT ABATTOIR.

Date.	Cattle	Calves.	Hogs.	Sheep.	Total.	Revenue.	Expenses.	Inspections.
1917						\$ c.	\$ c.	
November	58	30	8	.....	96	72 25	53 80	56
December	80	61	6	.....	147	118 00	60 90	93
1918								
January	44	37	14	.....	95	60 25	107 19	86
February	57	34	2	.....	93	66 50	71 75	116
March	35	25	5	.....	65	43 75	55 50	125
April	36	46	9	.....	91	52 00	50 45	115
May	53	37	13	.....	103	68 75	53 10	72
June	53	77	11	1	122	58 00	48 75	84
July	59	32	8	6	105	71 80	60 15	83
August	76	28	19	12	135	95 60	47 00	95
September	74	33	1	43	151	93 50	47 85	92
October	98	49	14	.....	161	117 25	62 80	94
Utilities .....	.....	.....	.....	.....	.....	.....	63 03	.....
	703	489	110	62	1,364	.....	782 27	1,111
Credit Balance....						.....	125 38	
						907 65	907 65	

CAUSES OF MORTALITY.

Infants Under One Year.

Number on International List.		Number on International List.	
151 Congenital debility	26	76 Diseases of the ears	1
104 Diarrhœa and enteritis	19	71 Convulsions of infants	1
92 Lobar pneumonia	11	53 Leukemia	1
91 Broncho pneumonia	6	167 Burns	1
10 Influenza	4	186 Other external causes	1
152 Other diseases of early infancy..	2	109 Hernia, etc.	1
8 Whooping cough	2	189 Ill-defined	2
89 Acute bronchitis	2		
150 Congenital malformations	1	Total	82
87 Diseases of the larynx	1		

DEATHS.

Number on International List.		Number on International List.	
151	Congenital debility	26	108 Appendicitis
92	Lobar pneumonia	23	109 Hernia, etc.
104	Diarrhœa and enteritis	19	152 Other diseases of early infancy.
10	Influenza	17	185 Fractures
79	Organic diseases of the heart ..	13	186 Other external causes
91	Broncho pneumonia	9	39 Cancer of the buccal cavity
28	Tuberculosis of the lungs	9	37 Syphilis
189	Ill-defined	8	41 Cancer of the peritoneum
81	Diseases of the arteries	5	46 Other tumors
96	Asthma	4	54 Anemia
61	Meningitis	4	71 Convulsions of infants
154	Senility	4	74 Other diseases of the nervous system
167	Burns	4	76 Diseases of the ears
175	Traumatism by other crushing..	4	78 Acute endocarditis
7	Scarlet fever	3	80 Angina pectoris
8	Whooping cough	3	90 Chronic bronchitis
40	Cancer of the stomach	3	102 Ulcer of the stomach
120	Bright's disease	3	87 Diseases of the larynx
138	Puerperal albuminuria	3	103 Other diseases of the stomach...
165	Other acute poisonings	3	113 Cirrhosis of the liver
169	Accidental drowning	3	119 Acute nephritis
9	Diphtheria	2	131 Cysts, etc.
20	Septicemia	2	134 Puerperal hemorrhage
43	Cancer of the breast	2	147 Diseases of the joints
45	Cancer of other unspecified organs	2	150 Congenital malformations
53	Leukemia	2	174 Traumatism by machines
64	Cerebral hemorrhage	2	181 Electricity
89	Acute bronchitis	2	

GENERAL EXPENSES.

Salaries	\$7,178 44
Maintenance of Isolation Hospital	1,350 08
Livery and carfare	89 50
Printing and stationery	225 44
Office and laboratory equipment	90
Antitoxin	29 35
Automobile	518 14
Conventions	100 00
Ambulance	13 00
Incidentals	184 12
Abattoir	782 27
	\$10,471 84

CREDITS.

Revenue from abattoir	\$907 65
Isolation Hospital accounts	1,166 00
Police Court fines	519 00
Milk licenses	14 75
	\$2,607 40
Total net cost of department	\$7,864 44
Total per capita cost	38.25 cents

Respectfully submitted.

EDW. B. OLIVER,
Medical Officer of Health.

GALT.

To the Chairman and Members of the Local Board of Health.

GENTLEMEN,—In accordance with the provisions of the Ontario Public Health Act, I beg herewith to submit my annual report for the year ending the 31st day of October, 1918.

The remarkable feature of this report is the total absence of typhoid fever within our municipality, due, no doubt, to the excellency of the water supplied to the citizens, to the careful supervision of the milk, and other minor sources of contamination.

Last year we found some difficulty in keeping the milk supply up to the standard of the city's by-law regarding butter-fat, but this year, I am pleased to be able to inform you, there has been a decided improvement, and that the milk vendors, in my opinion, are using their best endeavours to supply the citizens with clean, wholesome and nutritious milk. Yet notwithstanding the great endeavours of the milk vendors to supply us with good milk, I am still strongly convinced that the milk supply will never be satisfactory until we have a central station where all the milk will be first delivered, tested and pasteurized before being delivered to the citizens for consumption. This is, I believe, the only way you can detect from whence comes the unclean and poor milk. Milk, next to water, is the biggest problem we have to contend with in carrying disease. Furthermore, Bovine Tubercle, which attacks the young under sixteen, can only be destroyed by pasteurization or boiling.

Last year we had trouble in keeping the privies clean and in a sanitary condition, owing to the fact that the boxes were poorly constructed, the large number of pits, and the very unsatisfactory way of collecting the fee. However, all these difficulties have practically been overcome by having the boxes improved, the pits closed, and by the great assistance rendered by the City Council in passing a by-law making the landlords primarily responsible for the keeping of them clean and charging the costs of so doing against the various properties.

Regarding tuberculosis, I regret to be compelled to again inform you that the local medical gentlemen have not as yet complied with the regulation laid down by the Provincial Board of Health with regard to reporting cases of tuberculosis, which regulations say that whenever a legally qualified practitioner knows that any person whom he is called upon to visit is affected with tuberculosis, he shall, within twelve hours, give notice thereof, on the prescribed form, to the Medical Officer of Health of the municipality in which such diseased person resides.

During the year we have had some severe epidemics of measles, chickenpox, diphtheria, whooping cough and influenza. A detail of the cases will be given below.

I desire to call the attention of the physicians and the public generally to the fact that, under the Act, it is as compulsory to report whooping cough to the Medical Officer of Health as any other contagious disease, but it is not necessary to placard the house. This, in my opinion, is a mistake which should be remedied as soon as possible if it is the desire of the Health Authorities that the Medical Officer of Health should have supervision of whooping cough. Before leaving this subject it might not be inappropriate to draw attention to the fact that in the month of August in the Province of Ontario the death rate was as follows:

Scarlet fever	10	per 1,000
Diphtheria	6	" 1,000
Measles	17	" 1,000
Whooping cough	48	" 1,000

From the above statistics it will be seen that while we pay strict attention to the placarding of the first three we pay no attention whatever to whooping cough, where the death rate was very much greater during that month.

Re SPANISH INFLUENZA.

We are now passing through the throes of the severest and most deadly epidemic that this city, or, in fact, the continent of America, has ever known, and from a close observation of the cases that came under my notice I am convinced that the death rate has been greatly increased by the following facts:

1st.—By living in overcrowded and poorly ventilated premises.

2nd.—By being overworked and poorly nourished on account of the high cost of the essentials of life.

These facts, together with the fear of catching cold if by any means the blinds should be drawn and the windows opened so as to let in a current of fresh air and God's sunlight, are largely responsible. It is astonishing to me to see so many people who

are the happy possessors of parlours and guest-rooms who will not permit even the sun to enter these sacred precincts for fear the sunlight should fade the carpet, and the air never permitted to enter except when they are expecting a guest. All I have to say is, preserve me from being the guest in such cases.

Re VENEREAL DISEASES.

Since the Act went into force on July 1st of this year I have had sixteen cases under my supervision and I am satisfied that these are not more than fifty per cent. of the number suffering from venereal diseases in our city. The Act gives the Medical Officer of Health power to order any person, male or female, whom he believes, or has occasion to believe, is suffering from venereal disease, to present himself or herself before a legally qualified medical practitioner for examination and procure from him a certificate as to whether or not he or she is suffering from any venereal disease, and if so, what form.

It requires a good deal of courage on the part of the Medical Officer of Health to go as far as this Act provides in ordering one of his fellow citizens to present himself or herself for examination, and while these increased duties and responsibilities fall to the lot of the Medical Officer of Health, there seems to be no special provision made in the Act for remunerating him for these increased duties.

VITAL STATISTICS.

Deaths	207
Death rate per 1,000	16.60
Population	12,558
Births	268
Birth rate per 1,000	21.50
Infant mortality	33.
Infant mortality per 1,000	2.64

CONTAGIOUS DISEASES.

	Reported.	Deaths.
Typhoid fever	0	0
Chicken pox	20	0
Smallpox	0	0
Tuberculosis	3	3
Poliomyelitis	0	0
Scarlet fever	8	0
Diphtheria	25	3
Measles	455	1
Mumps	10	0
Erysipelas	0	0
Scabies	20	0
Whooping cough	(Not reported)	0
Influenza	(Not reported)	51

In conclusion, I feel that it might not be amiss to draw the attention of the Board and the public generally to the value of preventive medicine. Public health and prevention of disease have engrossed the attention of the medical profession for a very long time, but it has not been until recently that the doctors have received any help or co-operation in their work for humanity from the public, and it will require a great deal of philanthropy and organized work, united with the doctors, before any benefit will be felt by the general public in preventing and alleviating disease. You have all heard the old adage: "An ounce of prevention is worth a pound of cure," and that is true to-day in every sense of the word.

Respectfully submitted.

J. H. RADFORD,

M.O.H.

J. H. Radford, M.D., Medical Officer of Health, Galt, Ontario.

DEAR SIR,—Herewith find annual report and certified causes of death registered with me for the year ending October 31st, 1918, as follows:

Bright's disease	2	Abscess of liver	1
Cellulites	1	Acute indigestion	1
Gastric ulcers	1	Enlarged liver	2
Otitis olders	1	Railway accident	1
Still-born	6	Heart lesion	2
Congestion of liver	1	Inflammation of the brain	1
Septic meningitis	1	Double pneumonia	1
Injury at birth	1	Pyæmia	1
Apoplexy	10	Exophthalmic goitre	1
Peritonitis	2	Gastro-enteritis	1
Chronic bronchitis	1	Glandular tuberculosis	1
Acute phthisis	1	Splenic anæmia	1
Mitral incompetence	1	Locomotor ataxia	1
Myocarditis	5	Premature birth	6
Old age	11	Gangrene	1
Arterio-sclerosis	4	Senile decay	1
Cystitis	1	General debility	1
Sarcoma	1	Endocarditis	1
Valvular heart disease	3	Tumour of spleen	1
Uræmia	1	Cellulitis of brain	1
Pneumonia	21	Heart disease	1
Heart failure	2	Tabes messentenes	1
Cancer	6	Mitral regurgitation	1
Hepatic abscess	1	Pernicious anæmia	1
Paralysis	7	Septicæmia	2
Hemiplegia	1	Internal hæmorrhage	1
Appendicitis	1	Diphtheria	3
Nephritis	3	Cholera infantum	1
Injury	3	Fibrous phthisis	1
Burns	1	Spina bifida	1
Broncho-pneumonia	4	Diabetes	1
Tuberculosis	1	Myocardial degeneration	1
Acute jaundice	2	Influenza	41
Psoas abscess	1	Pulmonary tuberculosis	1
Carcinoma	4	Inanition	1
Epilepsy	1	Malnutrition	1
Diabetes mellitus	2	Organic heart disease	1
Gastritis	3		
Fibroma (uterus)	1		
			207

Certified.

JOSEPH MCCARTNEY,

Division Registrar.

GALT, ONT., December 9th, 1918.

To the Members of the Galt Board of Health.

GENTLEMEN,—The Chairman of the Local Board of Health, reviewing the work of the passing year, respectfully submits the following report:

The extensive report of our Medical Officer of Health has placed before you a detailed account of the year's work done by the Board of Health during 1918. It is a matter of deep regret to the Chairman and to every member of the Board that the past year has been the most distressing since the smallpox outbreak some years past. It is a coincidence that the present Swiss Cottage became a necessity at that time. The experience of the past few months has clearly demonstrated the necessity of an up-to-date isolation hospital to adequately take care of those unfortunately the victims of contagious diseases.

The ordinary health of the city is vastly due to the care which has been exercised towards securing a supply of pure water and unadulterated milk. The absence of typhoid fever is an evidence of improvement along these lines.

I wish to congratulate the Board on the progressive attitude which has been taken in all matters safeguarding the public health. The Board should continue to take the lead it has taken toward instructing in every possible way as to the advantages of

right living and right thinking, and sending out a word of advice in season that all may better understand the laws of healthful life.

There are some improvements needed in the matter of City Sanitary Conveniences. A resolution was passed by this Board directing the City Council to make a careful study of this important subject, and I trust our efforts will be successful next year.

The matter of disinfecting schools is a subject of vital interest. The City spends annually thousands of dollars on education, but is rather shrewd in its expenditure in the interest of public health. Health is the first consideration, and I hope to see the schools and public places disinfected regularly. The experience of the past few months has taught us that eternal vigilance is the price of health; that prevention is better than cure; and this leads me to congratulate the School Board in having secured the services of such a competent school nurse, who is continually on the alert and who understands the signals that indicate poor health. While we do not wish to usurp the work of the School Board, I think it advisable to have the school nurse placed under the supervision of the Board of Health, as her work is solely in the interest of public health.

The rule adopted by the Board of Health *re* sewer connection is working satisfactorily. The citizens are realizing the advantages of sewer connection and are making applications for sanitary conveniences. You may be asked to consider the advisability of appointing a qualified meat inspector who would see that all meat sold for human consumption would comply with the Government requirements. The Board held an important discussion relating to the inspection of dairy farms, and while no action was taken, it seems to be the opinion that some one duly qualified and of impartial mind should be appointed to undertake this important work.

The increasing duties of the Medical Officer of Health are worthy of your consideration. The position of the Medical Officer of Health is a very responsible one, and in order to discharge these duties faithfully a considerable amount of time is required altogether out of proportion to the remuneration he receives.

The Chairman of this Board wishes to thank the citizens' Willing Workers League and all others who, with such sacrifice, volunteered their assistance during the recent epidemic of influenza.

In conclusion, allow me to convey to you my appreciation of your valued co-operation and consideration extended to me during the year of 1918.

Yours very respectfully,

FRANK BLAIR,

Chairman of the Local Board of Health.

KINGSTON.

GENTLEMEN,—My annual report deals with subjects with which you have become very familiar in the past few years, but there is still room for much work along the lines indicated before we shall have reached conditions that are entirely satisfactory.

With the exception of typhoid fever and influenza, the toll taken by infectious diseases during the past year has not been unusually heavy. Until we attain the state in which infectious disease can be prevented or destroyed immediately after it has attacked the individual, we will, in spite of all other efforts directed against it, be subject to a certain loss of life. Last year the loss was not above the average. The influenza epidemic, while severe and very fatal in character in those who developed pneumonia, did not claim a greater number of victims here than it did anywhere else. The problem was a comparatively new one. In previous years, ever since the great epidemic of 1889-1890, we have become familiar with influenza or la grippe through yearly visitations, but the epidemic of 1918 confronted us with a new problem of dealing with a mixed infection, the pneumonic phase of which accounted for the high mortality. The city is greatly indebted to the medical students and the bands of volunteer workers who unselfishly threw themselves into the work of relief. The service they rendered can never be estimated in dollars and cents. As soon as the epidemic was well under way the local branch of the Provincial laboratory prepared a vaccine which was distributed free to all physicians asking for it. It was used freely in Kingston, with what ultimate beneficial effect we do not as yet know. The New York research laboratories announce that they have under preparation a serum which will act either as a preventative or curative agent.

Early in August it became apparent that a typhoid epidemic had again broken out. A diligent search for the cause revealed the fact that most of the cases were on the

route of an ice-cream dealer, and immediately all ice-cream offered for sale was subjected to laboratory tests. These, while failing to absolutely confirm the circumstantial evidence, brought out the fact most clearly that ice-cream made from pasteurized milk was infinitely superior from the bacteriological point of view to ice-cream made from raw milk. This indirectly brings up the whole question of milk supply. We insist on the producer keeping only healthy cattle in his herd and on reasonable cleanliness in attention to cattle, byres, containers, etc., but in spite of this it is possible for milk in transit to the consumer to be infected in various ways. This can only be overcome by pasteurization, and this can best be done by a civic plant, as otherwise a few progressive dealers will carry out the process, and others will not, or if forced to do so, will do it in a haphazard way. Some eighteen years ago an effort to supply Kingston with a pasteurized milk supply was attempted by a company of citizens who certainly had the right idea. For some reason the scheme failed to work out, and the building designed for the purpose is now leased to the Government for other purposes, but in spite of the failure of that effort the idea was right, as has been proved by the experience of larger centres, and we should plan for the time in the near future when such a scheme shall be successfully carried out under civic control.

While the typhoid epidemic last year was apparently due to infected ice-cream, we must not lose sight of the fact that this was only the immediate cause, and that the water supply is after all the great source of typhoid infection through sewage pollution. These questions, water supply and sewage disposal, are perennial, and are annually becoming more insistent, and a solution of these problems must be found. For one community to adopt an expensive system of sewage disposal while a neighbouring community failed to adopt any precautionary measures and continued to pollute the common water supply would be most unwise, but if we cannot ensure the purity of supply at its source, we can by chlorination, combined with filtration, ensure its purity at the distributing point. To some extent we have attempted this by chlorination, and I am informed by the Utilities Committee that a more up-to-date and reliable method of water chlorination has been ordered for Kingston. This became imperative through the failure of the old plant to adequately care for our water supply after the installation of the new electric pump, but at best this is a half measure and should only be regarded as a makeshift.

With the termination of the war and the return of the men at the front and the era of big business looked forward to by this country the housing problem promises to become acute. There are many dwellings in Kingston that are not sanitary or fit for human habitation according to modern ideas. The difficulty in the past has been that there are no places available for the tenants should these unhealthy places be closed, and so the Board has had to content itself with trying to get reasonable improvement made in such places, but if the health of the community as a whole is to be lifted up to a higher plane, it will be necessary to prevent people inhabiting dwellings that are unsanitary. Of course the problem is a mixed one, and until some people are taught to realize the advantages of personal hygiene, placing them in sanitary surroundings instead of improving them, will soon bring about a depreciation in the sanitary value of the dwellings. Fortunately such people are becoming fewer in number, and it would be worth while to try the educative value of sanitary surroundings in helping these people to realize the value of proper sanitation.

The city incinerator continues to do its work well, and it is hardly necessary at this time to point out its advantages. It has become a necessity in the community, and even if the expense was much greater than it now is the service rendered would be worthy of the expenditure.

During the past year the school nurse, Miss McCallum, who has been most efficient in the performance of her duties, resigned to take up other work. The School Board, impressed by the character of her work, resolved without controversy to continue the system, and on behalf of the Board of Health I must congratulate them on their decision, as there is no doubt whatever that the work of a competent school nurse is of the greatest value in the early detection and isolation of infectious diseases, apart altogether from its value in numerous other ways in the improvement of the health of the community.

Respectfully submitted.

A. R. B. WILLIAMSON,

Medical Health Officer.

KITCHENER.

KITCHENER, ONT., Nov. 29th, 1918.

To the Mayor, Chairman and Members of the Board of Health, Kitchener.

GENTLEMEN,—I beg to submit to you the annual health report for the city of Kitchener for the year ending Nov. 29th, 1918.

Up to the time of the Spanish influenza outbreak, the health of the city was good.

There were 341 deaths registered during the year. Thirty-four of these deaths were registered as prematurely born infants.

It is impossible to get a correct estimate of the number of cases of influenza. It caused 127 deaths; 40 cases were admitted to the Isolation Hospital; 13 died, all from pneumonia.

From reports to physicians the epidemic is over in this city.

The diphtheria report is the best we have had for years. Six cases of diphtheria and no deaths.

Two cases of scarlet fever. No deaths. One case of scarlet fever treated at the Isolation Hospital.

There were eleven deaths from tubercular affections, five less than in 1917.

Sixteen deaths from cancer, five more than in 1917.

One death registered from typhoid and one from typho-pneumonia.

There were several cases of mumps and whooping cough. No deaths.

Provincial laboratory water reports up to October were good. Superintendent Hymmen assures me that no water has been taken from Shoemaker's Lake since October 23rd.

Sanitary Inspector Buchhaupt states that the incinerator will be in full working order on December 2nd and that a first-class service may be looked for.

The milk tests during the year have been satisfactory. Owing to the Sanitary Inspector and M.O.H. having contracted influenza, there were no milk tests made in October and November.

Respectfully submitted,

JOHN MCGILLAWEE,

Medical Officer of Health.

LONDON.

LONDON, ONT., December 1st, 1918.

The Chairman and Members of the Board of Health.

GENTLEMEN,—I beg to report that the Board of Health held thirty-five meetings in 1918. The attendance of the members was as follows:

Controller Saunders	5 meetings.
The late Mr. Hale	1 meeting.
E. H. Russell	27 meetings.
Dr. Hill	5 "
His Worship the Mayor	24 "
Ald. Drake	2 "
Mr. Johnston	11 "
Mr. Douglas	27 "
Dr. Downham	25 "

The estimates of the Board provided for an expenditure of \$9,855. It is expected that with the exception of the expenses of the influenza epidemic the Board is well within its limit.

The sewerage system for Chelsea Green District and the lands along the river bank were considered by the Board, but, on account of war conditions, no action was taken.

Eight reports were submitted to the Board respecting the city water supply. In one or two cases colon bacilli were reported. The Board, thereupon, urged the protection of the ponds at Springbank from possible surface water contamination and the securing of a chlorination plant for emergency use. The Commission has been reported to have secured chlorination facilities.

The condition of the street cars was given consideration. During the prevalence of the epidemic, the cars were not crowded, and were satisfactorily disinfected.

The public and separate schools were inspected by the sanitary inspectors.

As a temporary war measure, the Board granted fifty-five permits to keep hogs in the city, and instructed Inspector Dr. Tamlin to satisfy himself that the regulations of the Board with respect thereto were strictly observed.

Miss Friend, who has been appointed public health nurse by this Board, was permitted to render assistance in the Child Welfare movement.

The usual practice of appointing a number of special back-yard inspectors in the spring was discontinued and Mr. Scott appointed a full-time assistant inspector.

Only a few complaints respecting unsanitary conditions were presented to the Board. The monthly reports of the inspectors were indicative of efficient inspection and of very much improved conditions in London. The epidemic, however, showed need for more vigorous action by the Board with respect to house sanitation.

The milk supply, as evidenced by Dr. Tamlin's report, is of good quality. The condition of a number of dairies, however, is not satisfactory. The Board is convinced that the veterinary inspector is getting results.

Dump conditions show improvement.

The reports submitted monthly by the M.O.H. enable the Board to secure reliable information and give full statements as to all activities under the control of the Board. The secretary furnishes each member of the Board with a copy of the minutes, which includes all reports and communications considered by the Board.

The sanitary sewers considered by the Board were the Egerton Street, Grand Ave., Kenneth Ave. and Wellington Rd. In neither case was it possible for the Board to afford immediate relief. The M.O.H. compelled ratepayers to connect with the sanitary sewers and discontinue outside closets.

The resignation of Dr. Hill was followed by the appointment of Dr. Downham.

The Board is considering the question of the control of all health officials and activities by the Board, and the use of volunteer organizations in conjunction with the Board—the co-ordination and co-operation of all health activities.

The influenza epidemic received the full consideration of the Board. Very indefinite information was securable as to the number of cases. The Board acted upon what they believed to be common sense principles and received magnificent support from the S.O.S. ladies. The number of deaths was 231. The cost to the municipality was not more than \$4,300. The minutes of the Board are in sufficient detail to be of service to any succeeding Board wishing to avail themselves of the experience of this Board.

All of which is respectfully submitted.

S. BAKER,
Secretary.

LONDON, ONT., December 10th, 1918.

GENTLEMEN,—Pursuant to the provisions of the Public Health Act, I beg to submit a report of the work of the Board of Health for the city of London for the year 1918.

The Board has had a very unusual number of changes in its personnel during the year. Controller Saunders was elected chairman at the first meeting, and proved himself a most capable and useful member of the Board. Early in the year the decease of Mr. Jeffrey Hale removed a most valued member. The vacancy was filled by the appointment of Alderman Drake. An Act of the Provincial Legislature prohibited a member of the Council from acting on the Board of Health, and Controller Saunders and Alderman Drake resigned from this Board. Messrs. H. M. Douglas and E. H. Johnston succeeded them. I was elected chairman by the new Board. Dr. Hill, Medical Officer of Health, resigned to take up work in the United States. The resignation of Dr. Hill was a very great loss to the city and district.

Dr. Hill was the best posted and best known leader in sanitary science in Ontario. He has done splendid work for London. His assistant, Dr. Downham, has been appointed to fill the vacancy, and should make a capable official.

The city water supply is ample and of excellent quality. Possibly, however, the use of the water for other purposes than domestic may prove too great.

The Board of Health has, from time to time, requested the Utilities Commission to further protect the ponds at Springbank from surface water contamination, and to provide a chlorination plant for emergency use. No action has been taken in the first request, but I understand a chlorination plant has been secured. The occasional presence of typhoid germs (*colon bacilli*) point to contamination, and the Board should order compliance with its request.

A recommendation was made to the City Council that some action be taken in reference to the river, including Hunt's mill dam, and also the re-erection of the Springbank dam.

An inspection of the school buildings was made by the Sanitary Inspector and M.O.H. The result of the inspection shows that the schools are in a sanitary condition.

As a war measure, persons were permitted to keep hogs in the city, subject to inspection and regulations of the Veterinary Inspector. About fifty-five persons were granted permits. The rules of the Board with respect thereto are: "Swine shall not be kept within the limits of the municipality except with the consent, in writing, and subject to regulations of the Board of Health of the city of London, and then only in

pens with floors kept free from standing water and regularly cleansed and disinfected, and distant at least one hundred feet from any dwelling house, school house or church, and from any public highway, street or lane." No further permits are being issued and others gradually lapse.

The Board this year discontinued the appointment of special Sanitary Inspectors for back-yard inspection in the spring, and appointed an Assistant Sanitary Inspector, Mr. Scott. The work is now being looked after during the whole year. The few complaints made to the Board, and the general condition of the city, prove that the action of the Board was wise. The influenza epidemic demanded attention that could not have been given by one inspector.

The work of Veterinary Inspector Tamlin has been very satisfactory. The milk supply is above the average. The condition of dairies generally is improving. A continual watchful inspection is made. There, however, is still room for improvement.

The appointment of Miss Friend as public health nurse promises to be a most helpful public health service. In the treatment of the influenza epidemic, Miss Friend gave splendid help. The influenza epidemic was most serious. The Board met every day. It is almost impossible to tell the number of cases, but the number of deaths registered were 231.

The main facts were:

First appearance—September 22nd.

October 5th—Meeting of Board of Health and Drs. McCallum and Tillmann. Dr. McCallum says the epidemic lasts about four weeks.

October 14th—Meeting of Board and city physicians. Closing order to theatres, pool rooms, schools, dance halls.

October 17th—Definitely closing churches and forbidding public funerals.

October 18th—Crest of epidemic about reached.

October 19th—Order opening drug stores.

October 23rd—Ministerial Alliance permit. Advt. Westminster Tp. opens churches, schools, November 4th, 1918.

October 24th—Victory Loan to proceed; Ministerial Alliance *re* opening churches.

October 26th—Informal discussion *re* same.

Upon motion it is decided:

(1) To permit churches to be opened on Sunday, Nov. 3rd.

(2) To permit theatres to be opened on Monday, Nov. 4th.

(3) To permit schools to be opened on Monday, Nov. 11th.

(4) To permit Sunday Schools to be opened on Sunday, Nov. 10th.

The expense to the city was about \$4,300.

The assistance rendered by the S.O.S. proved most valuable. The school kitchens provided food for nurses and patients. Mesdames McKillop and Thomson and a host of ladies were most indefatigable. The debt of gratitude of the Board of Health cannot be adequately expressed.

The Board was so impressed with the co-operation of the several organizations of the city that arrangements are made for a discussion at its next meeting of the question of a permanent Board for the continuance of the system. A full report is presented in Minute No. 157 of their work.

The staff of the Health Department at the close of the year is as follows, viz.:

(1) M.O.H., Dr. Downham.

(2) The staff of the Hygienic Institute.

(3) Miss Friend, Public Health Nurse.

(4) Sanitary Inspector, James Lutman.

(5) Assistant Sanitary Inspector, J. W. Scott.

(6) Miss Baron, Tuberculosis Nurse.

(7) Dr. Tamlin, Veterinary Inspector.

The appointment of Miss Friend and Inspector Scott inaugurate new departments. It seems to me that the nurses in the employ of the Board of Education and any other department of the city's activity should be under the control of the Board.

I am satisfied that if a system is put into operation, directed by the Public Health nurse, under the M.O.H., by which all the present nursing service is directed from a central point (City Hall), the city will be practically covered, without adding to the number of nurses now employed. Much time and energy will be saved; the special aspect of conditions in the homes, of which the nurses will have knowledge, will be available for those organizations that specialize in such work; the nurses, having a larger and more varied field of work, will find it more interesting and become more efficient, and the needs of a growing city more adequately cared for.

I would like also to express my thanks to His Worship the Mayor and members of the Board for their uniform kindness and consideration to myself during the year; also to the M.O.H., Dr. Downham, Secretary Baker, and the staff, for their promptness and cheerfulness in carrying out a large amount of added work during a crisis such as the

city never had at any previous time, the magnitude of which we do not yet realize; to Mr. Slack and the Health Institute for much work done outside its regular operations, to the great benefit of the city, and to Miss Fidler, of that staff, who was the pivotal point on which so much depended.

All of which is respectfully submitted.

E. H. RUSSELL,

Chairman.

REPORT OF THE M.O.H. FOR 1918.

The year 1918, from a public health standpoint, has been a very irregular one for London. Early in the year the city was visited with an epidemic of measles. This naturally demanded a great deal of work and attention. Unfortunately, at this period of the year there was no doctor employed, under Dr. Hill, to spend his whole time inspecting, quarantining and isolating such cases. A number of practising physicians were employed to devote as much time as possible to this work, and they worked faithfully at it, but they could devote only irregular hours. There was some overlapping and some uncertainty as to when certain calls could be made. As a result, some cases were a week or more late in being quarantined. This condition naturally tended to increase the number of cases, since a number of people will not isolate themselves or children unless compelled to do so.

About this time, also, there were changes in the members of the Board of Health, the chairman and one member resigning. However, two new members were soon appointed, and everything was working well, when suddenly we were informed that the M.O.H., Dr. Hill, had received a tempting offer from Minnesota, and was about to resign, which he did in June. This was a serious blow to health matters in general in London, since Dr. Hill was a capable officer and much interested in his work and understood it well.

After Dr. Hill's term of office expired, I endeavoured to carry on the work as best I could. Fortunately, about this time of the year, the number of cases of communicable disease is usually comparatively low in number.

Early in the autumn, however, we began to hear rumors of cases of influenza occurring in the large eastern cities of the United States, and it was only a few weeks until the disease showed itself in this city. The number of cases rapidly increased, and it was not long until all the doctors and nurses had more work than they could attend to. About this time it was arranged that nurses, trained and practical, could register at the Institute of Public Health for the convenience of physicians needing such help. This arrangement was scarcely under operation when Mrs. J. B. McKillop received a wire from Mr. McPherson, Provincial Secretary, asking her to form a branch of the Women's Volunteer Emergency Auxiliary. This was quickly and ably done by Mrs. McKillop on October 17th, and everything was soon in readiness for the registration of Sisters of Service. This organization had its headquarters at the Institute of Public Health, where Miss J. Fidler, Statistician, was placed in charge of registration of nurses, and Miss B. Friend, practical nurses, and directed all nurses as to where they should be employed. Nursing aid was sent on advice of physicians or after inspection by the Board of Health. Nursing aid was supplied, in this way, for eleven hundred and fifty nursing days; sheets, bedding, pneumonia jackets, old linen, clothes etc., supplied mostly by the Red Cross, through Mrs. C. R. Somerville, but also by private citizens and firms, were sent out from the office at the Institute of Public Health. In so far as possible, day and night nurses were relieved in the morning and evening, which assured the nurse of certain hours of rest. Nurses were driven from place to place by volunteer automobiles and by those supplied by the Board of Health. Nurses reported to the office by 'phone day and night. Several medical students and other young men volunteered their services, and were a great help in difficult cases.

Two hundred and twenty families, with an average of three patients each, were provided with nurses, of which there were ninety-four who registered. Seventeen women registered who gave assistance in homes as housekeepers where the mother was ill or exhausted.

The work of supplying nourishment for the stricken families and lunches for nurses was undertaken at once by the Women's Volunteer Emergency Auxiliary, and two diet kitchens established, one at the Alexandra School, under Miss Craig, dietician, and one at the Collegiate Institute, under Miss McPherson, dietician.

During the epidemic 187 civilians died. Of these, 67% were persons from twenty to fifty years of age.

The diet kitchen remained in operation for twenty-four hours, during which time twenty-two hundred baskets of food for patients and sixteen hundred lunches for nurses were prepared and sent out.

The distribution of the food was only made possible by the generous way in which the citizens made use of their motors, under the able direction of Mrs. Allan McLean.

An emergency hospital was opened at the Latter Day Saints Church, the use of the building being offered by the pastor, Mr. Gray. No. 4 Division, St. John Ambulance, cared for a number of patients at their quarters.

During the past few months I have been making observations on the different diseases that regularly come under the Board of Health, and I wish to say a few words regarding nasal diphtheria. For the past few months at least twenty-five per cent. of our cases have been purely nasal, no membrane showing in the throat, and very frequently such cases are diagnosed, especially by parents, as cold in the head. Patients with this variety are usually not very sick, but while they have this so-called cold in the head some other member of the family becomes seriously ill with diphtheria, and the health officer notified. As soon as possible I visited the home to arrange the quarantine and inspect the other members of the family, and very frequently I find usually a child, with a blood streaked mucous discharge from the nose. The culture, under these circumstances, has always proved positive for diphtheria with me. Every case of nasal diphtheria coming under my notice has given the disease to at least one other person. This cannot be said about diphtheria in the throat, because the case is soon isolated and the trouble usually ends. I would consider nasal diphtheria far more dangerous from the standpoint of infecting others than diphtheria of the throat. With me, a bloody mucous discharge from the nose has always given a positive culture, but in such cases the patient does not appear to be very ill.

A case of scarlet fever which was somewhat out of the ordinary came under our notice during the summer. A girl, eight years of age, showed a patch rash on body and limbs. The patches varied in size, from a ten cent piece to a foot in diameter. These patches had a considerable amount of natural coloured skin between them. They had the colour and appearance of a scarlet fever rash, and, in due time, each patch desquamated freely, while other parts of skin did not desquamate. The patient had some sore throat and a strawberry tongue, also other early signs of scarlet fever.

Early in the summer we observed a peculiarity in mumps that had not come under our notice before. Quite a percentage of these cases had more or less nose bleeding, and most of them gave a history of not having had nose bleed before. One girl, twelve years old, had several severe hemorrhages.

Chickenpox occurred in a woman seventy-eight years of age.

The Board of Health work in London has always received a great deal of valuable help in many ways from the Institute of Public Health. Their department of vital statistics receives notification of cases of communicable diseases, and keeps all our records in good order. They make many examinations of throat swabs, sputums, etc., and also regular examinations of the city water. They also test samples of milk.

Attached is a statement of the number of diseases for the year.

I remain,

Your obedient servant,

W. S. DOWNHAM,

Medical Officer of Health.

NUMBER OF CASES OF AND DEATHS FROM INFECTIOUS DISEASES IN THE CITY OF LONDON, CIVILIANS ONLY, FOR THE YEAR ENDING NOV. 30TH, 1918.

		1918																										
Disease		Dec.		Jan.		Feb.		Mar.		April		May		June		July		Aug.		Sept.		Oct.		Nov.		Total		
Ca.	D.	Ca.	D.	Ca.	D.	Ca.	D.	Ca.	D.	Ca.	D.	Ca.	D.	Ca.	D.	Ca.	D.	Ca.	D.	Ca.	D.	Ca.	D.	Ca.	D.	Ca.	D.	
25	0	68	0	0	47	0	26	0	33	0	61	0	49	0	19	0	4	0	0	3	0	37	0	11	0	0	382	0
23	4	25	3	3	12	1	13	3	10	1	8	3	8	0	24	1	9	1	0	7	1	24	3	12	2	2	175	23
384	0	468	1	280	2	74	0	16	0	22	0	2	0	0	6	0	0	0	0	0	0	0	0	0	0	0	1252	3
0	0	2	0	4	0	38	0	19	0	15	0	12	0	12	0	2	0	7	0	3	0	6	0	1	0	0	109	0
8	0	6	1	7	0	17	0	11	1	14	0	14	0	14	0	12	0	10	1	19	0	23	0	5	0	0	146	3
0	0	0	0	0	0	0	0	0	1	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0
0	0	0	0	0	0	0	0	0	0	0	2	0	5	0	3	0	2	0	1	1	1	0	0	0	0	0	13	1
8	0	5	0	9	0	9	0	18	0	9	0	12	0	25	0	35	1	26	0	12	0	0	0	0	0	0	159	1
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	1	0	0	0	0	4	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
7	4	10	2	11	3	9	8	18	6	21	6	20	4	10	1	8	2	6	4	4	4	4	4	3	1	1	127	45
		Not reportable until July 1st, 1918.																										
		Not reportable until July 1st, 1918.																										
455	8	585	7	371	7	195	11	117	8	167	9	135	4	114	3	83	4	89	6	114	7	33	3	32458	77			

There were seven cases of nasal diphtheria since July 1st, 1918.

ANNUAL REPORT OF SANITARY INSPECTORS FOR 1918.

LONDON January 10th 1919.

GENTLEMEN,—During the year there were 161 orders issued for sewer connections. Out of that number 140 have been completed to our satisfaction.

All toilets of the factories and larger places of business in the city have been inspected. We found all the larger places in good sanitary condition, but some of the smaller places were not sanitary and were ordered to have toilets cleaned, which has been done.

We visited the London Fertilizer Plant several times during the year. The place has changed hands, and is being remodelled, which will make a vast improvement. There has not been many complaints in regard to the plant during the past few months.

All butcher and fish shops have been inspected twice a month during the summer and once a month during the winter. All have been kept in fairly good condition throughout the year.

All bakeries, restaurants, laundries and creameries have been inspected once a month during the year. They were always in fairly good condition at the time of inspections.

The city in general is in a fairly good sanitary condition.

Respectfully,

JAMES LUTMAN.
J. W. SCOTT.

LONDON, ONT., Jan. 11th, 1919.

GENTLEMEN,—I herewith submit a report of the number of visits made by me from Jan. 1st, 1918, to Dec. 31st, 1918, as follows:

Lavatories	226	Stables	298
Laundries	320	Fruit shops	65
Restaurants	382	Fish shops	52
Butchers	393	Junk shops	56
Bakeries	173	Dumps	45
Barbers	194	Miscellaneous	911
			3,115

Yours respectfully,

JAMES LUTMAN,
Inspector.

NIAGARA FALLS.

The Medical Health Officer of Niagara Falls begs herewith to submit his report for the year 1918.

During the autumn of 1918 we had a severe epidemic of influenza, which was prevalent all over the world. In our city we had 3,000 cases, and a death rate of 70, or 2.33-1.3 %. Our General Hospital was not large enough to take care of all the serious cases, and the Board of Health took charge of the basement of Jepson Street Baptist Church, wherein they placed all the serious cases. The board was very handicapped for nurses, having to secure any one who would help, and trained them for the work.

Our milk supply has been adequate and of a superior quality. The city has two pasteurizing plants, each controlled by private capital. These plants are inspected frequently.

Although the city has not built an incinerator, the garbage question came up early in the year. We have provided a place for it until an incinerator is built. The garbage is thoroughly covered by cinders and ashes each day, and we cannot find the least trace of smell.

Our water supply has not been up to the mark during the heavy frost and cold in the winter, but we are now connecting up with the Hydro Power Co., and are assured of a plentiful supply. Since excavation has taken place at the mouth of the Chippawa Creek for development purposes, I have doubled the percentage of chlorine in the water, consequently we have no cases of typhoid in our city.

In the spring I was able to have the City Council pass a by-law to tie up all dogs for six months of the year, beginning 1st May and lasting until 31st October. This proved a godsend to everyone concerned, except perhaps the dog owner.

We also granted a few licenses to allow the people to keep one or two pigs, at a certain distance (60 feet) from any residence, this license to expire at the end of the year granted.

During four days in December, 9th, 10th, 11th and 12th, the city sent me as a delegate to the Public Health Association, held in Chicago, principally for the purpose of studying the influenza situation.

I thank the city and the Board for their hearty co-operation in our efforts to keep a clean city.

H. LOGAN, M.O.H.

OTTAWA.

OTTAWA, December 31st, 1918.

GENTLEMEN,—In the absence of Dr. T. A. Lomer, Medical Officer of Health, I herewith present report of the Health Department for the year ending 31st October, 1918.

RE INFLUENZA.

The most outstanding feature of the year was the epidemic of influenza, with its terrible and widespread levy of illness and death, and which but for the splendid way our citizens co-operated to combat this visitation it would have been infinitely worse.

From the commencement, in the latter days of September, the cases developed rapidly, the greater mortality occurring in mid-October, declining rapidly toward the end of that month. During this time 520 deaths were registered from influenza and pneumonia, thus converting an otherwise excellent mortality record into the heaviest for many years.

Drastic steps were taken by the Board to meet the situation, warnings and instructions to the public being issued through the press and circulars distributed by the Boy Scouts. All public gatherings were prohibited, and the hours shortened in mercantile and office work.

The aid of the public was enlisted, and too great praise cannot be given for the wonderful response to the Mayor's appeal to succor the stricken ones. Large relief committees were organized, with headquarters at the City Hall, through whom medical attention, nursing and all requisites were provided for the care of the sick. But for the splendid work done here, in many cases whole families must have gone untended and the suffering and death list have been terribly increased.

The general hospitals, though augmenting their accommodation to the utmost, were inadequate to meet the demands for hospital care.

The May Court Club, Misericordia Hospital and Day Nursery came to the rescue and cared for a large number of patients.

Through the courtesy of the University of Ottawa and the Public School Board we were enabled to open two large emergency hospitals, thus completing a hospital formation adequate to give the requisite care to those in need of it.

Thanks are also due to Queen's University, Kingston, V.A.D., the Militia Department, and other departments of the civil service by whom medical men, nurses and hospital equipment was provided, and to the personnel of the different civic services who were on duty at all hours to assist us.

Charts are appended showing the mortality record, and also the age incidence of those dying, showing the heaviest toll among those at the period of greatest usefulness in life.

The experience gained by many during the epidemic, showing conditions under which our poorer brethren live, must create a greater public interest looking to a betterment of living conditions for everyone. This means sanitary dwellings, but more important still, sanitary dwellers.

Legislation has been passed this year to aid those who wish to help themselves toward the acquisition of a proper home by financial aid on easy terms.

To teach people to dwell sanitariously in the home is a matter for education by the press, the schools, and through the advice of the tactful visiting by a district nurse. The co-ordinating of our various public health nursing activities, with an adequate increase to meet the needs, is one of the matters which should receive the early attention of the Board.

The closing of the schools during the epidemic of influenza, which many authorities contended would be not only unnecessary but undesirable from a public health standpoint when proper medical inspection is provided, gives further grounds for the utility of such a provision; the need for which the rejection for physical unfitness of so many by the medical examiners for the army had already emphasized.

Our soldiers have shown us Canadians how to die. It is up to the health authorities to show the people how to live.

TUBERCULOSIS.

Tuberculosis shows better reporting of cases by those in charge of them, there being 185 as compared with 103 last year. There is also a regrettable increase in the deaths, there being 149 as compared with 126. To this doubtless many factors have contributed, not the least being the high cost of the commodities essential to life. Meagre means and tuberculosis are close associates.

While the continued presence of tuberculosis is attributable to many causes, the most potent of all is the protracted presence in the homes of cases in the advanced stages, and although the Royal Ottawa Sanatorium has done splendid work in caring for these with a decided diminution in death rate, it is certainly inadequate to meet the needs, and our Board should support the committee in charge of it in their efforts to secure increased accommodation for patients—the need for which is absolutely urgent.

DIPHTHERIA.

Thirty-four deaths were reported as due to diphtheria. The great majority of these should be more properly attributed to delay on the part of parents in securing treatment and in view of the repeated warnings to the public of the importance of securing prompt medical advice in all cases of sore throat and croup. Those who have read and unheeded these warnings merit condemnation as well as commiseration in their needless bereavement.

SCARLET FEVER.

We were visited by an epidemic of mild scarlet fever,—the mildness of a large number of cases greatly increased the difficulties of its control,—many cases not being recognized in the early stages. A total of 592 cases was reported with 7 deaths, a mortality of a little over 1 per cent. as compared with the severe epidemic in the winter of 1914, when the death rate was 10 per cent.

SMALLPOX.

During the year 15 cases occurred. While some were moderately severe there were no deaths. The contrast in the virulence of the two epidemics of scarlet fever is analogous to that found in smallpox, though since the scourge in Montreal, smallpox in this part of the country has been on the whole mild, some day it may appear in malignant form with dire results to those who have neglected vaccination.

TYPHOID FEVER.

Typhoid fever, save for cases coming from outside, has been practically absent. There were six deaths during the year, all but one from outside sources. This is gratifying evidence of the success in attending the care of our water supply.

REGISTRATION OF BIRTHS AND CHILD WELFARE.

The registration of births shows a gratifying increase, there being a total of 3,016 registered—1,650 of them being registered during the last half year following upon the action taken by the Deputy Registrar-General, at the suggestion of our Board, to ensure better observance of the requirements *re* prompt registration of births by physicians. It is reasonable to assume that had as full returns been made during the first half of the year our registration would have totalled 3,300. The early registration of births gives opportunity for our nurses to get in touch with the mothers early and thereby enhance their efforts toward the saving of child life.

The severity of the past winter coupled with scarcity of fuel and the intense heat of the past summer, and the ravages of the influenza have been the main factors contributing to the increased mortality of children under one year as compared with last year, which showed the smallest mortality for years—a total of 398 as compared with 497 this year. Of these 47 were children coming from outside the city, leaving 450 deaths of city children. This, based on an estimated birth list of 3,300, would leave us with an infant mortality rate of 136 per thousand births.

DEATHS FROM TUBERCULOSIS BY WARDS FOR 1918.

Ward.	Pulmonary.	Other Forms.	Total.
Rideau	8	2	10
Ottawa	24	3	27
By	18	2	20
St. George's	16	3	19
Central	8	4	12
Wellington	12	2	14
Dalhousie	16	5	21
Victoria	10	1	11
Capital	13	2	15
Outside Cases	4	5	9
Totals	129	29	158

DEATHS FOR 1918 BY WARDS.

Wards.	Popula- tion.	1917.		1918.										
		Nov.	Dec.	Jan.	Feb.	Mar.	Apl.	May	June	July	Aug.	Sept.	Oct.	Totals
Rideau	3,635	5	7	3	5	4	6	4	5	7	4	9	20	79
Ottawa	9,953	7	17	20	15	23	22	18	20	29	18	20	94	303
By	8,212	12	12	15	12	14	19	19	13	16	14	13	54	213
St. George's	13,757	10	17	15	8	18	15	22	11	12	15	15	53	211
Central	12,911	8	10	15	12	13	9	12	11	13	13	20	55	191
Wellington	13,965	14	19	25	22	22	19	17	15	10	14	17	63	257
Dalhousie	19,145	22	28	28	28	33	36	23	21	21	36	31	117	424
Capital	15,496	13	12	19	12	12	19	19	19	5	22	14	58	224
Victoria	6,933	7	8	4	11	10	6	7	9	13	16	13	44	148
Outside .....	.....	6	17	13	18	23	15	28	24	31	21	24	93	313
Grand Totals	104,007	104	147	157	143	172	166	169	148	157	173	176	651	2,363

The death rate in Ottawa Ward is unduly augmented owing to the large institutions there, notably the one for aged people.

DEATHS BY NATIONALITY.

Austrians	11	Italians	12
Americans	30	Manxman	1
Assyrians	3	Newfoundlander	1
Canadians	2,046	Norwegian	1
Chinese	2	New Zealander	1
Danes	2	Parisians	4
English	98	Russians	11
Greeks	2	Scotch	45
Germans	8	Swiss	1
Irish	83	West Indian	1

Totals 2,363

Of the above 1,207 are males and 1,156 females.

DEATHS IN THE DIFFERENT INSTITUTIONS IN THE CITY FOR 1918.

Ottawa Maternity Hospital	30
Salvation Army Rescue Home	13
County Carleton Protestant General Hospital	121
Lady Grey Hospital	44
St. Luke's General Hospital	98
Water Street General Hospital	190
Misericordia Hospital	0
Misericordia Infants' Home	77
St. Patrick's Home	15
St. Charles' Home	44

DEATHS BY AGES ACCORDING TO MONTHS.

Age.	1917.		1918.										
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Total.
Under 6 months.	14	22	33	33	27	23	33	31	40	35	34	48	373
6 months to 1 year	1	2	6	5	11	9	5	6	15	30	18	16	124
1 to 2 years .....	.....	6	6	7	5	9	11	3	8	13	5	29	102
2 to 5 "	6	7	7	1	5	8	5	4	3	2	4	39	91
5 to 10 "	3	2	3	3	2	5	5	2	4	4	6	24	63
10 to 15 "	3	1	1	.....	1	4	5	3	2	2	9	25	56
15 to 20 "	2	3	5	5	6	4	2	4	1	3	5	44	84
20 to 25 "	4	4	10	4	8	4	5	6	7	5	7	76	140
25 to 30 "	3	2	3	2	3	10	8	8	6	1	6	112	164
30 to 35 "	6	4	4	9	2	11	3	5	6	9	6	74	139
35 to 40 "	4	7	5	7	6	2	7	3	7	3	7	29	87
40 to 45 "	5	7	5	4	7	14	3	3	3	5	5	24	85
45 to 50 "	3	3	4	5	4	6	2	5	5	5	1	9	52
50 to 55 "	1	9	5	4	6	6	3	6	4	5	9	18	76
55 to 60 "	15	3	9	9	11	3	9	8	4	4	5	14	94
60 to 65 "	2	9	6	3	9	7	12	2	4	4	7	10	75
65 to 70 "	4	7	9	6	10	7	4	4	6	6	10	9	82
70 to 75 "	7	8	9	5	13	7	14	9	7	7	9	10	105
75 to 80 "	4	11	15	12	6	5	8	8	5	7	6	8	95
80 to 90 "	5	14	7	11	14	7	12	11	7	6	7	9	110
90 up .....	.....	1	.....	1	3	.....	1	1	.....	1	2	4	14
Totals	92	132	152	136	159	151	157	132	144	157	168	631	2,211
Stillbirths	12	15	5	7	13	15	12	16	13	16	8	20	152
Grand Totals ..	104	147	157	143	172	166	169	148	157	173	176	651	2,363

Ward.	Population.	Total Death Rate per 1,000.	Deaths from Pulmonary Tuberculosis per 1,000.	Deaths under One Year per 1,000 Births.
Rideau	3,635	19.8	2.75	204
Ottawa	9,953	28.8	2.71	145
By	8,212	23.9	2.43	146
St. George's	13,757	14.04	1.37	139
Central	12,911	13.9	0.93	145
Wellington	13,965	16.9	1.0	149
Dalhousie	19,145	20.6	1.14	144
Capital	15,496	13.03	0.96	117
Victoria	6,923	19.48	1.70	148

VITAL STATISTICS FROM NOVEMBER 1ST, 1917, TO OCTOBER 31ST, 1918.

Disease.	1917.		1918.										Totals.
	November.	December.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	
Typhoid fever		1					1		2	1	1		6
Scarlet fever		1		1	2	2				1	1		7
Whooping cough		1		2	1	1			1	2	1	4	12
Diphtheria	6	5	3	1	2	4	2	2	3	1	5		34
Influenza			2				1		1		2	200	206
Erysipelas						1	1						2
Chicken-pox									1				1
Septicæmia	2	1	1		2	1	3	3	1	1	1		16
Tetanus										1			1
Tuberculosis of the lungs ..	10	8	15	10	10	13	8	12	7	8	11	17	129
Acute miliary tuberculosis ..											1	1	2
Tuberculous meningitis				1			1	1	1		1	1	6
Hæmorrhage					1								1
Abdominal tuberculosis		1	2	1	2	1	2		1	1		1	12
Pott's disease	1												1
Tuberculosis of hip joint							1						1
Tuberculosis of the kidney ..					1								1
Disseminated tuberculosis ..												1	1
Tuberculosis of the spine				2			1						3
Rickets		1	1	1			1	1			1		6
Syphilis	2	3	3	7			2	3		4	3		27
Cancer of buccal cavity	2			1	1			2			2	1	9
Cancer of stomach and liver ..	3	3		1	3	4	2	2	3	4	2	1	28
Cancer of the bladder				1								1	2
Cancer of peritonæum, intestines and rectum	4				3	1	1	2	1	1	1	2	16
Cancer of the uterus		1					1						2
Cancer of the breast	1		1						2	1			5
Cancer of the skin							1	1	1				3
Cancer of other or unspecified organs		3	2				1	1	1		2	1	11
Cancer of œsophagus					1								1
Acute articular rheumatism ..	1	1	2		1	1			1				7
Diabetes		3	2	1	2	1	2			1	3	2	17
Exophthalmic goitre		1	1		1			1	1		1	1	7
Addison's disease					1		1						2
Leuchæmia			1										1
Pernicious anemia		1	2	2	1	1	1	3		1	1		13
Pulmonary hæmorrhage									1				1
Purpura hæmorrhagica, etc. ..						1							1
Hæmothelia		1				1							2
Chronic or acute alcoholism ..		2											2
Meningitis				2	2	2							2
Cerebro-spinal fever or Epidemic meningitis				2	2	2			2	1	1		10
Simple meningitis							1		1	1			3
Locomotor ataxia	1	1								1			3
Paralysis agitans									1	1			2
Primary lateral sclerosis of the spinal cord					2				1				3
Myelitis									1				1
Cerebral hæmorrhage, Apoplexy	5	5	2	3	5	8	4		3	2	1	5	43
Cerebral embolus												1	1
Paralysis without specified cause	1	1	2										4
Other forms of mental alienation				1									1
Epilepsy			1							2			3

VITAL STATISTICS FROM NOVEMBER 1ST, 1917, TO OCTOBER 31ST, 1918.—*Con.*

Disease.	1917.		1918.										Totals.
	November.	December.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	
Convulsions (non-puerperal)					1							1	2
Convulsions of infants			2		3	3	2	2	2		1	1	16
Chorea										1	1		2
Pericarditis						1					1		2
Acute endocarditis	2	1	1	2		1	2	2	1	1	1	1	15
Chronic Endocarditis		2	5	3	3	5	1	3	1	1	1	1	26
Myocarditis	1	7	6	3	4	3	9	5	4	5	6	6	59
Angina pectoris	4												4
Disease of the arteries					1								1
Aneurysm	1												1
Arterio-sclerosis	3	1	1			1	3	1	1		2	2	15
Hæmorrhagica, other diseases of the circulatory system		1	1										2
Disease of the larynx			1										1
Acute bronchitis					2	4		1			1	2	10
Chronic Bronchitis	1		1						1				3
Broncho-pneumonia	2	1	8	6	7	7	5	3	2	2			43
Pneumonia	5	8	10	13	16	26	13	10	1	8	25	278	413
Pleurisy				1	2	2							5
Gangrene or abscess of lung						1							1
Empyema												1	1
Asthma				2								1	3
Pulmonary abscess		1											1
Otitis media							1						1
Ulcer of the stomach	1				2			1					4
Diarrhœa and Enteritis un- der two years	2	3	4	2	4	2	4	3	24	44	30	7	129
Diarrhœa and Enteritis			1	1			1	1	1	2		1	8
Intestinal perforation					1								1
Appendicitis and Typhlitis	1	1				4	1	1	3	2	3	8	24
Hernia, Intestinal obstruction	1	2	1	1	1			1	2	1		2	12
Hydatid tumour of liver										3			3
Cirrhosis of the liver	1		2								1		4
Abscess of the liver			1										1
Biliary calculi					3								3
Simple peritonitis (non-puer- peral)	1	4	1		2		2	4	1	1		1	17
Chronic nephritis	2	2	4	2	5	4	9	3	3	3	3	4	44
Acute nephritis	1	4	1	2	1	4	2	2	1	2	1	2	23
Diseases of the bladder			1										1
Cystitis													
Diseases of the prostate					1								1
Cysts and other tumours of ovary									1				1
Salpingitis and other diseases of the ovary				1									1
Tubal pregnancy									1		1		2
Ectopic gestation												1	1
Puerperal hæmorrhage						1			1		1		3
Rupture of uterus in labour etc.						1							1
Difficult labour									1				1
Puerperal septicæmia				1	1			1	1	1		1	6
Puerperal albuminuria and convulsions					1				1			2	4
Osteomyelitis						1		1		2			4
Congenital malformation ...	2	1								1			4
Congenital hydrocephalus ...						1							1
Congenital malformation of the heart							2	1		1	1	2	7

VITAL STATISTICS FROM NOVEMBER 1ST, 1917, TO OCTOBER 31ST, 1918.—*Con.*

Disease.	1917.		1918.										Totals.
	November.	December.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	
Spina bifida			1	....	1	2	....	1	....	....	....	1	6
Congenital debility	1	5	7	11	9	4	14	12	10	8	10	12	103
Premature birth	5	2	7	5	8	4	9	9	7	5	2	8	71
Marasmus	2	4	6	3	....	6	2	1	11	5	8	9	57
Difficult delivery .....	....	....	....	1	....	....	....	....	....	....	....	....	1
Actlectasis .....	....	....	....	....	....	2	....	....	....	....	....	1	3
Injury by forceps at birth, etc.	1	2	....	....	....	....	....	....	....	....	....	....	3
Dystocia .....	....	....	....	....	....	....	....	....	....	....	....	1	1
Senility	9	30	24	28	31	15	29	23	18	17	24	24	272
Hæmorrhagica .....	....	....	....	....	....	....	....	....	....	....	....	1	1
Asphyxia .....	....	....	....	....	....	1	....	....	....	....	....	....	1
Suicide by hanging or strangulation .....	....	....	....	....	....	....	1	....	....	....	....	....	1
Suicide by drowning .....	....	....	....	....	....	....	....	....	1	....	....	....	1
Suicide by firearms .....	....	....	....	....	....	....	....	2	....	....	....	....	2
Other acute poisonings .....	....	....	1	1	....	....	2	....	....	....	....	....	4
Conflagrations	1	....	4	1	....	....	....	....	....	....	....	....	6
Burns .....	....	....	....	2	....	....	....	....	....	....	....	1	3
Absorption of deleterious gases .....	....	2	1	1	....	....	....	....	....	....	....	....	4
Accidental drowning .....	....	....	....	....	....	1	1	1	1	....	....	....	4
Traumatism by firearms	1	....	....	....	....	....	....	....	....	....	....	1	2
Traumatism by cutting or piercing instruments .....	....	....	....	....	....	....	....	1	....	....	....	....	1
Traumatism by fall	1	1	2	1	4	1	2	1	4	1	1	4	23
Traumatism by machine .....	....	....	....	....	....	....	....	....	....	....	....	1	1
Railway crushings .....	....	....	....	....	1	....	1	....	....	1	1	1	5
Automobile accident .....	....	....	....	....	....	....	....	....	....	2	....	1	3
Excessive cold, freezing .....	....	....	1	....	....	....	....	....	....	....	....	....	1
Electricity (lightning excepted) .....	....	....	....	1	....	....	....	....	....	2	....	....	3
Homicide, by cutting or piercing instruments .....	....	....	....	....	....	....	....	1	....	....	....	....	1
Shock	1	....	2	....	....	....	....	....	....	....	....	....	3
Cause not known .....	....	....	1	2	....	....	....	....	....	....	....	....	3
Totals	92	132	152	136	150	151	157	132	144	157	168	631	2,211
Still-births	12	15	5	7	13	15	12	16	13	16	8	20	152
Total	104	147	157	143	172	166	169	148	157	173	176	651	2,363

PETERBOROUGH.

GENTLEMEN,—I beg leave to submit my annual report for the year ending November 30th, 1918.

There were 355 deaths and 449 births during the past twelve months.

We had 49 deaths from the following communicable diseases:—

Influenza, with its complications....	31	Mumps	0
Scarlet fever	1	Whooping Cough	0
Diphtheria	0	Typhoid fever	2
Measles	0	Tuberculosis	15

The following communicable diseases were reported:—

Diphtheria (2 negative)	5	Whooping cough	6
Scarlet fever	27	Chicken pox	3
Mumps	2	Tuberculosis	1
Measles	38	Typhoid fever	7

We have just passed through a very trying time. A "plague" that has swept over the whole world, and the most fatal on record, has been with us. It has been our good fortune to have escaped, so far, its terrors, with very few deaths as compared with other centres.

The credit for the above I take not to myself, but I beg leave at this opportune time to give thanks,—thanks not only for our escape, but also for the general public co-operation and appreciation of my efforts.

I do not consider it necessary for me to speak of the sanitary conditions of our city; our Sanitary Inspector, Mr. Stapleton, will no doubt tell you of his excellent work during the year. A nice, clean city and all his branches working in harmony.

Along these lines I would like to see the garbage area extended, a new arrangement made whereby the market square and the rears of the different offices and stores that back on same, could be kept in a more sanitary condition. It is covered at all times with straw, dust and dirt and all sorts of rubbish. The dirt and dust is blown in and out of every nook and corner of the square until eventually somebody carries it away in their food or on their person.

It is customary to end up these reports with a few recommendations for improvements that are in the interests of the public health.

1. No second-hand books for the children in our schools.
2. A passable approach at all times of the year to the Isolation Hospital.
3. A free Isolation Hospital, i.e. as I said last year, a hospital that is a boon and benefit to every citizen, sick or well, should be free, and with a free hospital would give better co-operation, fewer communicable diseases and all the benefits that the inhabitants of a municipality can derive from same.

Thanking you, gentlemen, for your able support and congratulating you on the harmonious and business-like attitude of the members of the Board during the past year, I am,

Your obedient servant,

C. HEWITT AMYS.

DEAR SIR,—I beg to submit my second report for your consideration.

I am pleased to report a decided improvement *re* scavenger and garbage complaints, there being 33 per cent. of scavenger complaints and 50 per cent. garbage complaints less this year than last. I find in my visits people generally are willing to comply with the by-laws of the city. Of course, there are a few who give me a great deal of trouble.

Some citizens do not provide proper receptacles for garbage. Old boxes, which a number of people use, without covers are a great nuisance. Dogs and hens get in boxes and pull them over so that garbage is strewn around on the ground which the garbage men refuse to pick up.

The following list of complaints will give you some idea of the work being done by the Sanitary Inspector:—

Scavenger complaints	437
Garbage complaints	268
Scarlet fever cases	27
Measles cases	38
Diphtheria cases	5
Inspection of houses, cellars and yards	366
Inspection of lanes	36

Inspection of stables	67
Dead animals	12
Cesspools	12
Typhoid cases	7
Houses disinfected	4
Notices served	425
Inspected slaughter-houses	20
Burying night soil	6
Cow byres inspected	45
Inspected all laundries.	
Inspected all eating houses.	
Inspected all bakeries.	
Inspected 7 factories.	
Granted 45 new milk vendors' licenses.	
Milk tests average, April	3.3
Milk tests average, May	3.3
Milk tests average, October	3.5
Milk tests average, December	4.0
Inspected all fruit and fish stores.	
Notices served on all public places during the epidemic of influenza.	

I would like to express my appreciation of the assistance given by Mr. F. W. Miller, Relief Officer, both in the office and in investigating complaints.
All of which is respectfully submitted.

C. S. STAPLETON,
Sanitary Inspector, City of Peterborough.

PORT ARTHUR.

DEAR SIR,—I have the honour to present my report for the year 1918.

The health of the city has been generally good, although early in the year we had a considerable outbreak of mumps among school children. All through the year we have had a few cases of scarlet fever. During the summer months, especially from April to July, we had a number of cases of whooping cough. The death rate, in spite of the epidemic of influenza which has been sweeping over the country, is lower than last year.

Last year there were 237 deaths from all causes. This year 176, which includes 39 stillborns. For several years I have drawn attention to the number of deaths among children, coming under the head of still births. This means that these children are dead at birth or within a few hours of birth. Out of 76 deaths among children up to two years of age for this year, 39 were reported as stillborn, being 2 more than the number which died from all other causes. In 1917 there were 53 still births and 43 under two years of age. In 1916 there were 39 still births and 51 under two years of age, who died from other causes. Making a total for the three years of 262 deaths among children under two years of age, of which number 131, or 50 per cent. died at birth or before. This is an alarming and startling fact. It shows that something is wrong—either ignorance in the handling of these cases or criminal negligence on the part of some one. We are startled when an epidemic like Spanish influenza strikes our town and there are 26 or 27 deaths recorded; every person is up in arms to fight the disease. If we had a dozen deaths from smallpox, scarlet fever or any other contagious disease, the whole community would be completely stirred. Yet year after year there is a tremendous death rate among children, to which no attention is being paid, although, as I say, I have referred to the matter different times. I think it is our duty to bring this matter before the proper authorities, for an investigation, and I am going to ask your Board to pass a resolution to-day asking the Provincial Board of Health to hold an investigation into this matter. I may state that under the head of stillborn is included premature births.

CONTAGIOUS DISEASES.

Scarlet Fever.

Year.	Cases.	Deaths.
1915.....	62	0
1916.....	2	0
1917.....	8	0
1918.....	66	3

Diphtheria.

Year.	Cases.	Deaths.
1915.....	3	0
1916.....	4	0
1917.....	5	0
1918.....	16	1

Measles.

Year.	Cases.	Deaths.
1915.....	6	0
1916.....	64	0
1917.....	318	0
1918.....	6	0

Whooping Cough.

Year.	Cases.	Deaths.
1915.....	6	0
1916.....	44	2
1917.....	6	2
1918.....	58	3

Infantile Paralysis.

Year.	Cases.	Deaths.
1915.....	0	0
1916.....	2	1
1917.....	0	0
1918.....	0	0

Typhoid Fever.

Year.	Cases.	Deaths.
1915.....	13	1
1916.....	11	3
1917.....	2	1
1918.....	5	1

Two of these cases being from outside points.

Mumps.

Year.	Cases.	Deaths.
1918.....	93	0

Spanish Influenza.

To November 25th there were reported 550 cases with 25 deaths. Fifteen of these deaths were among patients who were brought in from outside points.

ISOLATION HOSPITAL.

Altogether we have treated 94 patients in the Isolation Hospital; 66 of scarlet fever, 16 diphtheria, 7 mumps, 4 suspects, and 1 measles, the total number of nursing days being 2,615 at a cost per day of \$2.84.

BIRTHS.

1916.....	512
1917.....	539
1918.....	538

We have had a smaller number of charity patients this year, as there has been such a demand for labor that every person able to work has been busy if they wished it. During the recent epidemic of influenza, when the bread winner as well as the whole family has been laid up, we have been called upon to give assistance. In regard to this I wish to draw attention to the splendid work which has been done by a number of the citizens who have rendered assistance as volunteer nurses, both for private homes and to help out in the hospitals. Others have given help to prepare broths and nourishing food for those suffering from the disease. While others have helped to prepare pneumonia jackets, and other supplies needed by the hospitals. Several owners of automobiles very kindly gave their cars and their time to carry food and supplies to homes where it was needed. I intend through the Press to have the names of those who assisted published.

On account of the death last summer of Chief Nichols, who for a number of years was our Sanitary Inspector, I had considerably more work, having to perform his duties along with my own until a new inspector was appointed. The Council appointed Mr. Alfred Hayes, a returned soldier. I am very pleased to be able to say that Mr. Hayes has shown great energy and care in the performance of his duties.

With the Inspector I visited and inspected boarding houses, hotels, bunk houses, restaurants, butcher shops, bake shops, fruit stores, Current River Park, the dry dock, and elevators. We inspected the lanes and a large number of the yards. We made a house to house inspection in the Coal Dock Section, where we found some yards in splendid condition, the owners having put them into gardens raising very heavy crops of vegetables. A number of the yards were rather dirty and we had to order a general clean up. I am glad to be able to say that that part of the city will now compare favourably with any other part of the city as regards cleanliness. I have visited a number of dairies, having Doctor George, the District Officer of Health, with me on one inspection. He expressed himself as well pleased with the condition of affairs. We examined a large number of samples of milk taken from the rigs by the inspector. Generally the milk is good, but I do not think it will ever be satisfactory under the present mode of handling. I think that all milk coming to the city should pass through a city dairy where it will be examined and bottled before being handed out to the customers. Possibly this is a little in advance for a city of this size, but I think it would be the only satisfactory method of handling milk. At present the milk supply is so decidedly short of the required amount that it is almost impossible to say anything.

SCHOOL INSPECTIONS.

Our school nurse, Miss Jones, has been kept busy during the year. She visits the schools daily, examines pupils sent to her by the teachers, and visits the homes of absentees to find the reasons for their absence. In this manner we are able to keep a very careful supervision of the pupils and to detect and prevent contagious diseases being carried into the schools. The nurse reports to my office daily, so I am able to keep in close touch with the school work. Where there is any doubt in the diagnosis of a case she reports it to me; then I make a personal inspection. The school nurse has been of the greatest value to the city and has helped us to control the spread of disease and without doubt has prevented a number of cases which otherwise might have occurred, and doubtless saved a number of lives. Miss Jones also rendered valuable assistance during the epidemic of Spanish influenza.

I also wish to refer to the work done by Mrs. Flanagan, our matron at the Isolation Hospital. She has had a large number of patients under her care and has given them the greatest attention. The hospital is always clean and well kept.

C. N. LAURIE.

FINANCIAL STATEMENT BOARD OF HEALTH.

Team expense account	\$149 06
Ambulance	18 00
Drug supplies	2 65
Public utilities (tickets, light, phone, gas)	149 06
Printing and stationery	71 96
Labor	4 40
Wreath (Chief Nichols)	10 00
Telegrams	2 66
Pay roll	5,206 04
Total	\$5,613 83

ISOLATION HOSPITAL.

Board account	\$2,927 04
Public utilities (light, telephone, tickets)	52 06
Drug supplies	179 72
Fuel	440 01
Extra nursing	126 00
Ice	88 65
Repairs	333 89
Supplies	179 35
Pay roll	2,200 00
Total	\$6,426 72

2,615 nursing days, cost per day, \$2.84; patients for year, 94;
cost per patient, \$68.36; expenditure for 1917 was \$11,821 04

Total expenditure \$12,040 55

I have the honour to be, Sir,

Your obedient servant,

C. N. LAURIE,

Medical Officer of Health.

SARNIA.

GENTLEMEN,—I beg to submit to you the following report for the year 1918:

There were twenty-one meetings of the Board held during the year, the outbreak of smallpox in the winter of 1917-18 and of Spanish influenza in the fall of 1918 requiring frequent meetings. The information required by the Provincial Board with regard to cases of communicable disease has been forwarded weekly, except the cases of Spanish influenza, which is not entered on the official form as a communicable disease. Of that disease there were reported to the Sanitary Inspector, and through him to the Secretary, two thousand two hundred and fifty-nine cases (2,259).

The Board during the year purchased a machine for disinfecting small articles, and a milk tester, both of which have given good satisfaction.

The sanitary conditions of the city are on the whole good, the main exception being that part south of the Tunnel Cut, where a system of sewerage is much needed. This matter has been brought before the Municipal Council by the Board of Health, but financial conditions have so far prevented action. The City engineer, in his recommendations for 1919 work, has included a very complete sewer system for that part of the city.

I remain, Gentlemen,

Your obedient servant,

J. D. STEWART,

Secretary.

Summary of Expenditure of the Local Board of Health for the Year 1918, as shown by the City Treasurer's Ledger.

Expenditure on account of outbreak of Smallpox—

Medical attendance	\$882 00	
Groceries, board, etc.	553 89	
Fuel	54 16	
Medical supplies	117 05	
Labour	37 00	
Cartage and livery hire	51 50	
Apparatus and furnishings	68 19	
Rent	15 00	
Salary (extra to Inspector Crosbie)	50 00	
Total Smallpox expenditure		\$1,828 79

General Expenditure—

Syringes	\$17 65
Plumbing (Inspector's office)	41 88
Repairs to apparatus	18 30
Apparatus	17 95
Boxes for water samples	14 64
Express, telegraph and telephone charges	38 92
Salaries and pay-sheets	1,581 92
Printing, advertising and stationery	126 58
Hardware supplies	4 15
Cartage and livery hire	9 25
Clothing	60 50

Medical supplies	\$28 58	
Transportation	17 55	
Rent	40 00	
Miscellaneous	1 25	
Total general expenditure		\$2,019 12
Total		\$3,847 91

J. D. STEWART
Secretary.

GENTLEMEN,—I have the honour to submit to you the report of the sanitary conditions of the City of Sarnia for the year ending December 31st, 1918. There have been reported to the Health Department, 46 cases of scarlet fever, 11 cases of diphtheria, 16 cases of typhoid fever, 86 cases of measles, 45 cases of smallpox, 6 cases of tuberculosis, 2,068 cases of Spanish influenza. In all cases where fumigation was required, it was done by Mr. A. Crosbie, Sanitary Inspector, and instructions were given to the heads of homes *re* proper cleansing, etc.

The methods adopted by the Board in regard to the quarantining are as follows:

As soon as the attending physician decides he has a communicable disease he reports the same to the Health Department and the Sanitary Inspector immediately puts up a card on the house and issues a card with printed instructions for the guidance of the inmates of the home. As soon as the regular quarantine has passed, provided no additional cases develop in the home, he fumigates the premises, removes the card, and notifies the Medical Officer of Health, who issues certificates to the children of school age so that they may resume their school work. In case of smallpox, the home is quarantined and all the inmates are vaccinated, and the case or cases that have developed smallpox are isolated and attended for treatment by the Medical Officer of Health. During the early part of the year we were visited by an epidemic of smallpox. Two of the clerks of the post-office staff contracted smallpox. This necessitated drastic action, and the Board ordered the post-office closed, and all office employees were compelled to be vaccinated and quarantined at their homes for twelve days. A temporary post-office was opened on Front Street and equipped with a staff of employees from outside offices, and all the mail matter and building was thoroughly fumigated and the building scrubbed.

Ever since I can remember, the Board of Education passed a resolution compelling all school children before being admitted to school to be successfully vaccinated, and a certificate to that effect from their family physician should be taken to their respective teachers, and I am happy to say that this precaution has no doubt saved many from contracting the loathsome disease.

SPANISH INFLUENZA.

During the latter part of the year we were visited by a continental epidemic of Spanish influenza, which made its appearance about the 1st part of October. The Board of Health issued a proclamation through the Mayor of the city, compelling all schools of learning, churches, theatres, pool rooms, and dance halls closed indefinitely, and I prepared a pamphlet advising the citizens:

1. What to do to prevent influenza.
2. What to do if you contract influenza.

The Board instructed me to have printed several thousand of these Golden Rules, and these were distributed voluntarily in every home by members of the S.O.S. and I.O.D.E.

I am of the opinion that these suggestions to our citizens were the means of saving many lives. Fortunately our deathrate was considerably less than most of the places our size in population. I am pleased to state that at the present time the epidemic has also abated. The physicians of the city complied with our request to notify the Sanitary Inspector daily of the number of new cases for the preceding day, and by this means we were enabled to keep in touch with the spread of the epidemic. Whilst 2,068 cases were reported, we feel that many cases were not reported, and that many of these cases known as carriers were the means of its spread to others with whom they came in contact. The Provincial Board of Health provided a few packages of influenza vaccine, and these packages were distributed equally among the physicians of the city, and I am of the opinion that where the vaccine was used it worked wonders in preventing them from contracting the disease.

The public owes a great debt of gratitude to Miss Barrie, the S.O.S., and I.O.D.E., who did such splendid work in combating this disease. They were entrusted with the

distribution of literature of Golden Rules, as well as furnishing many families with nurses, and the work was well done. In several homes every member of the family was ill. It is no trifling matter for a young lady to offer her services as cook, house maid and nurse to a family affected with a disease so dangerous.

MEASLES AND SCARLET FEVER.

Measles and scarlet fever have been reported and the homes quarantined, but there are many cases that are not reported to the Health Board, as parents very strenuously object to being quarantined, and this causes a great deal of friction among neighbours where these diseases exist, viz.: one home is quarantined and inmates prevented from intermingling with their friends, while others try to conceal their cases from the Board by not calling in a physician, and the inmates of that home are allowed to follow their usual avocations. School rooms where any communicable disease has been known to have existed, are dismissed and the same fumigated by the Sanitary Inspector.

DIPHTHERIA.

We have been very fortunate in having only 11 cases of diphtheria and no deaths, and I am confident that the splendid efforts of the Provincial Board of Health will be appreciated fully by the medical profession throughout Ontario; and as long as free antitoxin is distributed by that body, the physicians have no excuse in not giving antitoxin to all those who may be suffering from symptoms of this disease, for it has been demonstrated that antitoxin administered early and in large doses is the only slogan in the handling of diphtheria.

We should have a laboratory of our own, with an expert bacteriologist, and every throat where there is a suspected case should be swabbed and examined in the laboratory, for otherwise we have to get the swab and send it to London and wait for hours for a diagnosis.

VENEREAL DISEASES.

During the last session of the Local Legislature, they passed an Act known as "Venereal Diseases Prevention Act," and this Act came into force after the passing of the same.

Notification and literature and forms were forwarded to our Sanitary Inspector and myself, and after drawing the attention of the members of the Board to the Act, it was resolved to wait and see what other places were doing. About the 1st part of October I issued notices for a meeting and invited members of the Board of Health, the physicians and dentists of the city, and heads of all institutions who were concerned in the enforcement of the Act. At this meeting, which was held in the police court room, about 13 out of 30 invitations attended, and I explained to those present "The Venereal Diseases Prevention Act," and for a few weeks some of the physicians reported their cases coming under their care, but sorry to say no reports have been handed to me for some time. The Act is for the public welfare, but I cannot see, with the machinery we have, how it is going to be enforced.

MILK SUPPLY.

No food is so useful for developing a sturdy race, and no food is so dangerous to human life. Our milk comes from many sources and is handled by many before it reaches the child. Our milk supply is distributed to our homes by (1) *The Dairyman*, who either gets his supply from his own herd of cows or by purchasing his milk supply from some neighbouring farmers. (2) *The City Creamery*. The Dairyman distributes his milk to his customers in bottles and from the bulk can, whilst the Creamery obtains their supply from the farmers, and before it is distributed the milk goes through the process of pasteurization and is then bottled and sealed and distributed in the early morning hours whilst the weather is cool.

Our Sanitary Inspector, through the courtesy of the Board, obtained a milk sediment tester during the year, and he has tested the milk vendors' milk at different times, and whilst the fat test stood out pretty well in most of the samples, the sediment test was not found to be very satisfactory.

There is another kind of milk known as "Certified Milk," which is obtained from the dairyman who has a herd of cows which are examined regularly at intervals by a skilled veterinary surgeon for tuberculosis, and any cow not conforming to the test is rejected from the herd, and all milk supplied is placed in sterile bottles and sealed and labelled "Certified Milk." Unfortunately we have no such milk delivered in the city.

I would recommend that a veterinary surgeon be appointed and that he visit those who supply milk to the dairymen and creamery twice a year and report on the health of the cows and condition of the stables, and that on the strength of these reports permits be issued to those disposing of their milk in this way.

In my opinion all milk should be pasteurized before it is allowed to be distributed to the homes in this city.

GARBAGE.

Our collection and disposal of garbage is not yet what it should be. Many citizens complain of the garbage being placed on the streets without proper receptacles, and this might be improved

(1) By systematic educational canvass.

(2) By distribution of leaflets of personal instruction.

The garbage collectors have for some years past removed the garbage to the dump outside the city limits just east of the old fair grounds, but as the Township of Sarnia Board of Health proclaimed this dump a nuisance, the city has been slow in carrying out the decision of Chief Justice Mulock when the case came before the courts. An incinerator has been spoken of, and we earnestly hope this question will be dealt with in the near future, and then we will have a proper place to dispose of the garbage without further complaints.

SCHOOL NURSE.

The Board of Education, in conjunction with the Council of Women, has for some years employed a Social District Nurse, Miss Barrie, who calls at the various schools and Collegiate Institute and makes out a physical record and history of each pupil, recommendations to parents regarding physical defects of the child. Examinations are made as soon as practicable after the child's admission to school, consisting of examination of vision, hearing, tonsils, adenoids, teeth, cervical glands, skin of face, neck, hands and scalp, the presence of vaccination scars, recognition of any nervous disorders, and general appearance of the pupil. These disorders are reported by the nurse to the parents, and they are advised to consult their family physician regarding the same and advised to have said defects attended to. Decayed teeth, enlarged tonsils and adenoids are attributed as causes of rheumatism, neuritis, anæmia and many other disorders of the human system.

ISOLATION HOSPITAL.

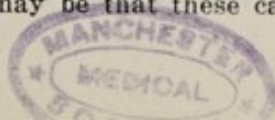
We are still without a suitable isolation hospital for contagious diseases. Every time we have a severe epidemic the question of an isolation hospital comes up before the Local Board of Health, and some action is taken, but as soon as the epidemic is over, nothing more is heard of it until the next epidemic. It behooves the authorities to get busy and secure a suitable piece of ground and erect a building of sufficient capacity for the future treatment of all our contagious diseases. During the four years of war our citizens have given generously of their money to alleviate the sufferings of our fallen men, and now that the war is over, I trust that the powers that be will erect an up-to-date isolation hospital.

WATER SUPPLY.

Ever since the great epidemic of typhoid fever, our water supply has been a hindrance to the growth of the city of Sarnia. To improve the conditions, the intake pipe was extended out to the river channel. Chlorination has been resorted to, and lately a very complete plant has been installed, and we have with this system been able to supply water which has been regularly sent to the Laboratory weekly, by the Sanitary Inspector, and found to be practically free from Coli Bacilli. However, our citizens at the last municipal elections ratified the spending of \$55,000.00 to secure absolutely pure water to our basins at the new pumping station, and we earnestly hope that the coming experiment will secure to our city the purest water that can be secured anywhere in Canada.

SEWERAGE.

The question of sewage disposal is becoming more and more an important question. Whilst our city is fairly covered with sewers, there remain about 211 closets which have to be attended to during the year. It may be that these cases have no sewer on



their streets. Some two years ago the Local Board ordered sewers to be built in that portion of the city south of the tunnel cut, and was endorsed by the Provincial Board of Health, but up to this time no action has been taken, and I would recommend that sewers be placed in that section of the town and connect with the outlet on Christina Street South. Our present outlet of all our sewers is into the River St. Clair, and as the International Waterways Commission has ordered this system to be stopped, it will be necessary for this Board to give this matter careful attention and investigation.

DEATHS AND BIRTHS.

During 1918 there have been registered 260 deaths, and the death rate per thousand of population has been 21.66.

The total rate for the last three months was 94, and 43 of these were due to influenza and complications, so that if these were deducted from the total death rate, it would reduce the death rate per thousand to 18. There are usually a number of deaths at the hospital amongst those who come to our hospital from outside places for treatment, and these deaths are charged against this city in making out our statistics.

Influenza deaths numbered 43 for the last three months of 1918, being at the rate of 3.5 per 1,000 of the population, and being lower than many places of our size.

The births for 1918 were 292, being 24.33 per 1,000 of population, and it is among children from birth to 4 or 5 years of age that we have our greatest percentage of deaths.

RECOMMENDATIONS FOR THE YEAR 1919.

1. That steps be taken to have a suitable place for the care of all communicable diseases.

2. That a sewer be constructed in the South Ward below the tunnel cut.

3. That a Veterinary Surgeon be employed to inspect all cows and barns where milk or cream is being supplied to our citizens or creamery, and that permits be granted to only those who comply with veterinary endorsement. That he examine regularly all slaughter-houses, and see that they comply with the health regulations.

4. That the Board should investigate and see if it is not possible to have all milk supplied to our citizens pasteurized.

5. We expect to see our Waterworks System completed and our city supplied with an abundance of pure, fresh water.

6. We expect to see our Incinerator built and in operation, so that all our garbage will be disposed of in a sanitary manner.

7. We would like to see our City Council Board of Works employ "white wings" and clean our principal streets daily.

All of which is respectfully submitted.

WM LOGIE, M.D.,
Medical Officer of Health.

STRATFORD.

To the Chairman and Members of the Local Board of Health.

GENTLEMEN,—I have the honour of again presenting to you the annual report of the health of the city, during the past year. In doing so there is a certain amount of pleasure, but commingled therewith is a degree of sadness.

It is a pleasure to note that we have been comparatively free from the so-called preventable diseases, no deaths being reported therefrom during the year. This is certainly a wonderful and unusual record.

Statistics.—In the city there were 311 births, 86 marriages, and 235 deaths, as per City Clerk Lang's report. The number and cause of deaths are as follows:

Apoplexy	7	Blood poison	1
Appendix abscess	1	Convulsions	4
Arterio-sclerosis	4	Congenital deformity	1
Asthma	2	Congested gall duct	1
Anæmia	1	Cancer	6
Abdominal tumour	1	Cerebral thrombosis	1
Bronchitis	5	Cerebral hæmorrhage	1
Bright's disease	4	Cholera infantum	1

Congenital heart defect	1	Lung	1
Debility	5	Laryngitis	1
Drowning	1	Myocarditis	2
Dysentery	1	Meningitis	2
Diabetes	1	Malnutrition	2
Enlarged prostate	1	Nephritis	2
Explosion	1	Old age	2
Endocarditis	1	Premature birth	6
Gangrene	3	Pleurisy	2
Goitre	2	Pneumonia	15
Gall stones	1	Paralysis	2
General prostration	3	Rheumatism	2
Heart	24	Still-born	9
Hæmorrhage from severed jugular vein	1	Senile dementia	1
Influenza	10	Senility	13
Influenza-pneumonia	61	Tuberculosis	5
Indigestion	4	Ulcer of duodenum	1
		Uræmic convulsion	2

Like other places we were attacked by the disease known as "Spanish influenza." It came upon us like a hailstorm and claimed 86 victims by death with its onslaught. Had it not been for that, our death rate would have been only 8.5 per cent., a wonderful showing.

I must congratulate the Board for the interest taken and work done by them during the trying time of the epidemic. I would specially mention the Chairman and the Sanitary Inspector. The former devoted almost his whole valuable time to the work, and the latter risked his health and life in the carrying out of his arduous duties.

The thorough plan of organization by the Board tended materially to keep the disease in check. The Board was ably assisted by the Ladies' Auxiliary, the Ladies' Aid and other societies. The managers of the different workshops, factories and stores rendered special aid. Voluntary nurses did more excellent work than can be expressed. It is deplorable that two nurses should have lost their lives in thus caring for others.

The Hospital Aid did noble work in opening its doors to deserving victims; the nurses therein deserve praise.

Loretto Convent and the Salvation Army undoubtedly stand high in the estimation of the citizens for the voluntary and excellent service rendered by them. The press proved thoroughly patriotic and rendered advice freely without thinking of hope of reward. The medical profession did much by their warning and advice towards suppression of the disease. The citizens, as a whole, rendered material assistance by the care they took of themselves, acting through advice given. The amount spent in fighting the disease and the giving of charity amounted to a comparatively small amount, when taking into consideration the amount of charitable work done. The elaborate report of the Chairman, sent to the Council a few weeks ago, gave a full account of the work done.

Typhoid Fever.—It is gratifying to note that there is not a single death reported from typhoid fever during the year. The entire absence of this disease has been undoubtedly due to our excellent water supply. Too much praise cannot be given the Chairman of the Utilities Commission, Mr. J. J. Mason, for his untiring zeal and perseverance in his endeavour to give the citizens a pure supply of drinking water. He has been rewarded by his efforts, in that he has accomplished his objective. Samples of the water were sent to Toronto weekly for analysis, by the Sanitary Inspector, and a favourable report was always given.

Sanitary Work Done.—The Inspector, Mr. Dunseith, made frequent inspections and sent notices to all persons not observing the regulations. Restaurants and all places where foodstuffs are dealt out have been carefully looked after. Butcher shops and slaughter-houses were often inspected, and on the whole found fairly satisfactory. Grocery stores and cellars were usually found well kept.

Our milk supply has been very good and up to the standard; the dairy barns clean and well looked after.

Butcher tables and meat in market shelter were regularly inspected. Butter offered for sale was frequently weighed and usually found correct.

The garbage collection is being carried on satisfactorily, and undoubtedly has contributed materially to the splendid health condition of the city.

The sanitary condition of the city, apart from the influenza, has been excellent.

Respectfully submitted,

J. A. ROBERTSON,
Medical Officer of Health.

ST. CATHARINES.

To the Chairman and Members of the Local Board of Health.

GENTLEMEN,—I beg to submit my annual report on the Sanitary and other conditions pertaining to the health of the city for the year ending October 31st, 1918.

Until the outbreak of influenza, early last month, the health of the city and the death rate per thousand of the population was about the average, as observed during the past few years.

Vital Statistics.—The total number of births, as reported, was 237 males, 255 females—grand total, 492. Number of marriages, 154. Total number of deaths, 316. Of these there were 37 still and premature births, also 47 deaths during the first year of life, making a total loss of 74 children, mainly due to pre-natal influences, congenital debility, congenital malformation, over-work, worry, lack of exercise, lack of hygienic living conditions during the period of gestation, etc. The question of child welfare is now becoming a great economic and social problem and one for which a solution should be found, if the great loss of child life is to be lessened.

Contagious Diseases.—There were reported as follows:

Diphtheria	17	cases, with 5 deaths.
Typhoid fever	5	" " 2 "
Measles	9	" " 0 "
Scarlet fever	69	" " 4 "
Mumps	2	" " 0 "
Chicken-pox	3	" " 0 "
Whooping cough	8	" " 2 "
	113	" " 11 "

In addition, there were reported 8 cases of tuberculosis, with 19 deaths. There were also reported 568 cases of epidemic influenza and pneumonia. There were recorded 61 deaths from these diseases during the year. Of these 33 died during the month of October alone. In addition to these cases of influenza reported, several hundred may be added, making a possible total of about 1,000. An incomplete report for the Province during the month of October shows that the normal death rate was more than doubled: that 3,394 people died from the twin diseases, giving a death rate of 27 per thousand during that month. While the loss of citizens is deplorable, there is room for thankfulness that the death rate was so low in this city.

Sanitation.—Generally speaking, the sanitary conditions of the city have been of a higher standard than usual. In other words, during the past year the city has been remarkably clean and free from the fly pest. This is no doubt due, to a great extent, to the universal cultivation of back-yard gardens, and also to fewer stables, by reason of the introduction of horseless wagons into business affairs, thus reducing the number of unsightly and offensive manure heaps. The City Engineer estimates that there have been collected and removed approximately 7,000 tons of garbage and other refuse matter. This, as compared with the estimate of last year of 10,000 tons, would indicate that much refuse has been spaded into the ground and that the people are more saving of food articles than in the past. I would again draw the attention of the authorities to the desirability and advisability of introducing in the near future a municipal system of garbage collection, as cheaper and more efficient than the present one. During the year there were constructed 10,389 feet of new sewers. There are also under contract and in course of construction a further 4,467 feet. There were also made 95 house connections. It may be interesting to state that during the past ten years the city has constructed 132,115 feet of new sewers, being about 25 miles of this progressive and health-giving work. There has also been made during the past ten years, 2,257 house service connections, all of which shows a healthful and steady sanitary progress.

On a recent visit to the cities of the North-West, I was greatly impressed with the cleanliness of and width of the streets, the almost universal system of lanes between streets, the wide-open spaces between houses in the residential sections, the parks and breathing spaces, and the large playgrounds around the public schools. Many of these desirable features could be adopted with advantage in this city.

Isolation Hospital.—During the year there were admitted to this institution, 25 patients suffering from different contagious diseases. The average cost for each patient was \$64.73. The total expenditure was \$1,930.52. The total revenue was \$849.00. While the hospital is inadequate for the work required, it has been kept in as serviceable a condition as circumstances would permit. The experience of the past month has duly demonstrated the necessity for an isolation hospital suitable for the demands of a growing city. What was considered sufficient ten years ago cannot meet the service

required to-day. In the near future, epidemic diseases of all kinds will be added to those which Boards of Health are now required to provide for, and such diseases will be excluded from general hospitals, as is now being urged in some cities.

Valuable War Lessons.—The war has taught many lessons which, while expensive, are valuable. One lesson is the value of physical training and personal hygiene as taught in the training camps. If the regulations of camp life as regards regular hours, regular meals with regular work and play in the open air, could be enforced in civil life, a great change would be made in the physical health and vigour of the civil population. The trouble is that people are too indifferent to the simple rules which make strong men and women, fill them with energy and courage, and fit them for the battle of life. The playground and gymnasium are valuable aids.

All of which is respectfully submitted.

F. KING, M.D.

Medical Officer of Health.

To the Chairman and Members of the Local Board of Health.

GENTLEMEN,—I herewith submit my annual report from November 15th, 1917, to November 15th, 1918.

Attached to this report is a list of deaths and their causes during the year, also a summary of their ages at the time of death.

Influenza-pneumonia shows a very large percentage of the deaths.

I also submit a list of diseases classed as contagious, as reported by the medical practitioners of the city, which shows a large number as compared with 1917. Influenza-pneumonia is only an approximate estimate, as the medical practitioners did not report that disease at the commencement of the epidemic.

Outside of tuberculosis and influenza-pneumonia there were only 11 deaths from contagious diseases.

Births reported: males, 250; females, 269. Total, 519; a decrease of 107 from 1917.

Marriages reported, 159; a decrease of 20 from 1917.

Deaths reported, 335; an increase of 80 over 1917.

The population, as returned by the Assessment Commissioner for 1918, is 19,189, an increase of 111.

The sewer system has been further extended and a large number of sewer connections made, which all tend to improve the health of the city.

All of which is respectfully submitted.

J. ALBERT PAY,

Secretary, Local Board of Health

DEATHS FROM NOVEMBER 15TH, 1917, TO NOVEMBER 15TH, 1918.

Apoplexy	13	Goitre	1
Accident	2	Gangrene	1
Arterio-sclerosis	5	Heart disease	8
Appendicitis	2	Hypertrophy	3
Asthma	2	Hæmorrhage	8
Bronchitis	4	Heart failure	9
Bright's disease	2	Indigestion	4
Cancer	9	Inanition	6
Carcinoma	7	Ilio-colitis	2
Convulsions	6	Jaundice	2
Carbuncle	1	Myocarditis	2
Cirrhosis of liver	1	Maldevelopment	1
Consumption of lungs	3	Meningitis	4
Cholera infantum	6	Malnutrition	3
Diabetes	4	Marasmus	3
Diphtheria	5	Nephritis	6
Debility	4	Neuritis	1
Diarrhœa	3	Oedema	2
Dilation of heart	2	Osteomyelitis	1
Dropsy	1	Obstruction of bowels	7
Drowned	1	Old age	5
Endocarditis	7	Ostiomyelitis	1
Epilepsy	2	Premature and still-births	30
Enteritis	2	Pneumonia	75

DEATHS FROM NOVEMBER 15TH, 1917, TO NOVEMBER 15TH, 1918.—*Continued.*

Poison	2	Tuberculosis	21
Pernicious anæmia	4	Tonæmia	1
Paralysis	4	Tetanus	2
Peritonitis	2	Typhoid fever	2
Septicæmia	1	Ulcer	1
Stabbed	1	Uræmia	4
Strangled	1	Valvular heart	2
Scalded	3		
Stone in bladder	1		
Scarlet fever	4		335

AGE AT TIME OF DEATH, FROM NOVEMBER 15TH, 1917, TO NOVEMBER 15TH, 1918.

Still and Premature	30
Under 1 year	49
1 year and under 5	22
5 years and under 10	8
10 " " 15	5
15 " " 20	11
20 " " 25	8
25 " " 30	16
30 " " 35	20
35 " " 40	21
40 " " 45	9
45 " " 50	15
50 " " 55	13
55 " " 60	16
60 " " 65	13
65 " " 70	20
70 " " 75	18
75 " " 80	18
80 " " 85	12
85 " " 90	6
90 " " 95	5
95 " " 100	..
	335

CONTAGIOUS DISEASES REPORTED.

	Cases.	Deaths.
Diphtheria	17	5
Scarlet fever	69	4
Mumps	2	0
Chicken-pox	3	0
Measles	9	0
Typhoid fever	5	2
Tuberculosis	8	21
Whooping cough	8	0
Influenza-pneumonia	568	75
Total		107

WINDSOR.

To the Chairman and Members of the Board of Health.

GENTLEMEN,—I beg to submit my annual report for year ending October 31st, 1918.

BIRTHS AND DEATHS.

There were 640 births and 364 deaths in Windsor last year. In the report of 1917, 760 births and 413 deaths—making practically the same ratio.

INFANT MORTALITY.

Eighty-seven died during the first year of life. Compared with the birth rate this is 11½% fewer deaths of infants than last year.

About one-quarter of all deaths occur during the first year of life. If our chief aim is to preserve life, then we must devote our best efforts to infants. The Board of Health has but one nurse, whose duties comprehend cleaning up for release from quarantine, attendance at the tubercular clinic and visits to tubercular patients, as well as visits to infants. During the past summer there was very little quarantine, and she was able to visit a good many homes in our congested districts to aid in the care of babies, but obviously our force is inadequate.

It is encouraging to note that the public generally is taking more interest in this problem, and we hope that something practical will grow out of the interest taken in it by Social Service.

If so many die during infancy, it is obvious that many of the survivors carry into life defects that impair their vitality and usefulness.

CONTAGIOUS DISEASES.

Two thousand and forty-three visits were made in connection with quarantine.

	Homes Quarantined.	No. of Cases.	Deaths.
Smallpox	10	16	0
Measles	49	*49	1
Scarlet fever	31	35	2
Infantile paralysis	1	1	0
Typhoid fever	16	16	4
Whooping cough	96	*96	2
Meningitis	2	3	3
Tuberculosis	..	37	14
Diphtheria	162	242	6
Carriers	..	67	..
Total	367	579	32

* All the cases of measles and whooping cough not noted.

INFLUENZA.

Influenza at present is not a disease subject to quarantine, but we advised the public to observe the same regulations, and I am grateful to say that our advice was graciously accepted, and on the whole I think the disease was as well controlled here as anywhere.

There were 235 homes with influenza, and we are grateful to the physicians for reporting these and for their assistance in every way suggested; but many cases did not consult a doctor, and medical men were so busy that they neglected to report many. It is estimated that upwards of two thousand cases have occurred in Windsor already.

The great difficulty in controlling influenza is due to the fact that it is contagious before the patient is aware of his illness, and many cases are so mild as not to be recognized at all.

The Mayor, after consulting with the Board of Health and doctors, closed schools, churches, theatres and public gatherings for two weeks.

NURSING PROBLEMS.

The sudden occurrence of so many cases of such a serious character at once took up the time of all our nurses and filled the hospital. The public owes a great debt of gratitude to the sisters of service who did such splendid work in combating this disease. They were entrusted with the publicity campaign as well as the furnishing of nurses, and the work was well done. No family in the border municipalities was without nursing and other necessary help. In several houses every one was ill.

Volunteers were called for, and a number nobly responded. It is no trifling matter for a young lady to offer her services as cook, housemaid and nurse to a family afflicted with a disease so dangerous, and one which she was almost certain to take.

The border cities were divided into sections, each supervised by a school nurse. When a request for a nurse came in, a volunteer who had already been instructed by St. John Ambulance or the pamphlet issued at headquarters in Toronto, was taken to the patient and shown what to do. In many cases the supervisor bathed the patient and did other necessary duties to illustrate to the volunteer.

Our thanks are due to the Ford Motor Co., which placed automobiles with chauffeurs at the service of the nurses, so that the supervisor could call in and see how her amateur nurses were getting on. *All the supervisors gave their services free.*

It is a matter for regret that the expected happened—a number of our nurses became sick, some of them very ill. One supervisor also was forced to give up, and Miss Baxter very graciously took her place.

Up to date there were only thirty-two deaths from influenza in Windsor, which is not excessive when we consider that probably two thousand were afflicted.

EFFICACY OF VACCINE SENT FOR PREVENTION BY THE PROVINCIAL LABORATORY.

At first the opinion of physicians was very much in favour of vaccine for prevention. Now there is a difference of opinion.

In order to arrive at some reliable conclusion, I have analyzed influenza and its vaccine where we have definite data, the staff of the Hotel Dieu, where all were vaccinated.

(1) Date of first case of influenza in Hotel Dieu	October 6
(2) Number on nursing staff at this date	45
(3) Number of maids at this date	17
(4) Date of first vaccine	October 25, 1918
(5) Number of nurses and maids ill with influenza to Oct. 25, 1918..	21
(6) Number taken ill within five days after the first vaccination ..	4
(7) Number taken ill within five days after the second vaccination..	3
(8) Number taken ill five days or more after the second vaccination	4
(9) Number of deaths	0
(10) Severity before vaccination or after	doubtful

It will be noted that in nineteen days after exposure without vaccination there were twenty-one victims; counting five days for incubation, twenty-five victims in twenty-four days. Three became ill in less than five days after the second dose, but seven, including this three, have become infected in twenty-one days after vaccination.

These figures would indicate a decided advantage in using the vaccine, but it happens that all the younger nurses but two who were nursing influenza became infected, and the older ones may have been immune without the vaccine. There were only six of the younger nurses in the hospital not infected.

Of the thirty-two deaths in the city till November 15, only one was vaccinated, and that only two days before taken ill. I have asked opinions of our physicians, and the majority consider it of great value, but probably the immunity is of short duration.

TUBERCULOSIS.

Only thirty-seven cases were reported, all from our clinic, and there were fourteen deaths.

I am certain many cases were not reported. There are probably two hundred open cases in the city. Where are they?

The danger of the infection is not so much from advanced or bed-ridden cases. They are not handling food for the family, or coughing towards them. An open case is going about the house, coughing, speaking towards others for two years before it becomes advanced; and, while it is certainly wise to provide against infection during this stage, it is quite certainly a case of "locking the stable door after the horse is stolen."

Our nurse has visited the houses of 37 cases. Her time for this work is limited. There should be a nurse for this purpose alone, and a good, capable one, with power to act.

Probably most of the unrecognized cases do not consult a physician until they are advanced, and attending physicians and infected families do not take kindly to outside interference. How many tubercular cows are furnishing us with milk?

Surely all milk should be pasteurized, and that, too, in a municipal dairy where we could be sure of details. *Every home should make provision for an outdoor sleeping porch.*

We are indebted to the Sanitarium for very much, and very particularly for the splendid work in the clinic by the medical superintendent, Dr. Flock.

TYPHOID FEVER.

During the past year twenty-one cases were reported and nine deaths; five cases and five deaths came to our hospital from other municipalities. This leaves sixteen cases in Windsor, with four deaths.

An analysis of these sixteen cases shows:

One drank water in Amherstburg;

Three drank water in Chatham during the epidemic;

Two drank water in M.C.R. private water system;

Two drank water at River Rouge, Mich.;

One drank water travelling from Port Arthur to Montreal;

One worked at a coal dock and on boats, and may have taken river water;

Three had typhoid in the family formerly, probably due to carriers;

Two diagnosis very doubtful, probably not typhoid (one a River Rouge case);

Two drank Windsor water, and there was no other apparent cause.

They were scattered pretty well over the city. Two victims used water from the M.C.R. system. This is very dangerous, and the authorities have been warned.

There are only two cases where we have not a reasonable cause aside from our city water, and I think it is fair to conclude that Windsor is more free from typhoid than it has been in thirty years, owing to effective chlorination. Gratitude of the city is due to Mr. Kellner, of the water works, and his careful assistants. If our chlorination is well done we are safe; ten minutes of neglect might mean a hundred cases.

Four deaths in the sixteen reported cases is a high death rate. I am inclined to think that all cases were not reported.

We expect a clean sheet next year.

DIPHTHERIA.

Our record for the past year is bad—242 cases, 67 carriers (some of our carriers were reported as diphtheria), and 6 deaths. Last year, 223 cases and 16 deaths.

We have established a laboratory of our own, with an expert bacteriologist. The throat of each pupil in the school room is swabbed and examined in the laboratory; every absentee is examined, and quarantine established in all positive cases, so that we must surely get results.

INSPECTION OF PREMISES.

According to the law, every home and surroundings in this city must be inspected by us once a year. With our present staff this is impossible. We inspect carefully every complaint; 267 of these inspections were made.

As a matter of fact, a city employee does or could inspect the premises. We have garbage collectors under the Board of Works, of good intelligence, who inspect them almost daily. If some system were devised of reporting to us, the thing is accomplished. Why not,

INSPECTIONS.

Stores	1,704
Markets	67
Slaughter-houses	93
Dairies	210

FOOD CONDEMNED.

Beef	3,600 lbs.
Lamb and veal	800 "
Pork	1,400 "
Vegetables and fruit	5,200 "
Milk, cream	700 "
	11,100 lbs.

BORDER CITIES BOARD OF HEALTH.

For more than two years we have been advocating that a health district should be established, but the uncertainty as to our financial position after the war seemed to make our efforts futile. It is quite likely this will be accomplished soon. Until it does come we cannot secure the best results with quarantine. We are not likely to get an isolation hospital or municipal pasteurization.

Yours respectfully,

G. R. CRUICKSHANK,
Medical Officer of Health.

WOODSTOCK.

To the Mayor and Aldermen of the City of Woodstock.

GENTLEMEN,—I herewith submit the annual report of the Health Department of the City of Woodstock for the year ending 15th of November, 1918.

During the close of 1917 and the early part of 1918 we have had to contend with an epidemic of measles, but we are glad to say that any fatality was not reported as due to the disease.

During the months of October and November of the present year the city was visited by the influenza wave which swept over nearly the whole world. In our opinion the city of Woodstock suffered less from the plague than the average town or city. As to the diseases to be reported to the Medical Officer of Health, we have had very few, except measles, chicken-pox and whooping cough.

The members of the Board of Health are very grateful to the City Council for their generosity in moving the Isolation Hospital from an unsanitary, inconvenient and lonesome locality to one having many good features in its favour. Your committee have remodelled the building and painted it. Water and electric light connections have also been made.

The population of the city by the census of 1918 is 10,057.

Number of births during the year, 198. Number of deaths registered in the Registrar's office, 139. Deducting from this 18 non-residents who came to the city for treatment, and also 20 still or premature births, we have 101 deaths from disease or accident. This gives a death rate of 10.4 per thousand of population.

Deaths were due to the following causes:

Typhoid	2	Pneumonia and influenza	17
Heart disease	22	Tuberculosis	4
Still and premature birth	20	Convulsions	5
Gastric ulcer	3	Cerebral hæmorrhage	3
Old age	8	Motor accidents	3
Cancer	2	Exhaustion	3
Apoplexy	2	Paralysis	4
Anæmia	3	Pulmonary œdema	2
Struck by train	2	Peritonitis	2
Septicæmia	2		

and one each of the following, viz., uræmic poisoning, cerebral abscess, congestion of brain, diabetes, hæmorrhage from chord, Bright's disease, arterial sclerosis, gastric hæmorrhage, cerebral softening, angina pectoris, carbuncles, suffocation, gangrene, meningitis, anti-partum hæmorrhage, poliomyelitis, nephritis, general debility, fracture of skull, cerebral coma, carcinoma of brain, poisoning, dilatation of stomach, obstruction of bowels, anæsthetic, appendicitis, marasmus, cholinitis, cerebral thrombus, dropsy.

The deaths occurred between the following periods:

Under 1 year	31	From 40 to 50 years	11
From 1 to 5 years	5	“ 50 “ 60 “	8
“ 5 “ 10 “	3	“ 60 “ 70 “	14
“ 10 “ 20 “	5	“ 70 “ 80 “	21
“ 20 “ 30 “	14	“ 80 “ 90 “	17
“ 30 “ 40 “	6	90 years and over	4

COMMUNICABLE DISEASES.

Disease.	1917.		1918.											Totals.
	Nov. 16.	December.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	Nov. 15.	
Measles.....	26	85	52	30	10	2	....	3	5	....	....	....	....	213
Scabies.....	2	....	....	....	2	1	....	....	....	....	....	....	....	5
Erysipelas.....	1	....	....	....	....	....	....	....	....	....	....	1	....	2
Whooping Cough.....	....	7	2	2	2	....	1	....	2	....	....	4	....	20
Chickenpox.....	....	6	7	2	2	1	....	2	....	1	....	2	....	23
Tuberculosis.....	....	1	....	....	....	....	1	....	....	....	....	....	1	3
Mumps.....	....	....	1	....	....	....	....	....	1	....	....	1	....	3
Scarlet Fever.....	....	....	....	1	....	....	1	....	....	....	....	1	....	3
Poliomyelitis.....	....	....	....	....	....	1	....	....	....	....	....	....	....	1
Typhoid Fever.....	....	....	....	....	....	....	....	1	....	....	2	1	2	6
Totals.....	29	99	62	35	16	5	3	6	8	1	2	10	3	279

Of the six cases of typhoid only one was contracted in the city; the others returned to the city suffering from the disease.

MILK SUPPLY.

The city milk is principally supplied by the Woodstock Dairy Company, but they have not an exclusive right; a few private parties take out licenses to sell, and all have to comply with the same standard as to butter-fat and cleanliness. The milk is tested monthly, and generally is up to standard (3.25) as to butter-fat. The Dairy milk is invariably free from sediment, but some of the individual vendors are not as careful as they should be.

SANITATION.

There are altogether too many out-door closets yet in use, though they are diminishing from year to year. I would suggest that the city by-law be amended by extending the area in which outside closets shall be prohibited, said area to include all streets supplied with sanitary sewers.

I thank the members of the Board for their active co-operation in carrying out the work of the Health Department.

Respectfully submitted.

ANDREW MACKAY,
Medical Officer of Health.

ADDENDUM.

Owing to the continuance of the influenza epidemic in a severe form, the Board recommends that influenza be put on the list of reportable diseases by the Provincial Board.

ANDREW MACKAY,
Medical Officer of Health.

AMHERSTBURG.

AMHERSTBURG, ONT., November 30th, 1918.

The Chairman Board of Health.

SIR,—I beg to submit my annual report for the year 1918. Early in the year the town council took under consideration the Bruner Mond Co. agreement to construct a filtration chlorinating plant. After many discussions, the Bruner Mond Co. proposition, to erect a plant to filter and supply the town, was presented to the electorate. The vote was taken on May 28th, and decided favourably. They immediately began the construction of the plant. The town has the new water mains almost finished, and in a short time Amherstburg will have a supply of pure filtered and chlorinated water second to none in the Province. We hope as a result to rid ourselves of the typhoid menace.

Inspections during the year were 198. Every person complied with the public health requirements. Contagious cases during the year were: 38 cases measles, no deaths; 59 cases typhoid, 3 deaths; 2 cases scarlet fever, no deaths. There was a sharp epidemic of influenza, some 380 cases, with 4 deaths, all the result of pneumonia complications.

Sanitary toilets have been installed in the public school, and I would ask the council to insist on the removal of all Hopper closets, and, on the streets having sewers, to have the property owners make the proper sanitary connections, as so many outside toilets are not kept as they should be, consequently drawing many flies and causing a decided nuisance. I would also suggest that a by-law be passed to prevent spitting on the sidewalks and in public halls.

It would be advisable to request the milk dealers to have their milk cows treated with the tuberculin test to make sure of the health of the herd and to ensure a pure supply of milk.

Respectfully submitted,

T. JAMES PARK.
M.O.H.

BARRIE.

BARRIE, November 15th, 1918.

To the Chairman and Members of the Board of Health, Barrie, Ont.

GENTLEMEN,—My report as Medical Officer of Health to your Board for the year 1918, ending November 15th, is as follows:

Births, 152; marriages, 50; deaths, 104.

Contagious diseases reported—Diphtheria, 1; scarlet fever, 1; measles, 6; typhoid fever, 1.

Deaths from contagious diseases—Tuberculosis, 6; influenza, 9.

Apart from the world-wide epidemic of influenza, our town has been comparatively free from contagious diseases. We experienced a large number of cases of the disease in October and the early part of November, with unfortunately nine deaths from pneumonia complication. No deaths among those of public school age, though many children had the disease. Your Board followed the course pursued by the larger centres and had a closure of all schools, churches, library, and places of amusement, during the height of the outbreak. We have to thank all the citizens for their ready compliance with our regulations. We availed ourselves of the offer of the Provincial Board to send instructors to train "volunteer aid nurses" to help in fighting the disease, and we wish to convey our thanks to all the ladies of the Soldiers' Aid, Red Cross Society and other patriotic associations for their splendid organization of the Sisters of Service. The work they did during the epidemic was invaluable, going into homes of all classes and administering to the wants of the sick. In the early period of the outbreak nurses from the Royal Victoria Hospital gave their assistance and were helpful to the volunteer nurses. Many cases were treated in the hospital; one-half of the entire space was allotted for their reception; private wards were converted into semi-private to utilize space. The infection did not spread to other patients, showing careful attention on the part of the superintendent and nurses. The report of your chairman will show the cost of the outbreak to the municipality. The activities of the Board have been greatly curtailed by the desire on their part to keep down expenditures.

Many much needed reforms were held back by the Board, such as milk pasteurization; a better system of handling bread and confectionery and the care of other articles of food, as fruit; a different system of garbage collection; construction of sedimentation tanks; construction of bath houses; extension of our sewer system.

thereby doing away with many objectionable cesspools, now serving so many houses. These and many other reforms should engage the attention of the new Board.

Your Inspector has brought in monthly reports of his work, which have been duly filed.

In conclusion, I have to thank the members of the Board and the Sanitary Inspector for their co-operation and assistance in my work during the year.

All of which is respectfully submitted.

A. T. LITTLE,

Medical Officer of Health.

BARRIE, ONT., February 13th, 1919.

To the Mayor and Council of the Town of Barrie.

GENTLEMEN,—I beg to present the report of the Medical Officer of Health for the year 1918. In doing so, I would say that the Board of Health has endeavoured to carry on its work as economically as possible. Several matters have been left in abeyance, which only a desire to keep down expenses at this time has caused us to leave over. Our expenditures to date amount to \$945.08, with a balance for salaries of \$126.67 to pay would make a total of \$1,071.75, which is comparatively below our estimates. This is especially gratifying, as we had a most serious epidemic of influenza, which might have cost us a very great deal but for the very patriotic and unselfish assistance rendered by the ladies of the Soldiers' Aid Society, the Women's Institute, Red Cross, and others, who assisted in nursing and supplying the needs of those who were afflicted.

While there has been a most regrettable loss of life, we feel that, in comparison with other places, we have been most fortunate. Your Board endeavoured early to meet the situation, and while our efforts may have seemed drastic at first, we believe the results have justified our efforts.

Outside of this outbreak, the town has been remarkably free from disease during the year, for which we have great cause for thankfulness.

All of which is respectfully submitted.

R. A. STEPHENS,

Chairman, Board of Health.

BROCKVILLE.

BROCKVILLE, December 16th, 1918.

GENTLEMEN,—I beg to transmit herewith the annual report of the Medical Officer of Health, Veterinary and Sanitary Inspectors and the Secretary of the Board.

Up to the time of the outbreak of Spanish influenza the infectious and contagious cases of diseases were few and conditions generally were normal.

At the inception of the Spanish influenza epidemic the Board, with the concurrence and approval of your honourable body, took very drastic measures to prevent the spread of this dread disease. The churches, schools and theatres were closed, and other gatherings, exceeding twenty-five in number, were forbidden, and this order was kept in force until the danger had practically subsided. The public generally cheerfully and loyally observed the order of the Board, although in some instances at personal loss and inconvenience. As a result of the precautionary measures the death percentage of this scourge has been comparatively small.

In this connection I wish also to place on record the Board's deep appreciation of the very valuable and practical assistance rendered by the ladies of the town in preparing and supplying food and other necessities to persons prostrated by this sickness, who along with the other members of their family would have been, at this critical period, wholly unable to cope with the disease except for the assistance so generously and unselfishly supplied by the ladies of Brockville.

It is a pleasure to note that although the price of milk is still advancing its purity and quality is beyond criticism.

The garbage system continues to give satisfaction, and the general health conditions of the town are good.

The birth rate exceeds the death rate by a considerable percentage.

All of which is respectfully submitted.

M. M. BROWN,

Chairman.

BROCKVILLE.

GENTLEMEN,—I beg to submit the following report for the year ending October 31st, 1918.

The number of births registered during the year were 246, of which 127 were males and 119 females.

The number of deaths registered as having occurred in this municipality was 245, of which number 56 were residents of other municipalities brought to the hospitals here for treatment, making 189 deaths of persons resident in Brockville. Of this number 97 were males and 92 females.

Of the total number of deaths 19 were still-born, 15 under one year of age, 14 between 1 and 5, 18 between 5 and 20, 52 between 20 and 40, 39 between 40 and 60, and 88 over 60 years of age.

The returns required by the Provincial Board have been regularly sent to the Department.

Your obedient servant,

GEO. K. DEWEY,
Secretary.

BROCKVILLE.

GENTLEMEN,—I beg to submit the following report for the year ending October 31st, 1918.

The number of contagious diseases reported at the office of the Secretary is as follows:—

Typhoid fever	4 cases
Diphtheria	10 "
Chickenpox	1 case

Quarantine was established when necessary and premises fumigated as required.

The collecting of garbage has been efficiently done during the year.

The butcher shops and bakeries have been inspected from time to time and found clean and sanitary.

Your obedient servant,

WM. BURKE,
Sanitary Inspector.

BROCKVILLE.

GENTLEMEN,—In submitting this my report, I beg to point out the excellent condition of the live stock in this district, and their freedom generally from anything of a contagious nature. During the year we have had one outbreak of hog cholera, but it was confined to one premises with the loss of five hogs.

The milk supply of the town has undergone some changes, in that a large proportion of the milk now supplied is sterilized and pasteurized at the plant of the Whyte Packing Company. The supply comes from farms within a considerable radius of the town. The herds, from which the milk supplied direct to the consumers is procured, are in good condition. The surroundings and appliances for handling are showing some improvement.

The meat supplied has shown no change since my last report. The bulk of the beef sold in the butcher shops comes from Toronto, and is slaughtered under Federal Government inspection. The lighter carcasses are mostly supplied from the surrounding country. The slaughter houses in the vicinity of Brockville are very little used. They are equipped for carrying out the provisions of the by-laws of the town relative thereto.

There has been few complaints during the year as to the offering of meats and fowl on the local market.

Respectfully submitted.

D. McALPINE,
Veterinary Inspector.

BROCKVILLE.

GENTLEMEN,—In this my annual report I am pleased to state that we have been particularly fortunate, as very few cases of infectious diseases have been reported, with very few deaths, until the unfortunate epidemic of influenza, beginning in October.

The cases reported are:—

Varicella—One case; no deaths.

Typhoid fever—Four cases; one death.

Diphtheria—Ten cases; one death.

Tuberculosis—Sixteen deaths.

Influenza—Forty-two deaths (out of town, 8 cases).

By this report it may be seen that our town during the past year has been particularly free from diseases of an infectious nature, and had it not been for the influenza outbreak, it would have been our banner year.

The quality of milk furnished has been good, but the number of vendors much less than in previous years, and a greater quantity is now pasteurized. The number of examinations has not been as great, as the room provided by this Board for examinations has been given to the regiment stationed here as a club-room.

The town has been kept particularly clean, and the garbage very efficiently collected. The public grounds for disposal of refuse is especially well kept, but that done by private collectors has been in most cases in a slovenly manner, and is particularly hard to control.

The sewer system has been extended and sewer connections have been made wherever possible.

The weeds on the streets have not been kept as well as usual and hence more difficulty has been experienced in keeping private yards tidy.

Respectfully submitted,

A. J. MACAULEY,
M.O.H.

BURLINGTON.

Medical Health Officer's Report, Town of Burlington, 1918.

I herewith present the annual report of the Board of Health for the year 1918.

We have had a year very free from contagious diseases, there being reported only six cases of scarlet fever, three cases of measles, two cases of diphtheria and typhoid fever. Only four cases of venereal disease have been reported to the M. O. H.; others may have had it, but have gone out of town for treatment.

As regards nuisances, each nuisance has been promptly investigated by either the Sanitary Inspector or M. O. H., and a satisfactory adjustment made. An inspection of the premises of the several milk vendors supplying milk to the town was made, four in number. Three of them were in first-class condition, the other promising to have milk-house built and stable whitewashed to conform to the requirements of the milk by-law.

The milk supplied to the town is distributed by one milk vendor, nearly all milk supplied being pasteurized. Frequent analysis of the milk has been made for butter fat, and on one or two occasions it has tested low, but we have endeavoured to keep it up to the standard.

The water supply has been regularly tested throughout the year, and not at any time has anything been found of a serious nature.

An attempt was made early in the year to introduce a garbage by-law, but met with poor success.

Altogether we have had a year free from any contagious diseases of a serious nature.

A. H. SPEERS,
M.O.H.

CORNWALL.

REPORT OF THE MEDICAL HEALTH OFFICER, TOWN OF CORNWALL, FOR THE YEAR ENDING NOVEMBER 15TH, 1918.

To the Chairman and Members of the Local Board of Health:

GENTLEMEN,—I beg to submit to you the annual report of the Medical Health Officer of the town of Cornwall for the year ending November 15th, 1918.

I regret to say that the past year has been a very severe one upon the people of the town, from a health point of view. In the early months of the year we were visited by smallpox, which lasted some eight or ten weeks, but fortunately was attended with no fatal cases. Not having an Isolation Hospital, it was necessary to isolate the people

in the houses in which we found the cases, and although a somewhat difficult task, we succeeded in confining the disease to the houses in which it originated.

During the year there were reported to me the following cases:—

Scarlet fever	8 cases.
Smallpox	8 "
Diphtheria	9 "
Typhoid fever	10 "
Tuberculosis	12 "
Measles	2 "
Mumps	6 "

I am not prepared to say that these figures are correct, as I am confident many cases were suppressed and not reported to me, nor was any medical attendant called in, and in this manner they escaped the health officer.

As usual, the town was regularly inspected at different periods of the year by two very faithful, painstaking Sanitary Inspectors. A milk inspection was more rigidly carried out this year than formerly, and a system of protection by covering foods and fruits exposed for sale, was also carried out. The water system of the town was analyzed, and the water found good and wholesome. The sewerage in the town has also been extended, and in one instance a sewer was rebuilt for the purpose of giving proper drainage to that portion of the town formerly not properly provided for.

In the latter part of the month of September the town was visited by a severe epidemic of influenza, accompanied in many cases by pneumonia, which resulted in the death of 79 persons in the month of October.

During the month of October there were 100 deaths recorded at the Town Hall—79 of influenza, followed by pneumonia; 3 of phthisis; 1 of surgical shock; 3 of cerebral hemorrhage; 1 of septic poisoning; 5 still-born; 1 abscess of larynx; 2 cancer; 3 old age; 1 cardiac syncope; 1 meningitis.

It is fair to say that out of the 79 cases reported at the registration office, many were persons who came from outside of the municipality of the town and who died in our hospitals.

The number of deaths for the year were as follows:—

1st quarter ending March 31st	35 deaths.
2nd quarter ending June 30th	41 "
3rd quarter ending September 30th	38 "
September 30th to October 31st	100 "

During the epidemic of influenza the Board of Health held several meetings, and it was decided that all public places should be closed to prevent, as far as possible, the gathering of crowds. The schools closed of their own accord, and by the request of the Medical Health Officer, the theatres and pool-rooms were closed, and also the churches.

About November 11th the condition of the town seemed to warrant the opening of the different schools, as well as the churches and the other places which had been closed, and I am glad to report at this date that the condition of the town is satisfactory, and that the epidemic has practically ceased to exist. It is quite probable that isolated cases of influenza, followed by pneumonia, may take place for the next few months, as such is usual after a severe epidemic of this kind.

Otherwise, the town is in a good and sanitary condition.

All of which is respectfully submitted.

C. J. HAMILTON,

Medical Officer of Health,

Cornwall, Ont., November 15th, 1918.

FORD CITY.

ANNUAL REPORT OF THE BOARD OF HEALTH, 1918.

The year 1918 will surely register in the annals of our municipality a very important point in hygienic matters. In fact, it is admitted by everybody that the development of our town is lingering, due to our lack of accommodation, more particularly our inadequate sewerage system. We have now to deal with a definite plan of sewerage, with full permit from proper Provincial and Federal authorities, and already under construction.

We sincerely hope that the residents of this municipality will realize the necessity of such an expense incurred entirely for the betterment of the community, and which will contribute largely in bringing about a new era of prosperity within our limits.

SCHOOLS.—Our schools have been, twice during the year, invaded by undesirable visitors, such as diphtheria and influenza germs. Such hosts demonstrate the importance of the regular school nurse inspection. In fact, in both instances, proper measures having been taken immediately, the children were protected against serious complications.

MEAT SHOPS AND RESTAURANTS.—The Local Board is thankful to the efficient aid it has obtained, during periods of epidemics or otherwise, through the experience of Dr. A. E. Bowman, of Windsor, whose knowledge of bacteriology and public health matters is deeply appreciated. Milk and meat inspections have been carefully gone through, and all eatables found improper for domestic consumption condemned.

CONCLUSION.—Finally, the prospect of a centralized Board of Health, including all the border municipalities, operated under one heading, in order to establish uniform regulations, proper accommodations for contagious diseases and unanimity on public health questions, would contribute largely to the welfare of our prosperous industrial district, which will need in the future a very competent health organization.

DAMIEN ST. PIERRE,
M. O. H.

N.B.—Influenza, which has made so many victims all over the country, has not forgotten us. We have had so far about 350 cases, with 5 deaths.

Number of communicable diseases for the year ending Novembr 30th, 1918:—

Diphtheria	18
Measles	3
Whooping cough	3
Typhoid fever	3
Tuberculosis	1

FORT FRANCES.

The Local Board of Health presents herewith its report for the year 1918:

Generally speaking, the health of the community during the past year—outside of the influenza epidemic—has been good.

The comparative statistics for the years 1917 and 1918 are as follows:

Births.

	Males.	Females.	Marriages.	Deaths.
1917	54	47	38	35
1918	58	49	28	51

The number of deaths due to influenza in 1918 was sixteen, this being the exact number by which the deaths in 1918 exceeded the deaths in 1917. The number of deaths from tuberculosis in one form or another was three in each year.

Outside the influenza epidemic the number of contagious diseases reported was very small.

Detailed reports are attached hereto.

VITAL STATISTICS, 1918.

Births.

Males	58
Females	49
Total	107

Marriages.

Total	28
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Deaths.

Prematurity	2
Still-born	8
Child-birth	1
Malnutrition	1

DEATHS.—Continued.

Convulsions	1
Acute indigestion	1
Cancer	3
Tuberculosis	3
Apoplexy	1
Heart failure	4
Meningitis	2
Old age	1
Diarrhœa	1
Hardening arteries	1
Ulcer of stomach	1
Accident	2
Pneumonia	2
Pneumonia and influenza	16
Total	51

	Jan.	Feb.	Mar.	Apr.	Oct.	Nov.	Dec.
Measles	1	1	1	..	1	..	..
Mumps	..	..	1	1	..	..	..
Typhoid	..	..	..	..	3	..	..
Influenza	..	..	..	..	40 (200)	..	..

According to reports made to the Secretary of the Local Board of Health, the number of contagious diseases in the municipality during the year 1918 was very few and the spread of same was not noticeable.

THE INFLUENZA EPIDEMIC.

Judging by newspaper reports and hearsay, other places suffered from this epidemic more severely than this municipality. Although it is impossible to estimate exactly, it is probable that during the last three months of the year the number of cases in the town would be from 200 to 250. The number of deaths reported from this cause was sixteen. To those who have watched the course of this disease it is quite apparent that when nursing and proper care were provided the patient had every chance of recovery. In most of the cases where death occurred, especially at first, there was generally some cause in addition to the epidemic that lessened the chance of recovery. In this connection the Board wishes to express its appreciation of the action of the Council in establishing and maintaining the Emergency Hospital. There can be no doubt this action did great good, not only in saving lives, but also in diminishing suffering and controlling the spread of the disease.

MILK TESTS.

During the year a number of milk tests were made. As a rule the test of milk for butter fat was satisfactory. In regard to cleanliness, however, the first test proved that there was something radically wrong in the manner of handling milk. The results of these tests were made public and a very marked improvement was observed in respect of cleanliness almost immediately.

On August 15th the District Officer of Health, Dr. W. E. George, visited the town, and this was one of the chief matters that received his attention. The District Officer of Health was particularly strong in his condemnation of the "one-cow dairy." There has, however, been so much difficulty obtaining milk that the Board has felt that it could not be too stringent in this matter. The matter of milk supply is one of the difficult questions still to be settled.

DEFERRED BUSINESS.

The following matters should receive the attention of next year's board:—

Installing of sewer and water in all houses which are on the mains.

Regular inspection of stables.

Regular milk tests from all who sell milk.

Regular water tests.

Inspection of houses to prevent overcrowding.

All of which is respectfully submitted.

J. W. WALKER,
Secretary.
R. MOORE, M.D.,
M.O.H.

GUELPH TOWNSHIP.

GENTLEMEN,—I beg leave to submit the following report of the health of the people of Guelph township for the current year.

Again we have been fortunate in escaping epidemics of the more common infectious diseases, such as diphtheria, scarlet fever, measles, etc., but we have had isolated cases of these troubles, especially near the city. With strict attention to quarantine and thorough disinfection, the diseases spread no farther. We would again respectfully ask all medical men practising in the township to promptly notify the Board of Health of any infectious cases they may attend, so that the necessary precautions may be taken to prevent its spread. Prevention is better than cure.

Guelph Township, like most parts of the world, was afflicted with that terrible scourge, the Spanish "Flu," but while more populous centres were sorely stricken, and a great many deaths were recorded, we cannot say that any deaths in the township, outside of St. Joseph's Hospital, were directly due to it. All the schools in the township were closed for a time, some by necessity, as the teachers had the disease. Your Medical Officer of Health and Sanitary Inspector visited all the schools in the township previous to the opening of the fall term, with the object of seeing what preparation the trustees had made for the reception of the scholars; to inspect the school building, the wells and outbuildings. The report of this visit was not sent to the Chairman of each Board of Trustees, but they were all invited to attend a meeting at the Council rooms, which they did, and a free discussion took place concerning the care and upkeep of the school buildings and grounds. Professor Tomlinson, of the Ontario Agricultural College was present and gave an interesting talk on tree planting and the adornment of country schools, which we are persuaded will result in much good.

Conditions at the sewage disposal plant are much the same as last year—rather worse than better. The sewer beds are totally inadequate to filter the amount of sewage going on to them, consequently much untreated sewage goes directly into the River Speed. Every year the city is extending its mains and thus increasing the amount of sewage, without making an adequate increase in the filtering capacity.

All of which is respectfully submitted.

H. G. ROBERTS,
M.O.H., Guelph Township.

To the Municipal Council of the Township of Guelph.

GENTLEMEN,—Your local Board of Health beg leave to report for the year 1918 as follows:

Nothing of a very alarming nature has transpired during the year, except the outbreak of the "Flu," which has been world-wide and thoroughly epidemic in its character and very fatal in its results.

During the month of October, the vital statistics for which have not been included in this report, the death rate has been high. The general health of the Township has been fully reported on by Dr. Roberts, M.O.H., and Sanitary Inspector William Young.

Vital statistics for the year 1918 are as follows: Births, 53 male and 59 female, a total of 112, of whom 78 were born in St. Joseph's Hospital and 34 in homes in the township. Deaths, 73, 39 male and 34 female—52 in St. Joseph's hospital and 21 in homes in the township. Three deaths were from tuberculosis; 2 diphtheria; 2 cancer; 1 meningitis and 1 typhoid. Five of the births were still-born. The deaths by ages were: 11 under one year, including those still-born; 7 under ten years; 3 under 20 years; 5 under 30 years; 4 under 40 years; 5 under 50 years; 9 under 60 years; 7 under 70 years; 15 under 80 years; 6 under 90 years; 1 between 90 and 100 years.

We would recommend payment of the following amounts:

Dr. Roberts, M.O.H.	\$60 00
William Young, Sanitary Inspector	60 00
George McIntosh, member of Board	14 00
William Jackson, member of Board	14 00
James Laidlaw, member of Board	14 00
Nicol Jeffrey, legal advice	15 00
Alex. Stewart, disinfectants	31 50
William Young, exp. disinfecting	9 00

All of which is respectfully submitted.

GEORGE MCINTOSH,
Chairman.

HESPELER.

GENTLEMEN,—As Medical Officer of Health I beg to report as follows for the last half year:

Up till November the town had a clean bill as far as epidemics or contagious diseases are concerned. In November we had the universal epidemic of Spanish influenza. Fortunately only a few deaths occurred. The ban was early placed on schools, churches and public gatherings. An emergency hospital was instituted by the Board and a committee of citizens, report of which I herewith append.

The sanitary conditions and drinking water is in a sanitary condition. A semi-annual inspection being made by the inspector. A Babcock milk and cream tester has been installed and an improvement in the supply will no doubt follow.

M. C. BLACK,
M.O.H.

KEEWATIN.

GENTLEMEN,—In compliance with the requirements of the Public Health Act I hereby submit to you my annual report for the year 1918., which is brief, from the fact that the seriousness of the present epidemic has overshadowed all ordinary topics on health and sanitation.

During the year there were thirteen deaths, as follows: One from consumption; two from Bright's disease; two from cancer; one from pneumonia following measles; three from pneumonia following or complicating influenza; one from heart failure; one from broncho pneumonia (infant); one from infantile cachexia (age 3 hours); one from accident.

The case of phthisis was one in which the prominent symptoms were of two years' duration, and care was taken throughout the course of the disease to prevent the spread of infection.

One case of Bright's disease occurred during pregnancy, death occurring some time after parturition.

The other case was a child of twelve years, the case being well advanced before discovered.

The case of pneumonia following measles occurred in a Galician family. The child had been very weak and poorly nourished from birth, and death occurred at the age of six months.

In the cases of pneumonia occurring with influenza, two of them did not follow the attack of influenza, but complicated it; the pneumonia being the chief feature of illness from the outset.

Among the deaths recorded we found the names of three infants, two resulting from broncho-pneumonia and one from infantile weakness, the latter dying three hours after birth.

The only epidemic other than the present one was one of infantile paralysis that occurred in the months of May and June, four cases in all, three girls and a boy, all under the age of ten years.

Absolute recovery occurred in three cases, and a slight weakness and subsequent lack of development in the affected limb occurred in the other.

It was made mention of at the Provincial Health Officers' annual meeting, held in Hamilton, Ont., in May, and the results were thought to be most unusual, considering the serious character of the disease, and the paralysis that almost invariably follows.

We have had no typhoid to report during the year. In regard to the epidemic of influenza I have little to say, probably because we know so little about it other than from the experience in dealing with it since the outbreak.

Probably we have an apology to make for negligence, as to what we did do in the way of preparation to meet the conditions incident to the pest? Nothing. We knew it was coming, but like many other things of this kind, waited until we heard the bushes crackle, and when the blow came, it was like the eruption of a volcano, notwithstanding the knowledge we had through the medium of the newspapers, of its ravages in eastern cities, and the articles that appeared in all newspapers regarding the prevention symptoms and treatment of the disease. However, when we consider what might have been, and what did really occur, questions naturally arise. Would it have been possible for the municipality, had they wished to take affected persons from homes and isolated them for treatment, to have erected a hospital or prepared a place adequate for the accommodation of all persons affected with the disease when it was at its worst? I think not. That was the time when work counted, and not calculation. I think one may rightly compare the situation to the Battle of the Marne.

Also of the persons in our municipality who lost their lives from the disease, was it because they did not get proper treatment either in home or hospital? This may have been true of other places, but I don't think the same could be said of this municipality. We must admit that while the disease was at its height patients did not get the same attention they would have received under normal conditions, but as a matter of fact in many places where conditions seemed most deplorable all went well. Many things could have been done that were not done, but under other such conditions would results have been better?

All of which is respectfully submitted.

E. BAKER, M.H.O.

MIDLAND.

T. J. Johnston, Esq., M.D., M.O.H.
H. R. McGill, Esq., M.D.
W. A. Glass, Esq.
W. J. Thorburn, Esq.
D. L. White, Esq., Mayor.

May 2nd. A meeting was held, and, on motion of Messrs. Glass and Thorburn, H. R. McGill was appointed Chairman.

A discussion occurred as to ways and means for a general cleaning up of the town.

May 9th. Newspaper advertisements and posters were issued advising and instructing citizens to clean up their premises.

Oct. 12th. The Board discussed the Spanish Influenza epidemic and ways of combating it.

Oct. 15th. The Board prohibited all public meetings and ordered all public places closed until October 26th. This prohibition was continued until November 10th, when churches were permitted to hold services, and other prohibited places allowed to open on 11th.

Oct. 18th. The Regent Street School was opened as an Emergency Hospital, and kept open until November 7th. Sixty-six patients were treated, with a total of 354 days' attendance, and 18 patients died from influenza and pneumonia, a recovery of 73%.

The Provincial Board of Health supplied a number of students who did excellent work in the Emergency Hospital and with the resident town practitioners.

W. H. Russell had charge of the Emergency Hospital and was paid \$15.00 per day. J. D. Kinsman, G. O. Macdonald, and Guy Hanley were paid \$10.00 per day, and their work was much appreciated.

A Distribution Kitchen was opened to supply patients in their own homes with necessary food that they were unable to prepare for themselves. Many citizens co-operated, and nearly 500 families were supplied at a cost of \$231.42.

Nov. 25th. Board met and ordered accounts of \$2,431.42 paid.

The whole cost of the Emergency Hospital and other expense connected with the epidemic was \$2,500. The number of deaths in the municipality caused by the epidemic was 74 from the 8th October to the 23rd November. After that date there were not many cases and few deaths.

Dec. 19th. The Board met and discussed the recurrence of the disease, and decided not to take any action, as there were few cases, and those well controlled by the doctors in charge.

T. J. JOHNSTON.
M.O.H.

MOUNT FOREST.

GENTLEMEN.—The Local Board of Health for the Town of Mount Forest beg leave to report on matters affecting the health of the town for the year 1918.

The total number of deaths in the town for 1918 to date were 25.

12 over sixty years of age.

7 over thirty years of age.

3 under one year.

3 between 30 and 20 years of age.

The rules and regulations of the Board have been fairly well respected during the year.

The citizens generally seemed well disposed and willing to keep their premises clean. There has been very few cases of contagious disease in town during the year.

We have had the water properly inspected, and also the milk, all of which has given general satisfaction to the ratepayers; in fact, we have had very few complaints, considering the amount of sickness there has been in the town from influenza, etc.

WM. NICHOL

Chairman Mt. Forest Local Board of Health.

NORTH BAY.

To the Chairman and Members of Board of Health.

GENTLEMEN.—Permit me to submit my sixth annual report as Medical Officer of Health of the Municipality.

The number of communicable diseases reported this year was 41, as against 72 in 1917 and 112 in 1916, a very marked reduction. Influenza is not a reportable disease, and so had no definite knowledge as to the number of cases. However, I will deal with this more fully later in the report. These cases were apportioned as follows:

			1917
Measles	15 cases	0 deaths	19 cases
Scarlet fever	5 "	2 "	0 "
Diphtheria	10 "	0 "	35 "
Typhoid fever	5 "	0 "	3 "
Tuberculosis	1 "	1 "	5 "
German measles	1 "	0 "	6 "
Chicken-pox	4 "	0 "	4 "
	41 "	3 "	72 "

Vital Statistics to December.—

	1917
There were: Deaths, 165 (males 87, females 74).	163
Births, 343 (males 150, females 193).	332
Marriages, 50.	91
Population, 9,500.	....

The deaths mostly took place in October and November, being 76, or 45% of the total number. There were 15 Still-births, Pneumonia 61, Heart disease 16, Accidental deaths 7, Diarrhoea and Enteritis 25, other variable causes 37.

Communicable Diseases.—There was a very material reduction in the number of such during the year, registering 41, as against 72 in 1917. This is a very satisfactory state of affairs, as we practically had no epidemic this year, apart from the influenza outbreak, which was non-reportable. The *Measles* cases were isolated, sporadic cases which came from outside sources, or from Toronto or other places where we knew they were exposed.

Scarlet Fever existed in a similar way, and practically all in one family. The two cases that died were of a very malignant type, the children rapidly succumbing to the disease. The disease was traceable to outside sources.

Typhoid Fever.—These cases were brought in from outside, and some of them treated in the local hospital.

Diphtheria.—Ten cases existed, as against 35 last year, and were scattered throughout the year and did not occur in groups or epidemic. There were no deaths.

Tuberculosis.—But one case was reported to us, and it would appear that the law is not being observed as it should. One death occurred, and it was not the case reported, as she was removed to Montreal by her husband on my advice. At the same time, there is a gain here as against five cases reported in 1917, and seven in 1916.

Influenza Epidemic.—During October and November, the influenza pandemic, which has been sweeping over the civilized world, reached our town. This so-called "Spanish Flu," from the belief that it first began in Spain and spread from there into the armies of the Central Powers and the Allies as well, rapidly spread all over Europe and soon reached America by transports and caused a loss of 350,000 lives in the United States since September 15th. In Ontario the statistics are very incomplete and, based from undertakers' returns, show 3,105 deaths were reported during the month of October and 2,608 in November, or 5,623 for the two months. The disease rapidly spread in our town, and with the numerous cases coming in from the lumber camps and surrounding country, the local hospital was quickly filled to capacity and necessitated

the local Board of Health taking action. Special meetings were convened and a resolution passed closing the schools, theatres, churches, pool-rooms, as well as arranging for further hospital accommodation. The Elks Club Rooms were offered and gladly accepted and equipped with beds, but in a few days these were exhausted and necessitated our getting larger quarters. This was solved by the generous disposal of the Club Rooms of the Knights of Columbus. Here some twenty-five beds were filled and met the pressing situation. In this connection I should like to bear testimony to the splendid response made by the ladies of the town to the call for help in nursing the patients. The ex-graduate nurses stepped into the breach and, ably assisted by volunteer workers, handled the situation with energy, efficiency and ability. Only one graduate nurse was paid, the night superior, all others giving their services gratuitously. Many lives were undoubtedly saved through the instituting of the Emergency Hospital.

There were at least 300 to 500 cases of influenza during the epidemic, an exceedingly small number as compared with other towns and cities. We had 52 deaths during October and November, of which 17 were cases brought in from outside points for treatment, leaving 35 deaths in a population of nearly 10,000, which was an extremely good result, when it is compared with the general result for the Province. We anticipate that cases of this disease will be forthcoming throughout the year, as the unexposed population come in contact with convalescents, carriers, or people sickening with the disease. At the same time we do not look for an epidemic such as we have passed through. The inoculation with vaccine supplied by the Provincial Laboratories assisted in immunizing a good many people, and undoubtedly assisted in preventing the spread of the disease. My own personal observation bore out the fact of its value, for I saw practically no cases occurring among those who had been sufficiently inoculated.

Water.—The water supply has been checked up regularly by samples being taken monthly and sent to the Provincial Laboratory for analysis. During the earlier months of the year these samples were satisfactory, but beginning with April samples of the water showed contamination with bacteria of intestinal origin in varying amounts; even the September specimen showed infection in as small amounts as 5 c.c., and once as low as 1 c.c. Our November samples, however, were entirely satisfactory. Constant, frequent samplings are necessary to bacteriological control. It is evident that no typhoid carriers have been around, or we would have had an epidemic. The destruction of the Pump House by fire brought up the question of its removal to a more suitable site, and the Town Engineer's report in this matter was a very thorough and painstaking document. The Council were wise in repairing the old building and equipping it with the necessary turbines and machinery, in view of the war situation at that time and the very prohibitive cost. Its removal to the site was a wise procedure, however, from the point of view of a pure water supply.

Sewers.—Very little work was done this year, save some lateral extensions and the completion of the trunk sewer to Sherbrooke and Worthington Streets. The extension of this system to the Wallace Park district, as outlined in previous reports, we hope will be undertaken next year or at some future date. Authorization of lateral extensions of the present system on Bloem and McIntyre West Streets were made.

The removal of night soil has been regularly carried out by the present contractor, Mr. Vachon. There have been many complaints during the season as to the service, but they were readily and cheerfully attended to. The disposal of the excreta into the town's sewers has been carried out during the year when it was possible. This has removed all sources of complaint from Widdifield residents and Council, and has proved a most excellent sanitary measure, as it has removed an open source of fly infection, which, so long as it remained, gave us constant cause for concern. The local dump has been watched carefully by our scavenger drivers, and a continuous fire has been maintained there. Yet this still remains a problem that can only be solved by a modern incinerator, which we have previously drawn to the attention of preceding Councils.

Milk and Dairy Inspection.—We have had the plants of the producers and vendors inspected and samples taken, examined for butter fat and dirt by the sedimentation test. All were passed as to cream content, but the samples contained a variable amount of dirt from time to time. The price of milk was advanced to fifteen cents a quart, and we feel such a price warrants a clean article. The great scarcity of supply, however, and the difficulty the producers have in getting adequate labour, has induced us to a greater degree of leniency than in pre-war times. The full enforcement of the by-law would have worked hardships on both producer and consumer. Pasteurization is the next best thing, and I am convinced that this should be done in the interest of the conservation of child life. A recognized authority stated at the Hamilton Convention of Health Officers and Public Health Workers this spring, that 25% of the tuberculosis in children under five years of age was due to milk, which is absolutely

preventable. At the present time about 40% of our milk supply is pasteurized, and no great hardships would be entailed to compel the balance to be similarly treated and made safe for children, who are so susceptible to tuberculosis of bovine origin.

Applications for license were received from 21 parties and granted to the following:

G. C. Smyth, No. 50, North Bay.
 J. Sabourin, No. 51, Widdifield.
 D. McBeth, No. 52, Widdifield.
 J. Hogan, No. 53, Powassan.
 Mrs. R. Leach, No. 54, Widdifield.
 W. F. Clark, No. 55, Powassan.
 E. Eloy, No. 56, Widdifield.
 J. K. Purdon, No. 57, Powassan.
 J. B. Leach, No. 58, R.R. No. 1, Verner.
 L. Besserer, No. 59, Widdifield.
 C. Johnston, No. 60, North Bay.
 F. E. Longhurst, No. 61, Widdifield.
 Jno. Perry, No. 62, Ferris.
 Geo. Thorne, No. 63, Widdifield.
 Mrs. W. Howse, No. 64, North Bay.
 T. A. Bebee, No. 65, Ferris.
 Mrs. S. Simms, 66 North Bay.
 Mrs. H. Stevenson, No. 67, North Bay.

Public Health Nursing should be taken up by the Board next year. By this we mean that a full-time graduate nurse trained in Public Health work should be employed. Her business would be in visiting the schools and assisting the teachers in matters of hygiene, ventilation and the inspection of the children, in so far as she is qualified, for communicable diseases, infections and the material assistance she would be in epidemics in preventing its spread, etc. The child-welfare department presents a large field for her activities. The conservation of child life cannot be over estimated in importance to this country and the British nation, since the enormous and excessive losses due to the war, which must be replaced by the greater safeguarding of the child. The health nurse, by regular visiting and giving advice in the care, feeding and handling of children, the calling in of the family physician early and in ample time, will surely save many lives which would otherwise pass off the scene of action, martyrs to ignorance and wilful neglect. Too many children are lost because of ignorance and procrastination. They leave the child so long that a physician is called in only in time to certify to cause of death, whereas a Public Health Nurse would visit these homes shortly after the birth of the child and by advice and supervision from time to time prevent the mother from neglecting the babe, as well as giving it foods and drugs which can only do the child harm. We believe this would be an investment to our town and country which would pay enormous dividends, and we bespeak to the Town Council of 1919 the hearty endorsement of this proposal.

Conclusion.—The work of the Board this year has been conscientiously looked after by the members, all endeavouring to take a live interest in the matters brought before them. During the year Mr. Tandy, a member of the Board, was made Sanitary Inspector, his previous experience on the Board naturally assisting him in carrying out his duties. He has proved efficient, active and painstaking in his duties, and has materially assisted myself in enforcing the regulations and effecting quarantine whenever needed. Mr. A. R. White, Provincial Sanitary Inspector, and Dr. W. E. George, District Medical Officer, have co-operated with us and advised with us as occasion demanded.

All of which is respectfully submitted.

Yours truly,

EDGAR BRANDON,
Medical Officer of Health.

NORTH BAY, ONT., December 10th, 1918

To the Chairman and Members, Board of Health, North Bay, Ont.

GENTLEMEN,—I herewith submit report as Acting Secretary of the Board of Health for 1918:

The following gentlemen constituted the Board of Health at the beginning of the year: A. Tandy, J. Fallon, T. Wallace, Mayor Patton, and Dr. E. Brandon, M.O.H. In

June, the Sanitary Inspector, T. Whitehead, resigned, and A. Tandy was appointed to this position. As Mr. Tandy was acting as chairman, this created a vacancy which was filled by Mr. Thos. Wallace.

Fifteen meetings of the Board were called, six of these meetings being special meetings called to consider ways and means of combating with the influenza epidemic.

SEWERS.

This has not been a very busy year for the construction of sewers. A continuation of the 30-inch trunk sewer of 97 feet has been completed on Sherbrooke Street, which will greatly relieve the situation arising from nuisances from overloaded sewers in that part of the town.

A length of 10-inch sanitary sewer, 435 feet, has been constructed on Third Avenue, from Cassells to Fraser Street. The Council are also taking over a section of sanitary sewer on Worthington Street, from Sherbrooke to Fisher Street; and have asked for and obtained the necessary approval for the construction of the sanitary sewer on Bloem Street, which, when constructed, will relieve a most unsanitary condition existing there.

Much yet remains to be done in the construction of sanitary sewers, the most important of which will be placed before the Council as occasion demands.

PLUMBING.

Very few applications for plumbing work have been received this year. Thirteen in all applied, and permits granted, as work was in accordance with by-law. The work was duly inspected and carried out in a satisfactory manner. My estimate of the cost of the work done is \$6,000.00.

COMMUNICABLE DISEASES.

Very few cases of communicable diseases have been reported this year, the number being the lowest on record for some years, outside of the epidemic of influenza, which visited us in October and November, but which now appears to be dying out, as very few cases are being reported. No doubt the Medical Health Officer will have a full report regarding this epidemic.

The number of communicable diseases reported during the year is as follows:

Measles	15 cases	0 deaths
Scarlet fever	4 "	2 "
Diphtheria	5 "	0 "
Chicken-pox	3 "	0 "
Tuberculosis	1 "	1 "
Typhoid fever	4 "	0 "

all of which were duly quarantined, and premises disinfected when released.

GARBAGE SYSTEM.

Our equipment of one team of horses and large wagon, which operates under the Scavenger By-law, makes collections of garbage and ashes from stores and private residences when required. A charge is made for collection on a monthly basis, the charge ranging from 70 cents per month for private residences to \$5.50 per month for hotels, the number of customers on the books at present being 129. In addition, barrels or cans of garbage are collected at a charge of 25 cents; the whole would produce a revenue of \$1,800.00.

In addition to this, the team collects the sweepings from streets, garbage from fire hall, manure from stables at fire hall and market, and deposits ashes from blocks, etc., on streets at the direction of the Town Engineer.

The present method of collection does not appear to be a satisfactory one, as there are a large number of houses who only get an occasional collection, and the fact remains there must be some garbage or refuse that should be taken away. It appears to me that the best way of taking care of this part of the system would be to have the scavenger work covered by the taxes. We would then be in a position to clean up when and where it would be required.

The dumping ground has been visited on several occasions, and is in fairly good shape, considering our present system, there being a number of persons who have their garbage taken to the dump by carters, who do not go to the trouble of depositing same at the proper place, but drop it indiscriminately over the ground. If the town collected the whole, this would be obviated.

NIGHT SOIL COLLECTION.

This work is operated on a contract basis, and is let to Mr. J. Vachon, who holds a contract for one year from May, 1918, to April, 1919, at a cost to the town of \$260.00 per month, which is an increase of \$5.00 per month over last year. Ten per cent. is deducted for the first three months, and five per cent. for the balance of the year, as a guarantee of fulfilment of the contract, said holdback to be paid when contract expires.

Between the first day of April and the first day of December, the night soil is disposed of by emptying into sewer manhole on Regina Street, and the balance of the year by taking it to the town dumping ground.

There are some 800 outside closets yet in the town, and, according to contract, the collection from these should be twice monthly, or oftener should occasion require it. In addition to this, the contractor has to collect night soil from Trout Lake once every three weeks, under an agreement entered into by the Town and the Township of Widdifield.

We have had far too many complaints regarding the service this year. Quite a few have had reasonable cause for complaint; others, on investigation, have not just cause, as, in the case of large families, two pails should be provided. However, I must credit the contractor with giving attention to the complaints as soon as possible after report.

I would recommend that all cans be of one standard size for the future; this will make it easier for the exchange of cans when emptying in winter. A considerable number of pails will be out of commission this winter, and it will be necessary to purchase at least 250 new cans to replace those worn out.

WATER SUPPLY.

We have had very little trouble with our water supply, as far as the analysis is concerned. Samples have been sent to Toronto monthly for examination, and, with the exception of the month of September, the analysis was normal. The samples taken in September contained colon bacteria.

DAIRIES.

The usual visits to dairies have been made, and several improvements in conditions have resulted, but owing to the shortage of labour on farms, etc., the Board has not taken any drastic measures this year, but has had due regard to the manner and cleanliness in which the milk supply is handed to the consumer, it being as sanitary as possible.

The tests made for butter fat and sediment show that, while the sediment test is fairly comparable with former years, there is a lower average for butter fat, no doubt due to the higher cost of feed, etc.

MEAT MARKET.

Since taking up my duties, the market has been visited on every market day. The quality of the produce offered for sale has been, generally speaking, fair to good. On quite a few occasions the meat market has been overcrowded with farmers selling meat, leaving very little room for customers. It is very certain that present conditions will have to be altered, as the practice of customers handling the meat before purchase will have to be stopped, and, if the market is to remain, larger premises will have to be secured, so that the meat can be handled in a sanitary manner. My suggestion for the guards to prevent the handling of meat was not carried out by the Council.

A rough summary of the work performed by myself would be: Plumbing inspections 26; served 150 notices; adjusted 100 complaints; received and answered 50 letters; made two personal visits with garbage men to check up service. Fixed all accounts in ledger, made out and posted up 400 accounts, and collected some \$700 from customers. Made records of all complaints received; recorded Vachon's reports from commencement of year.

In conclusion, it is my wish to thank the Board and the members of the Council for their liberal support during the period of my service. I am also grateful to the Provincial officers, Dr. George and Mr. Alex. White, for the practical help rendered me in the discharge of my duties.

Yours truly,

ALFRED TANDY.

Acting Secretary; Sanitary and Plumbing Inspector

ORILLIA.

GENTLEMEN,—I have the honour herewith to submit my annual report for the year 1918.

The year has been comparatively free from the usual contagious diseases, such as smallpox, scarlet fever, mumps, chicken-pox, whooping-cough, etc., of which no cases have been reported. Diphtheria has prevailed to the extent of 7 cases, confined to 5 households. The origin of these cases was traced to outside sources, and in no instance was the disease communicated to other parties in town by those affected, so strictly were the quarantine regulations observed. A few cases of typhoid developed, and were nearly all caused by the drinking of well water.

The number of contagious cases reported to me during the year were: Diphtheria 7, no deaths; typhoid fever 9, no deaths; measles 5, no deaths; infantile paralysis 1, one death.

This year the country has been invaded by a hitherto unknown disease, which has received the name of "Spanish Influenza." It has proved the most contagious or communicable plague known in modern times. As soon as it made its appearance in Orillia the schools, churches and all places of public entertainment were closed, and all public assemblies prohibited. Knowing that the General Hospital could not afford the amount of accommodation that would be required, a committee of Council was appointed at the request of the Board of Health to secure a suitable place for an emergency hospital. The Board of Management of the Orillia Methodist Church offered their Sunday-school room for that purpose, and it was accepted. A number of ladies immediately offered their services to put the place in order, and inside of twelve hours they were ready to receive patients. The Presbyterian Sunday-school room afforded splendid facilities for cooking, and food was prepared and supplied, not only for the hospital patients, but for a large number of families in different parts of the town who were stricken by the plague. Fifty-seven patients in all were admitted to the hospital, and out of that number only nine deaths occurred, a splendid record, knowing that only the most severe cases were brought there. The courageous women and girls who, at the risk of their own lives, volunteered to nurse, not alone at the hospital, but at the homes of those seized by this dread disease, should receive our sincerest gratitude. The whole number of cases in town, up to the present time, amounts to upwards of 1,300.

There are three things that are closely linked to the sanitation of the town and the health of the people, viz.: the water supply, the milk supply and the sewer system. In order to secure a pure supply of water a filtration plant was installed, and it was fully expected that it would serve the purpose. But it has been found that while it removes dirt and foreign matter, it does not destroy the active bacilli which produce disease, so chlorination is resorted to, and that provides water that is perfectly safe to drink but that does not agree with many people's palate. It is found that Tannery or Slaven's creek, the boathouses, and the privies and bathing-houses of Couchiching Beach Park, and leaks in the sewer line, are largely responsible for the pollution of the water in the lake. It is also known that the mouth of the intake pipe is so situated that it receives a portion of the drainage from these sources. So you can easily understand why chlorination is necessary. However, the Water, Light and Power Commission are working overtime to devise and execute plans that will effectively remove this danger.

A year ago the Town Council enacted a milk by-law which raised the percentage of butter-fat and required better methods of delivery. In company with Chief Reid, I made an inspection of the dairies supplying milk to the town. On our first visit we found a lack of cleanliness and overcrowding that were very disappointing. After pointing out the requirements of the Statute and by-law, we asked the owners to make an honest effort to comply with the law and remedy the unsanitary conditions. A second visit showed a commendable improvement from the standpoint of cleanliness, both in the animals and stables, but overcrowding still existed. A third inspection revealed a fairly satisfactory condition of affairs, only for the overcrowding, which it was impossible to change at that time. Tests were made of samples of milk at regular intervals, and in the majority of cases the amount of butter-fat was up to the standard. A few samples showed a deficiency. After repeated warnings, and no heed being paid, the Inspector instituted legal proceedings against the delinquents, who were given the benefit of a doubt regarding the accuracy of the test, and in that way escaped being penalized. But I wish to assure the consumers of milk that we shall not relax our efforts to secure a pure and wholesome article for them.

The sewer system has not been working satisfactorily, the trouble being at the pumping station on Queen Street, and leakages in the line between that point and the disposal works. The chairman of the Sewer Committee has employed several engineers to correct these defects, and their efforts have met with some success. But the pump still persists, occasionally, in acting obstreperously and discharging the contents of the station into Tannery creek, thereby polluting the lake, and the old pipe

on West Street is determined to let people know of its existence. The Council has taken the matter into their serious consideration, and no doubt a satisfactory solution will be discovered, not requiring too heavy an expenditure.

We have not attempted to enforce the by-law requiring everyone whose property abuts on a street having a common sewer to connect therewith, owing to the scarcity of competent labour to do the work. Now, as labour is more plentiful, the work should be done as soon as possible.

During the year I had to deal with many complaints regarding cesspools, privies, drains, etc., but an admonition was sufficient to set matters right.

All of which is respectfully submitted.

JOHN McLEAN, M.D.
Medical Health Officer.

OWEN SOUND.

GENTLEMEN,—In accordance with the requirements of the Public Health Act, I herewith submit to you the annual report of matters pertaining to the public health of the municipality for the year 1918.

Had it not been for the recent influenza epidemic the town would have had rather a light year so far as contagious diseases were concerned.

During the year eighteen cases of typhoid fever were reported. Six of these were in one house. Several of the cases were contracted elsewhere and were only treated in Owen Sound. But one death directly due to typhoid was reported, while one other case developed influenza during a protracted convalescence and died.

The town water supply has been regularly tested at the Provincial Laboratories and the reports have been almost uniformly good. The Public Utilities Commission with the assistance of Mr. C. J. Pratt have done all in their power to give the town a pure water supply.

The source of the typhoid originating in town was not discovered.

An outbreak of diphtheria threatened early in January, but with the aid of the school nurse an active inspection of the schools was made, a number of diphtheria carriers were located and isolated with very gratifying results. No active cases developed. In September there was another scare, but the disease was confined to one house. Just here I think it but proper to highly commend Miss Beaton, the school nurse, for her energetic and intelligent work, which undoubtedly aided materially in preventing the spread of this dreaded disease.

At the annual convention of the Provincial Health Officers' Association, which met in May in Hamilton, I presented a paper dealing with the subject of Diphtheria Carriers, which was well received and produced a good deal of discussion.

Early this fall there were quite a number of cases of whooping-cough. In a number of these cases the whooping-cough vaccine was used with very good results. The vaccine is provided free by the Provincial Board of Health and I think it should be generally used both as a preventative and curative agent.

During the first week in October influenza arrived in full force and raged for about six weeks. The Health Act does not require these cases to be reported, so that I can only estimate the number of cases; I should judge there were about two thousand. There were twenty-one deaths, which is a large number and to be regretted, as it was the youth of the municipality which was taken—yet the number of deaths was much smaller than in many other places of similar size. All places of public gathering were closed for some time and the public was warned through the press of precautions to take. Whether these measures helped I cannot say, but certainly Owen Sound did not pay as heavy a toll as many other places.

The influenza vaccine was used to a certain extent, but statistics are not available to show the results. However, I think I am safe in saying that it afforded a measure of protection. I know of homes where, with one case in the house, the vaccine was used on the other members of the household and no more cases developed, but this statement could also be truthfully made where no vaccine was used, so that, I say, we do not yet know the real value of the vaccine; but I think it worthy of a trial. As previously announced, it is supplied free by the Provincial Board of Health and may be had by application to the family physician.

The local Board of Health were not put to any great expense by the epidemic. It was necessary to supply nurses in a number of homes, some of whom were paid by the Board. However, there were a great many who gave their services voluntarily, including a number of the public school and collegiate teachers, while these institutions were

152

closed. The thanks of the Board are due to all those who assisted in this time of need. Aid was offered from the Provincial Board by way of nurses and doctors.

There are still a number of new cases every week, and no doubt there will be all winter, so that it behooves those who have not already had the influenza to take precautions.

The scavenger work has evidently been fairly satisfactory during the year, judging from the few complaints received. All complaints were referred to Sanitary Inspector King, who had them remedied.

In the spring an effort was made to have the junk yards around the town cleaned up. Some work was also done to have manure pits properly protected and cleaned. There were no doubt some good results from the above efforts, but there is still room for improvement. The work should not stop until every stable in town has a properly constructed, fly-proof manure pit as required by the regulations of the Provincial Board of Health, as flies are beyond a doubt great carriers of disease.

The slaughter houses have been duly inspected and for the most part found in a fairly satisfactory condition.

Dr. Norton has made the spring inspection of all the premises and cattle of the milk producers whose names have been supplied by the local milk vendors. I have had notices sent to all these producers to clean up for the fall inspection. Dr. Norton has not yet completed this inspection, so is not able to report as yet. His report will have to be dealt with at a later meeting of this Board. Attached is a copy of the notice sent to each producer.

I think provision should be made for the inspection of the premises of the small vendors,—those who have but one or two cows. While they supply but a few families, it is just as important that they should comply with the requirements of the milk by-law. You have already taken steps to see that these small vendors apply for a license. You will probably have to pay the Inspector more money to have this extra work done, but it should be done to protect all milk users, and out of fairness to the larger producers and vendors.

Mr. King has made the usual tests of milk supplied by the large vendors and attached to this report you will find a table showing the average of the tests made.

The war is over. Dr. Murray, the M.O.H., will, we trust, soon be back, and believe me, for several reasons I shall be very glad to welcome him home. Doing his bit in this war has meant a great sacrifice on his part—knowing this we must honour him. I have done my best to keep the work going in his absence, and I want to thank you, as a Board, for your co-operation and assistance. I also want to say this—you should offer Dr. Murray a handsome increase in his salary. The work that devolves on the M.O.H. of a town this size is a heavy task and should command a much larger salary. I trust the Board will consider this on Dr. Murray's return.

Again I thank you for your help during the three years I have been Acting M.O.H. All of which is respectfully submitted.

A. B. RUTHERFORD,
Acting M.O.H.

MILK TESTS, 1918.

The following are the averages of the tests made during the year from the larger vendors:—

Vendor.	Fats.	Solids other than Fats.	Total Solids.
	Per cent.	Per cent.	Per cent.
W. C. Barber.....	3.80	8.21	12.01
L. Kivell.....	3.87	8.43	12.30
O. S. Dairy Co.....	3.67	7.86	11.53
R. J. Walters.....	3.80	8.50	12.30

The Milk By-law requires not less than 12½ per cent. total solids of which the fats shall not be less than 3½ per cent. It will be seen that all the vendors were above the minimum of fats, but none were up to the requirement in total solids. There were a number of complaints as to the quality and cleanliness of the milk, but I believe the vendors made an honest effort to supply as good milk as possible, obtaining it, as they do, from a great many sources.

PORT HOPE.

GENTLEMEN,—I have the honour to present to the members of the Council of the Town of Port Hope my report on the work of the Board of Health for part of the year 1918, together with the reports of the Medical Health Officer as given to the Board.

During the short time which I have been chairman, in company with the Medical Health Officer I visited several of the dairies from which our town obtains its supply of milk. And I found them in good condition and all that could be desired in the way of cleanliness and equipment. The water supplies were good and the herds were among the best in the district. The one milk house that I saw was clean and very satisfactory. On our trip we inspected one slaughter house and found it in fair condition, and on the premises was a well equipped place for storing and preparing meat for market. And this butcher promised to build a new slaughter house in the near future. On this inspection trip I was pleased with what I saw, and intend if possible to see more of the dairies and slaughter houses.

The matter of having bread wrapped in paper so as to protect it from dust and dirty hands during street delivery is a question, it seems to me, that might be dealt with by the council, if they think well. I understand the council may enact a by-law requiring that this be done. And if they pass such a law I am sure it will meet with the approval of the Board of Health. Recently I heard of a case where a child when drawing some unwrapped bread loaves in a cart, accidentally upset the cart on a muddy street crossing, and I am sure the loaves did not lose in weight or gain in whiteness through what happened.

Complaint has been made to us that the anti-spitting by-law is not enforced. All we can say to this is that the Board of Health is anxious to see this law enforced. And, moreover, the members of the Board are anxious to see all the sanitary by-laws observed, as these laws are intended to protect our citizens from ill-health and disease.

Yours truly,

Chairman, Board of Health.

ANNUAL REPORTS, 1918.

On the work done during the year 1918 I have prepared the following reports, viz.:—

Inspection of Victualling Houses.
Inspection of Slaughter Houses.
Report of Communicable Diseases.
Report on Child Welfare.
Inspection of Milk and Dairies.

REPORT ON THE INSPECTION OF MILK FOR 1918.

Regular inspections of all the dairies supplying the Town of Port Hope have been made during the year.

In order that the Chairman of the Board, Mr. Outram, might see for himself the condition of some of the dairies and slaughter houses he accompanied me on one of my inspection trips. Mr. Outram made some good suggestions in regard to several places which were visited and his advice was very helpful to me. He was able to get a good idea of the conditions under which our milk is produced—a much better idea than could possibly be obtained from a written report. At the first opportunity I am sure that Mr. Outram will tell the Board what he thinks of some of the dairies and slaughter houses which he visited.

Following gives the monthly average of all the samples tested for percentage of butter fat during the year, viz.:—

December	3.52	June	3.29
January	3.44	July	3.23
February	3.39	August	3.18
March	3.42	September	3.38
April	3.27	October	3.55
May	3.20	November	3.40

The yearly average for each of the large vendors is as follows, viz.: W. J. Highfield, 3.40; James Sinnott, 3.41; T. W. Philp, 3.24; W. C. Hugh, 3.28.

Some fifty examinations were made with the dirt sediment test, and a number of these dirt sediment discs have been kept for future reference. In any case where the milk examined showed the least trace of dust or dirt, the vendor was told of the fact. But we are pleased to say that all the samples examined were found to be clean, wholesome milk.

The tests for butter-fat and dirt sediment and the particulars of the inspection of the dairies have been obtained for the benefit of the milk consumers of Port Hope, and the details of these examinations will be shown to any milk user who asks for them. And if a householder finds that the milk he receives is in any way not satisfactory, complaint should be made to the milk inspector, when every care will be taken to investigate and remedy the matter. This is the only way that the individual consumer can be safeguarded.

In the hot months of the summer, even with the greatest care, occasionally a bottle of milk may turn sour, but it is not possible for a health officer to prevent every accident such as this, especially when he has had little or no help from the sanitary inspector.

COMMUNICABLE DISEASE .

There have been reported during the year thirty-five cases of communicable disease, as follows, viz.:

Pertussis	10 cases.
Measles	6 "
Rubella	3 "
Diphtheria	5 "
Tuberculosis	4 "
Epidemic parotitis	4 "
Paratyphoid	2 "
Typhoid fever	1 "

It will be noted we had only three cases of typhoid in the past year, and two of these were brought to the town, and the third patient was most probably infected while out of town. This says much for the health of the municipality and the purity of our water supply.

At the last session of the legislature an Act was passed making the notification of venereal disease compulsory. And when a report of one of these is received a record is made, and each week the particulars are transmitted to the Provincial Board of Health, so that a statement of these cases does not appear in this report.

During the month of October many citizens were ill with influenza. The epidemic came suddenly, and in the space of three or four weeks had almost run its course, when it subsided nearly as abruptly as it had come. There is no way of judging the number of persons who were ill, as influenza is not one of the notifiable diseases, and, moreover, many were only very slightly ill, and these did not seek medical aid. The first case admitted at the Port Hope Hospital was on October the first, and the second case was received on the sixth day of October. The majority of those who were quite ill were between twenty and fifty years of age. In every case where death resulted it was brought about through some complication, such as pneumonia.

Our death rate was very low, and is probably as low as any place in the Province of Ontario. The death rate in thirteen Canadian cities and five United States cities, as published by the Provincial Board of Health, is in some cases as much as eight times that recorded in Port Hope.

Many different preventive measures have been tried, such as inoculations, the use of face masks, the prohibition of public assemblies. The governments of Great Britain, France, the United States and Canada have between them spent many millions of dollars in medical aid and in investigating the cause and treatment of the disease, but as yet no really effective preventive measures have been devised.

INSPECTION OF SLAUGHTER-HOUSES.

The slaughter-houses have been regularly inspected during the year, and it is gratifying to be able to say that from the time they were first visited some years ago there has every year been a steady and marked improvement in their condition. There is no longer any serious violation of the law to be seen, and all the places visited were in very good condition, viz.: W. C. Greenaway, Lorne Giddy, C. Hutchings, George Perrin, Gardiner Brothers, Thomas Roberts.

At three of these places extensive improvements have already been made, and another butcher is now engaged in building an up-to-date establishment of cement blocks. This slaughter-house will doubtless be one of the best when it is finished.

Another butcher has recently bought some land on which he intends to build in the very near future. He has already a splendid place for cutting up carcasses and a large refrigerator.

Another butcher is engaged in getting building material ready for the spring. Some of the butchers have been a little slow in erecting new buildings, but all have been making important alterations and improvements.

CHILD WELFARE.

Under the auspices of the Bureau of Child Welfare, a baby clinic has been started at the Port Hope Hospital.

The Bureau of Child Welfare has for its object the saving of babies' lives and the rearing of healthy children. It is a department of the Provincial Board of Health, and Miss Mary Power is Director of the Bureau.

The work takes in all children up to six years of age—those who are too young to attend school.

On certain days in each month mothers are invited to take their children to the clinic, and there they are carefully examined by the physician in attendance, and a record of this examination is kept on file. The particulars obtained in regard to each child are, viz.: name, address, age, height, weight, size of head and chest, nourishment given, condition of teeth, tonsils, eyes, ears, throat and nose, signs of disease or defects in any of the organs of the body, etc. Any defects or diseases that are found are noted on the record card. The parent is given such advice as is necessary on feeding, clothing, bathing, sleep, ventilation, exercise, care of eyes, etc., and in case any disease or defect be found the case is referred to the family physician for treatment. Pamphlets on the care of children and other literature, supplied by the Provincial Board of Health, is given to those who attend the clinics.

This important work was started in Port Hope on May 3rd, 1918, when some of the officials of the Provincial Board of Health gave a practical demonstration on the subject in the Town Hall. Previous to this date the members of the Port Hope Hospital Mission had made a systematic canvass of the town, and had obtained the name and address of every family where there were any little children. This index of names has been of great help at the clinic and to the visiting nurse. So that to Mrs. Edgar and the other ladies of the Hospital Mission must be given much of the credit for the success of the undertaking.

Up to the present time about one hundred and twenty-five children have been examined at the clinic, and quite a number of these have attended a second or third time for further advice or examination.

The results of the examinations show that a number of babies were suffering from defects that required an operation in order to cure them, such as enlarged tonsils, adenoids, rupture, etc.

Others were found to be suffering from the ill-effects of feeding.

Some were unsuitably dressed.

Several ruptures were discovered which were readily cured by proper treatment. In a few cases a serious disease, which had not been suspected by the parent, was discovered.

For the success of the work much credit should be given to Miss Eliot, superintendent of the hospital, and the splendid staff of nurses at this institution. For several days before the time for the clinic, two of the nursing staff call at many of the homes where there are children. The nurse offers such advice in regard to the children as seems proper, and in case they see a baby that looks ill, the mother is urged to take the child to the clinic for more careful examination and advice. The nurse gets acquainted with the mothers, and this friendship helps very much in inducing the mother to accept the advice given at the clinics, and in this way much sickness and disease among the children is prevented.

The clinics continue about one hour and are held between the hours of nine and ten in the morning. As many as fifteen children have attended at one time.

In the cities where these clinics are held many thousands of lives have been saved. In some districts the deaths among babies have been reduced as much as thirty-five per cent.; at the same time much sickness has been prevented and a healthier and stronger generation of children has been the result.

The work can and should be extended in Port Hope. All that is needed is that a little more time be given to the work, and that the Board of Health give their approval and encourage those in charge. Up to the present, the time given by the hospital nursing staff has been voluntary, and the cost to the town has been practically nothing, but we cannot hope that this will continue indefinitely. The Board of Health has authority to engage a visiting nurse, if they think well. And in doing this they will have the hearty support and approval of the Provincial Board of Health and the Bureau of Child Welfare. But I am of the opinion that a practical scheme could be worked out whereby the work might be continued and made permanent.

This child welfare work is one of the best ways that possibly can be devised for the prevention of sickness and disease among children, and any money spent in doing this work will be well spent.

It is well known that money spent in the prevention of illness is much more profitable than that which is spent in cure.

These few thoughts are offered for the consideration of the members of the Board of Health.

All of which is respectfully submitted.

Yours truly,

GEO. A. DICKINSON, M.O.H.

RENFREW.

GENTLEMEN.—I have the honour to submit to you the report on the sanitary conditions of the town, for the year December 1st, 1917, to November 30th, 1918.

There has been reported during the year, 16 cases of diphtheria, 8 cases chicken-pox, 2 cases of typhoid fever, 1 case measles, 3 cases scarlet fever, and 5 cases of mumps. There was a very decided decrease in the number of cases of communicable diseases reported over last year.

The influenza epidemic, which has been universal, visited Renfrew and took a very heavy toll. Accurate figures of the number of cases are not available, as the cases were not required reported, but a fairly conservative estimate would place the number in the neighbourhood of 1,000. There were 67 deaths. The town is almost entirely free of the disease now, although sporadic cases are likely to appear during the next six months. It was early recognized that the disease was of a particularly virulent type and spreading rapidly, so an appeal for outside help (doctors and nurses) was made to the Provincial Health Department. They responded by sending us 13 nurses, and must be credited with doing all in their power to secure outside doctors, but evidently none were available. In addition, 20 nurses were secured privately. These, along with the town and hospital nurses, worked unselfishly and heroically and did an incalculable amount of good. Dr. Maloney, District Health Officer, was also on hand for three days, and gave valuable assistance in organization work. Various women's organizations of the town rendered valuable assistance. To all who assisted in any way in relieving a tense and pathetic situation we are very thankful. It was deemed advisable to close schools, theatres and pool-rooms for a period of three weeks. While expenditure in connection with the epidemic was heavy, it was mostly in supplying nurses for the hospital and charity cases.

There have been a few complaints *re* nuisances, which have been investigated and remedied.

The matter of proposed sewers on Gladstone Street and in the Plaunt Park sections has been gone into carefully and their construction urged and recommended. Mr. Dallyn, Dr. Maloney, Engineer and District Officer of Provincial Board, respectively, made visits to the town in this connection and met the Board and Council and gave valuable assistance and advice. It is hoped that construction of these sewers will not be much longer delayed.

Frequent water analyses show the town water supply to be bacteriologically pure, and now that an extra filter has been installed the continuation of a pure water supply can be practically assured.

A by-law regulating the supply and handling of milk offered for sale in the town has been put into effect and has given good results, particularly in the decreasing number of cases of infantile diarrhoea during the summer months.

During the year diagnostic outfits supplied by the Provincial Board of Health have been supplied to the local physicians, and the antitoxins, serums, etc., distributed by the Provincial Board of Health, free of charge, have been kept on hand.

The Isolation Hospital has undergone some improvements and is, along with the equipment, in good condition.

During the year there have been 200 births and 144 deaths, compared with 177 and 74, respectively, last year. The increased number of deaths was due to the influenza epidemic.

I wish to thank the Board and Sanitary Inspector for valuable assistance and co-operation during the year.

DR. J. J. McCANN,
Medical Officer of Health.

SANDWICH.

GENTLEMEN.—The Board of Health for the Town of Sandwich beg leave to submit the following report:

Following the usual custom, early in the spring, the Board of Health had the Sanitary Inspector visit all places where there might be any doubt of the sanitary conditions, and, where necessary, everything was put in sanitary condition.

Yards.—The work of keeping the yards clean was greatly assisted by the Council, who had notices published asking all residents to clean their yards and collect any and all rubbish so that it might be drawn away by the town teams, deposited and burned or disinfected with lime and covered over with earth.

Houses.—In one case the Sanitary Inspector visited a large boarding-house occupied by foreigners, had the mattresses burned and the place cleaned up, properly.

Hydrants.—The Board saw that the hydrants were properly flushed, particularly at the dead ends of mains.

Installing Closets.—The Board also took steps and compelled seven different property owners to connect their places with the sewer, and one of these was fined for not installing a closet as notified.

There are very few outside closets in town, but the few are so far from any buildings that they are no nuisance, while some are permitted by the Board as there is no sewer in front of the lot with which the premises may be connected.

Communicable Diseases.—There were some forty-three cases of communicable diseases reported during the year, of which there were four deaths. These do not include influenza, of which there were eight deaths in town.

All the communicable diseases were very mild cases, with the exception of some four or five; and in the diphtheria cases, as many as four swabs were taken from one patient, in some cases.

When influenza struck the town, and became serious, the Board took steps to check the disease, closing schools, prohibiting public gatherings, and notifying parents to keep their children off the streets.

When persons were quarantined for smallpox, even the dogs in the neighbourhood were kept tied up for fear that, if loose, they might spread the disease.

Provisions were furnished to those quarantined, and the town paid the bills.

Meetings.—During the year there were ten meetings, but anything requiring immediate and prompt attention was taken care of by the M.O.H. giving orders to the proper official, without waiting for a meeting.

All of which is respectfully submitted.

W. J. BEASLEY,
Medical Officer of Health.
E. R. NORTH,
Secretary.

TOWN OF SIMCOE.

The Chairman and Members of the Board of Health.

SIRS.—There has been an unusual number of contagious diseases during the past year, and, with the exception of smallpox, our town has been visited with every one of the so-called communicable diseases, the last three months ending in one of the most violent and serious epidemics in the history of the town, when Spanish influenza made its appearance. In the months of April, May and June, measles became very prevalent, 19 cases in all being reported, with no deaths. This number, of course, does not include all the cases that occurred, as some cases were not brought to our attention, partly through a desire to conceal it, and partly through the parents or others not fully understanding their duty to report such cases. Diphtheria was present in May, September, October and November, 8 cases being reported, with one death. Typhoid occurred in the late summer and early fall months as usual, but the cases reported were not many, but seven coming under notice. Two cases of spinal meningitis, with one death; one case only of scarlet fever being reported.

The usual number of cases of chicken-pox, whooping cough and mumps developed. These cases were isolated, and attendance at school prohibited where necessary. In the diphtheria cases, antitoxin was used promptly and in large doses to the patients as well as others exposed in the same house, for rendering them immune from possible attack. This measure, with strict isolation, no doubt prevented the dread disease from spreading. In all cases where quarantine measures were necessary, the Sanitary Inspector visited the houses once or twice daily, and the premises were thoroughly disinfected before the cases were released.

I attended the annual meeting of the Health Officers' Association at Hamilton, in May, and much useful information regarding public health matters was obtained. Much interest was taken in the Child Welfare branch of the Association, which has as its object the reduction of the enormous mortality rate of the first few years of child life, especially that of the first year, in which the mortality rate is the greatest. The proper care, feeding, cleanliness and good sanitary arrangements were the chief measures proposed to help in saving the great loss of infant life. This Child Welfare Association, which has branches all over the United States and Canada, has started out to save, this year, 100,000 infant lives, while it is stated that it is possible to save twice that many annually in the two countries that are now lost through improper food, bad sanitary arrangements and ignorance or neglect of the parents, and so forth.

Births.—There were 68 births during the year, 35 males and 33 females.

Deaths.—A very high rate of mortality is to be recorded this year, there being 76 deaths, as compared with 57 last year, this high rate being due to the influenza epidemic, some 20 deaths being attributed directly to this cause, but no doubt others were indirectly due to this disease. October claimed most of the victims, 14 dying during the month; November 2, and December 4. The oldest person was 47 and the youngest one year.

The causes of death were as follows:

Accident	1	Pelvic cellulitis	1
Abscess	1	Hæmorrhage	2
Cancer	3	Senility	4
Cholera infantum	2	Apoplexy	3
Convulsions	1	Nephritis	6
Diphtheria	1	Meningitis	1
Epilepsy	1	Indigestion	1
Fracture	3	Influenza	20
Heart disease	7	Suicide	1
Still-born	2	Disease of gall bladder	1
Pneumonia	10		

Samples of water were taken from a number of wells to ascertain the source of disease, but none were found in a very bad condition. Tap water was also analyzed and found each time to be in a good state of purity. Milk samples were also forwarded for analysis at various times, which proved satisfactory, with a few exceptions. No preservatives were found, percentage of butter-fat up to the standard, and bacterial count under the shipping conditions not very reliable. The milk supply of the town at present is under one management, viz., The Simcoe Sanitary Dairy. This firm is deserving of much praise for their enterprise in installing a pasteurizing plant at considerable expense and study. The process of pasteurizing milk renders it one of the healthiest forms in which this very important food product can be used, but the process of treating milk in this way entails, of course, considerable extra expense, and were this enterprise encouraged by public recognition in some form, such as an annual bonus, it would help to ensure the process being maintained, as well as to give the Board of Health freer access for inspection purposes, and will thereby furnish a guarantee for this brand as against the raw or untreated and less healthy milk. Some of the dairy farms that were inspected were found to be in a first-class sanitary condition, with clean basins and towels, with good facilities for cooling the milk, and the stables in a cleanly state, etc., and others again much neglected in this way. As the sources of the milk supply keep changing, in some instances it is not possible to keep them all under satisfactory inspection.

The annual notices for spring cleaning were distributed to each householder, together with literature issued by the Provincial Board. Two dogs that had bitten children were destroyed and the heads sent to Ottawa for analysis as to presence of negri bodies (germs) as a precautionary measure. They were not found present in either case.

There was one prosecution for keeping hogs too near a dwelling.

As the number of closet pits in town are still numerous, we are trying to get them all changed to the drawer system, and have succeeded in the past year in eliminating some of the more objectionable ones.

The garbage question is still in an unsatisfactory state, the same having been rendered more troublesome in one respect by the Dominion Veterinary Department prohibiting the kitchen garbage being fed to hogs without being cooked or steamed, which rendered it more difficult to get collected. The proposed by-law recommended by Board of Health to the Town Council had no action taken upon it.

The embargo which a few years ago had been placed upon bringing manure into

town on the railways and unloading the same in certain vicinities, was raised this summer until further notice, owing to the urgent solicitation of interested parties. The value of this material for production purposes, and the number of employees maintained in the business, was the chief reason for giving the question another trial, in view of the fact that the unloading was to be more expedited and certain objectionable (or paunch) manure not to be included.

The District Officer of Health, Dr. McClenahan, made one official visit and gave us a little help and instruction on matters of public health in general, and incidentally on the question of pit closets.

The Provincial Laboratory has kept our supply of vaccines, antitoxins, etc., as they were required. The Board was also supplied with a serum for the influenza epidemic, which was used by our local physicians with apparent success as a preventive measure.

The recent appointment of Mr. John Pratt as Sanitary Inspector, we hope, will result in much needed improvement in sanitary matters, as the work required to be done in an efficient manner entails more time than our late inspector had opportunity for. I hope to have their detailed reports to present later.

Respectfully yours,

J. C. C. GRASETT,
Medical Officer of Health.

ST. MARY'S.

To the Board of Health, St. Mary's.

GENTLEMEN.—The past year has been very favourable from a health point of view. With one exception contagious diseases have been less prevalent than usual. The town has been almost free from children's infectious diseases, and also from typhoid, small-pox and other infections that affect the adult. We have been less seriously affected by the unfortunate influenza epidemic than have many other towns; but even at that, the epidemic was terribly severe, and quite a number of deaths resulted.

The matter of proper protection of manure piles has engaged the attention of your Inspector and myself, and we believe it a measure that should be enforced most rigidly, and where enforced the diminution of the fly nuisance has been most marked.

The Council has not thought it advisable to enact the amendments proposed by us to the milk by-law. We believe it would be more effective were such amendments added to the by-law.

I must express my appreciation of the work done by the Inspector and other officials and must thank them for their co-operation.

I am quite in sympathy with a movement that is on foot to provide proper housing for all the people. The town has quite a number of houses that are used as dwellings that are really not fit, and yet it would appear that hardship would be inflicted by arbitrarily closing them; yet this is a question we will have to face in the future.

J. R. STANLEY,
Medical Officer of Health.

SUDBURY.

To the Chairman and Members of the Board of Health.

GENTLEMEN.—We have the honour to submit to you the report of the sanitary work done under your Board, for the year 1918, ending November 30th.

The garbage and night soil collections have been regularly and efficiently performed by the contractor, and considering the labour problem for this class of work, it is very gratifying to find so few complaints coming to the office; any such complaints received were investigated and attended to as early as possible.

The total number of loads of garbage and other waste destroyed was as follows:

Loads of garbage and other refuse, 2,575 loads.

Carcasses of 9 horses, 1 cow, 1 calf, 48 dogs.

Beef, 6 quarters—3,513 lbs.

16 boxes sausages.
 2 barrels fish and 400 lbs fish.
 1½ barrels pork.
 1 barrel apples.
 8,000 lbs. onions.
 2 tons cabbage.
 13 boxes liver.

The incinerator, with the ordinary repairs to fire box, continues to give full satisfaction. Early in the year part of the shed was destroyed by fire, but this has all been renewed.

Collections for night soil were:

Amount collected	\$2,158 80
Outstanding account, on closets	\$81 60
Outstanding account, cesspools	123 75
Total outstanding	\$205 35 205 35
	\$2,364 15
Contractor received for work	1,891 64
Credit balance	\$472 51

Of the outside closets, further improvements are required, in order that the structures be made fully fly-proof. Much has yet to be done in this line of work, which can only be accomplished by careful attention.

We have only four dwelling-houses in the municipality not connected to the sewer, where sewers exist—three of which are closed.

Plumbing permits were:

16 new connections to the sewers.
 28 repairs and alterations to fittings and sewers.

All the work has been regularly inspected and tested before being passed.

Water Samples.—85 samples have been taken from the lake and town supply and sent to the Provincial Board of Health Laboratories for analysis. Very few have shown contamination, which is very encouraging and shows results for the big outlay in sewers at the lake section during the past two years.

We cannot pass on without again drawing the attention of campers and picnickers to use every care during the summer season at the lake; washing clothes in the lake and throwing of refuse is only too frequently done, and we trust that when the parks are opened the attendant in charge will give special attention to this particular work, as it is impossible for the health officers to be always around.

Milk.—88 samples of milk were taken from vendors and tested. The standard of cleanliness has been fairly well maintained, especially when the labour question is so difficult.

The butter-fat was good; the average being 4%, the lowest 3%, and the highest 5.6%. 9 tests were below the regulation standard in butter-fat.

The dairies have been regularly inspected, and generally found to be kept clean and sanitary. There is room for improvement in the milk rooms; these should in all cases be separate from the stables.

One large dairy—The Sudbury Dairy—has gone out of business, and with the amalgamation of the other large dairies, and the curtailment of stock, a very serious shortage of milk is at present being felt in the town. An outside source of supply will have to be found to meet the requirements, especially for the infants, and it is most important that they have a plentiful supply of pure milk.

Bake Shops have been much improved and standard weight of bread well maintained. Only 34 loaves of bread were taken as underweight, varying from 2 to 3½ oz. short weight.

Meat.—The handling and shipping of meat has been much improved. The greatest cause of complaint is when the meat is not in bags, the sheets and covers not being kept thoroughly clean, sometimes old covers and blankets being used. We wish to draw special attention of all farmers and meat vendors to this particular item. In the spring, as already reported, there was a large amount of meat wasted, for which the companies were prosecuted and fined.

Prosecutions.—12 cases were taken before the magistrate—the total fines being \$460.00.



2 cases for entering houses whilst under quarantine, fined \$25.00 and \$30.00 and costs respectively.

2 for not complying with sanitary regulations, \$5.00 and costs each.

Meat unsound and allowed to waste—1 case, \$10.00 and costs; 3 cases, \$100.00 and costs each.

1 case of offering for sale the carcass of a cow having died from disease, \$25.00 and costs.

Eggs unfit for food, \$25.00 and costs.

Unsound fruit, \$10.00 and costs.

1 case for allowing a company to congregate contrary to the Closing Order during the influenza epidemic, \$25.00 and costs.

Infectious Diseases.—There were 12 cases of diphtheria; 1 patient died.

There were 2 cases of scarlet fever; 1 patient died.

There were 9 cases of smallpox; 1 patient died.

The smallpox cases reported during the months of January and March, and one case in June, were all directly traceable to outside sources, having mostly been brought in from the camps, the one death being an infant in town only a few weeks old. All the cases were well cared for and strictly quarantined, and, on recovery of the patients, house, clothing, etc., cleaned and disinfected.

During the month of October a serious epidemic of Spanish influenza broke out, and from the 10th to the 15th, we estimated there were some 800 cases. It was deemed advisable at a joint meeting of the Council and Board of Health, held on the 15th, that all public premises, schools, etc., be closed. An emergency committee was formed in charge of Mr. McCarten and Mr. Berlanquet. A volunteer staff of some 150 men, young women and boys got together and gave valuable assistance to the stricken families; the women doing nursing and caring for the houses, boys doing general errands and chores, and the men found endless work in visiting and helping in many ways. We are greatly indebted to these helpers for their valuable work, and to the owners of automobiles for the assistance given. The Daughters of the Empire and Red Cross were untiring in the work of making soups and beef-tea for the hospital and invalid patients at their homes. The ban on public gatherings was raised for churches on the 10th of November, theatres, etc., on the 11th, and schools were opened on the 18th. During the period from October 16th to November 30th some 1,434 cases were reported, making a total, approximately, of 2,230. There were 164 deaths, of which 65 were residents of the town.

One important question was forcibly brought home to the workers, and that was the care of the children in the homes, and before very long the authorities will have to appoint a competent nurse to visit the schools and homes.

There is a great work to be done in educating the mothers in the rearing of children. Miss Power, Director of Child Welfare under the Provincial Board of Health, visited Sudbury for a short time in August, and intends, at an early date, to make a special visit to bring this important question before the Board and general public.

Dr. George, the District Medical Officer of Health, visited Sudbury in February, May and October. He had a thorough inspection of the work done under your Board, and was satisfied with the general progress made, our lodging-houses and apartments being most satisfactory.

The regular inspections of all public places, blocks, abattoirs and stores have been made, and it is very gratifying to the officers to report how much conditions have improved; the ready response to any request for improvements, both in structure and general sanitary matters; the big reduction during the year in prosecutions, under this, shows this most clearly.

We have again to thank the Town Council, Board of Health, and the public generally for their advice, help and courtesy given to us in the performance of our duties.

We have the honour to be, Gentlemen,

Yours obediently

W. J. COOK,

Medical Officer of Health.

JAMES TAYLOR,

Sanitary Inspector.



