

1915.
NEW ZEALAND.

PUBLIC HEALTH

AND

HOSPITALS AND CHARITABLE AID:

REPORT THEREON BY THE INSPECTOR-GENERAL OF HOSPITALS AND CHARITABLE
INSTITUTIONS AND CHIEF HEALTH OFFICER.

Presented in pursuance of Section 76 of the Hospitals and Charitable Institutions Act, 1909.

CONTENTS.

	Page		Page
Report of Inspector-General of Hospitals and Chief Health Officer :—		APPENDIX I (Public Health)— <i>continued</i> .	
Public Health	2	C. Appendices to Reports— <i>continued</i> .	
Hospitals and Charitable Aid	3	(12.) Immigration Restriction Act	33
The Nurses Registration Act	6	(13.) Private Hospitals and Midwives	36
The Midwives Act	7	(14.) The Sale of Food and Drugs Act	37
State Maternity Hospitals	7	D. Laboratory Reports	44
Te Waikato Sanatorium	8		
APPENDIX I (Public Health) :—		APPENDIX II (Hospitals and Charitable Aid) :—	
A. Local Vital Statistics	9	Statistical,—	
B. General Reports of District Health Officers	10	Table I.—Hospital and Charitable-aid Re-	
C. Appendices to Reports,—		ceipts	55
(1.) Infectious Diseases	12	„ II.—Hospital and Charitable-aid Ex-	
(2.) Dangerous Infectious Diseases	19	penditure	56
(3.) Provision for Infectious-disease Cases	20	„ III.—Hospital Statistics (General)	58
(4.) Sanitary Conditions	20	„ IV.—Hospital Expenditure	60
(5.) Sanitary Condition of Maoris	26	„ V.—Statistics of Government Hospitals	62
(6.) Sanitary Inspections	28	„ VI.—Expenditure of Government Hos-	
(7.) Offensive Trades	34	pitals	62
(8.) Insanitary Buildings	34	„ VII.—Charitable Institutions (Statistical)	63
(9.) By-laws	34	„ VIII.—Charitable Institutions Expendi-	
(10.) Quarantine	35	turo	64
(11.) Disinfection of Oversea Goods	36	„ IX.—Levies and Subsidies for 1915–16	65
		„ X.—Hospital and Charitable Aid Boards	
		(General)	66

REPORT.

The INSPECTOR-GENERAL OF HOSPITALS AND CHIEF HEALTH OFFICER to the Hon. the MINISTER OF PUBLIC HEALTH, HOSPITALS, AND CHARITABLE AID.

Department of Public Health, Hospitals, and Charitable Aid,
Wellington, 10th August, 1915.

SIR,—

I have the honour to lay before you the annual report of the Department for the year ending 31st March, 1915.

PUBLIC HEALTH.

The general health of the Dominion has been good. The general death-rate is 9·31, as against 9·47 last year. The infantile-mortality rate for New Zealand was 51·38 deaths per 1,000 births, an increase upon that of the two previous years. The following table shows the rates of infantile mortality in New Zealand and four chief centres each year 1904–1914.

Number of Deaths per 1,000 Births.

Year.	New Zealand.	Auckland and Suburban Boroughs.	Wellington and Suburban Boroughs.	Christchurch and Suburban Boroughs.	Dunedin and Suburban Boroughs.
1904	70·98	70·12	95·33	102·96	93·02
1905	67·52	91·52	96·21	88·99	67·13
1906	62·10	85·80	71·88	74·37	72·60
1907	88·78	97·19	117·80	126·16	95·36
1908	67·88	81·87	81·67	67·82	74·54
1909	61·60	61·85	84·21	62·78	48·52
1910	67·73	79·02	84·59	69·40	79·08
1911	56·31	63·02	73·36	62·90	43·42
1912	51·22	56·95	61·32	60·03	38·11
1913	59·17	80·81	60·23	63·49	73·42
1914	51·38	57·62	82·57	68·15	54·28

The following table shows the death-rates for the more prevalent infectious diseases per 10,000 of the population :—

					Proportion of 10,000 of Mean Population.				
					1910.	1911.	1912.	1913.	1914.
Enteric .. ..	..	..	..	..	0·62	0·66	0·44	0·56	0·44
Scarlet fever .. ..	..	..	..	..	0·13	0·09	0·07	0·10	0·20
Diphtheria .. ..	..	..	..	..	0·76	0·61	0·44	0·57	0·72
Phthisis .. ..	..	..	..	..	5·54	5·28	5·04	5·41	4·99
Other forms of tuberculosis .. ..	..	..	..	..	1·82	1·99	1·85	2·19	1·68

The interest of the Hospital Boards and public regarding the care of sufferers from tubercular diseases, especially phthisis, and the precautionary measures against the spreading of such diseases augur well for a still more successful outcome being demonstrable in the future for the campaign that has been so well initiated generally throughout the Dominion.

Cases notified are set out as follows :—

				Number of Cases.		Rate of Incidence per 10,000 of Mean Population.	
				1913.	1914.	1913.	1914.
Enteric fever .. ..	..	..	..	863	859	8·07	7·87
Scarlet fever .. ..	..	..	..	1,614	1,506	15·10	13·81
Diphtheria .. ..	..	..	..	747	1,095	6·99	10·04
Tuberculosis .. ..	..	..	..	1,018	957	9·53	8·78

SALE OF FOOD AND DRUGS ACT.

From the returns attached to the several reports of the District Health Officers it will be seen that the amount of work undertaken in the administration of the regulations under the above Act increased substantially during 1914. Fines inflicted amounted to £497, as against £412 during 1913. While on the one hand it has been obvious to the officers administering this Act that they should avoid insisting upon minor technicalities—of labelling, for example—the cost of which would inevitably be placed upon the consumer, nevertheless, they have been watchful lest gross adulterations or short weight be taken advantage of by less scrupulous vendors in these times of national stress.

HOSPITALS AND CHARITABLE AID.

Receipts.

The total amount received by Boards, separate institutions, and Government institutions for the past year on account of hospitals, charitable aid, and public health was £628,831, a decrease of £31,633 on the previous year, the receipts for the past four years being—

1911-12	£ 556,108
1912-13	583,673
1913-14	660,464
1914-15	628,831

The receipts from the principal sources of revenue were as follows:—

Government contributions—

1911-12	189,011
1912-13	200,256
1913-14	219,520
1914-15	217,152

Levies on local authorities—

1911-12	149,203
1912-13	166,281
1913-14	175,120
1914-15	189,886

Voluntary contributions—

1911-12	31,656
1912-13	25,930
1913-14	49,856
1914-15	25,227

Payments by persons relieved—

1911-12	64,138
1912-13	77,369
1913-14	84,026
1914-15	89,592

Voluntary contributions, though fluctuating considerably, show, in relation to the total expenditure, a downward tendency. In 1913-14, the amount was swelled substantially by the gift of £15,000 from Mr. Cawthron, of Nelson.

Payments by persons relieved last year exhibit an increase of £5,566 over those for the previous year, payments by hospital patients almost wholly accounting for the increase.

Year.	Payments by Hospital Patients.	Payments by Inmates of Charitable Institutions.	Total.*
	£	£	£
1911-12	47,338	16,698	64,138
1912-13	56,255	20,888	77,369
1913-14	62,680	20,987	84,026
1914-15	69,404	20,188	89,592

* Includes also district nursing fees.

Expenditure.

The total expenditure of Boards, separate institutions, Government institutions, and grants in aid amounted to £592,008.

The total expenditure of Hospital and Charitable Aid Boards was £548,868, and compared in detail with that of 1913-14 as follows:—

	1913-14.	1914-15.
	£	£
Hospital maintenance*	249,911	268,695
Charitable aid	94,735	102,576
Public health	11,867	10,734
Administration	21,323	22,862
Capital expenditure	140,840	115,279
Other expenditure	31,153	28,722
	£549,830	£548,868

* Includes expenditure on pathological, dental, and tuberculosis out-patients departments.

The total expenditure by separate institutions was,—

	1913-14.	1914-15.
	£	£
Hospital maintenance	3,181	2,983
Charitable aid	8,315	8,918
Administration	951	902
Capital expenditure	1,637	2,464
Other expenditure	1,452	732
	£15,536	£15,999

The expenditure on Government institutions (Te Waikato Sanatorium and St. Helens Hospitals) was,—

	1913-14.	1914-15.
	£	£
Maintenance	12,176	12,215
Administration	445	502
Capital expenditure	1,051	239
Other expenditure	657	1,014
	<u>£14,329</u>	<u>£13,971</u>

There was also expended by the Department on other means of medical and nursing assistance a sum of £13,170, made up of—

	£
(1.) Subsidies to medical men in the backblocks.. .. .	1,143
(2.) Medical and nursing attendance on Maoris	3,219
(3.) Grants to private charitable institutions, Plunket nurses, &c. .. .	8,808

Hospital Expenditure.

The total expenditure on account of hospitals for the last four years was as follows:—

Year.	Maintenance.	Administration.	Capital.	Miscellaneous.	Total.
	£	£	£	£	£
1910-11	199,573	11,586	70,814	5,830	287,803
1911-12	225,796	13,255	84,798	5,663	329,513
1912-13	240,527	12,644	98,051	3,598	354,818
1913-14	262,007	13,948	130,343	4,856	411,454
1914-15	283,490	15,458	88,498	7,983	395,429

Hospital Maintenance Expenditure.

Year.	Patients under Treatment during Year.			Average Number under Daily Treatment.		
	General Hospitals.	Special Hospitals.	Total.	General Hospitals.	Special Hospitals.	Total.
1910-11	23,584	1,607	25,191	1,839	186	2,025
1911-12	24,681	1,879	26,560	1,900	178	2,078
1912-13	26,979	1,789	28,768	2,131	200	2,231
1913-14	28,885	1,761	30,646	2,234	234	2,468
1914-15	31,366	2,009	33,375	2,364	288	2,652

General Hospitals.—The expenditure on maintenance on Boards' general hospitals was £249,210, and this is equivalent to £106·2 per annum per occupied bed. The average annual cost of maintenance per occupied bed for the last four years is set out below:—

Year.	Provisions.	Surgery and Dispensary.	Domestic and Establishment.	Salaries and Wages.	Total Maintenance.
	£	£	£	£	£
1911-12	24·2	10·3	29·5	42·3	106·3
1912-13	23·8	9·9	26·3	40·2	100·3
1913-14	24·9	9·8	27·4	43·0	105·1
1914-15	25·0	10·7	27·0	43·5	106·2

Charitable-aid Expenditure.

As compared with last year there is an increase of £8,443 in charitable-aid expenditure, the figures for the last four years being as follows:—

Year.	Indoor Relief.	Outdoor Relief.	Total.
	£	£	£
1911-12	64,651	34,171	98,822
1912-13	66,378	31,092	97,470
1913-14	68,510	34,541	103,051
1914-15	74,081	37,413	111,494

A Comparison of Hospital and Charitable-aid Expenditure for the past Ten Years.

Year.	Hospital and Charitable-aid Expenditure.	Mean Population.	Cost per Head of Population.
	£		s. d.
1905-6	270,710	877,469	6 2
1906-7	288,808	901,920	6 4½
1907-8	315,197	925,727	6 10
1908-9	359,941	945,063	7 7½
1909-10	375,075	977,906	7 8
1910-11	416,384	997,974	8 4½
1911-12	482,645	1,019,984	9 5½
1912-13	500,443	1,046,624	9 6½
1913-14	579,695	1,075,787	10 9½
1914-15	578,838	1,095,206	10 6½

In the above the figures for the last four years include infectious-diseases hospitals and consumptive sanatoria under Boards' control, also public health, subsidies to medical associations, and district nurses. In every year separate institutions have been included.

The number of persons availing themselves of treatment in the general hospitals for the last ten years was as follows:—

Year.	Total Number of Persons under Treatment.	Population.	Proportion under Treatment per 1,000 of Population.	Average Number of Occupied Beds per Diem.	Proportion per 1,000 of Population.
1905-6	16,216	877,469	18.5	1,354	1.54
1906-7	17,521	901,920	19.4	1,505	1.67
1907-8	19,160	925,727	20.7	1,511	1.66
1908-9	18,653	945,063	20.8	1,566	1.66
1909-10	21,108	977,906	21.6	1,709	1.75
1910-11	23,584	997,974	23.6	1,839	1.81
1911-12	24,681	1,019,984	24.1	1,900	1.83
1912-13	26,979	1,046,624	25.8	2,131	2.04
1913-14	28,885	1,075,787	26.8	2,234	2.08
1914-15	31,366	1,095,206	28.6	2,364	2.16

Year.	Number of General Hospitals.	Number of Beds.	Proportion of Beds per 1,000 of Population.
1905-6	52	2,186	2.49
1906-7	53	2,331	2.58
1907-8	53	2,347	2.54
1908-9	53	2,502	2.65
1909-10	56	2,689	2.75
1910-11	57	2,863	2.87
1911-12	60	3,057	3.00
1912-13	63	3,176	3.03
1913-14	63	3,292	3.06
1914-15	65	3,531	3.22

Capital expenditure on general hospitals is as follows:—

	£
1905-6	20,379
1906-7	31,508
1907-8	39,499
1908-9	55,837
1909-10	52,341
1910-11	62,237
1911-12	70,331
1912-13	87,042
1913-14	113,353
1914-15	80,485

General.

1. Hospital and charitable-aid expenditure has increased in the ten years ended 31st March, 1914, from 6s. 1d. per head of population to 10s. 9½d. For the year ended 31st March, 1915, it was 10s. 6¾d. per head.

2. In 1914-15, 28·6 per 1,000 of the population availed themselves of hospital treatment, as against 18·5 in 1905-6.

3. And the average number of occupied beds per diem rose from 1,354 to 2,364, or from 1·54 to 2·16 per 1,000 of the population.

4. The resulting capital expenditure necessitated thereby has provided 3,531 beds, as against 2,186, or 3·22 per 1,000 of the population, as against 2·49 in 1905-6.

5. Capital expenditure on general hospitals was £20,379 in 1904-5, £113,353 in 1913-14, and £80,485 in 1914-15.

6. In addition to the necessity for providing additional wards, many of the old wooden hospitals have had to be rebuilt.

7. The cost per occupied bed in the general hospitals during the last five years has been,—

							£	s.	d.
1910-11	..	..	..	..	..	..	96	19	0
1911-12	..	..	..	..	..	..	106	6	0
1912-13	..	..	..	..	..	..	100	6	0
1913-14	..	..	..	..	..	..	105	2	0
1914-15	..	..	..	..	..	..	106	4	0

8. Patients' payments have averaged, per occupied bed,—

1910-11	..	..	..	..	..	..	20	17	8
1911-12	..	..	..	..	..	..	21	12	0
1912-13	..	..	..	..	..	..	22	8	0
1913-14	..	..	..	..	..	..	23	10	0
1914-15	..	..	..	..	..	..	25	12	0

T. H. A. VALINTINE,

Inspector-General of Hospitals and Chief Health Officer.

THE NURSES REGISTRATION ACT, MIDWIVES ACT, AND PART III OF THE HOSPITALS AND CHARITABLE INSTITUTIONS ACT, 1909.

THE NURSES REGISTRATION ACT.

During the year two examinations were held by the State. There were 146 candidates, of whom 128 passed, and their names were placed on the register of trained nurses.

The receipts of fees for examination and registration amounted to £177, and the expenses in connection with the examination £176 17s. 4d.

The nurses registered on certificates from overseas hospitals were thirty-seven. During the latter six months of the year very few nurses from overseas applied for registration, the war undoubtedly keeping them in their own countries.

There have not been many developments or changes in the administration of this Act since last report. The regulations passed last year are now being carried out. Many of the training-schools have added to their accommodation for patients, and thus are able to train a larger number of pupils.

The New Zealand Army Nursing Service has at last been formed. A body of 110 nurses has been enrolled, and although until an amendment of the Defence Act is passed this body cannot be actually incorporated in the Defence Forces of the Dominion, it is recognized by the Government as a part of the defence scheme and the conditions of service have been authorized. The acceptance by the Army Council of an offer made by the Government of fifty nurses for service during the war had given a stimulus to the formation of a Nursing Service. These fifty nurses were selected from all over the Dominion, and despatched to England under the charge of the Matron-in-Chief.

At the commencement of the war six nurses were sent with the troops to Samoa, where they have rendered excellent service. They were stationed at the hospital at Apia formerly owned by the Germans.

Maori Nurses and Native-health Work.

The training of Maori nurses has been somewhat disappointing. Of several who started their preliminary one-year training, only two remained in the hospital to complete the three-years course. There are now three in training.

During the year two Maori nurses were appointed assistant nurses for the Native-health work—Nurses Rena Te Au and Ngapori Naera.

Nurses Ellen Taere and Maud Matairo resigned. Both had done very good work, but tired of the conditions of working in typhoid camps.

District Nurses.

There are now working in different parts of the country fourteen district nurses. This branch of work might well be extended, but one great difficulty in the way is that of getting nurses with all needed qualifications to take it up. The conditions of work in some of the country parts are very hard, and the people expect, besides the anxious nursing of the sick, too much from the nurses in work for the well.

Plunket Nurses.

The number of branches of this society now maintaining nurses, with an assistance from the Government amounting to considerably more than half the expenses of each nurse, has increased to

twenty-one, controlling twenty-six nurses. Owing to the war the society has been recommended to curtail any fresh expenditure in this branch of nursing.

THE MIDWIVES ACT.

During the year there have been two examinations of midwives, and out of seventy-seven candidates sixty-five have passed the State examination and have been registered as midwives. Seventeen have been registered on Central Midwives Board certificates, and thirteen on other certificates.

STATE MATERNITY HOSPITALS.

St. Helens Hospital, Wellington.

During the year 203 cases were confined, 196 children born alive and eleven still-births. There were four maternal deaths and five deaths of infants; the causes are given in the adjoined table.

There were also attended ninety-one outside cases. No deaths of mothers or of infants.

There has been no change in this Hospital. The staff continues the same, except that the Medical Officer, Dr. Agnes Bennett, was granted leave for service at the scene of war, and left at the beginning of April. Dr. Elliott was appointed in charge during Dr. Bennett's absence. The Sub-Matron also has been on leave for active service since August, having gone with the advance Expeditionary Force to Samoa. Three gatherings of mothers with their infants were held, showing a very satisfactory result and fine healthy children.

Sixteen pupils have been trained and fourteen are now in training.

Note by Medical Officer.—Three cases of hæmorrhagica neonatorum: all recovered with serum treatment. Ten premature infants born alive at seven and a half and eight months: all did well. Eight babies readmitted for malnutrition: all discharged recovered, and digesting their food satisfactorily. The large number of albuminurias (forty) is very unusual, and the two eclamptics were of the acutest type. The absence of all sepsis and sapræmia except those cases to be accounted for is most satisfactory, and the Matron and nurses are much to be congratulated. There has not been a case of sapræmia in the Hospital. It is noticeable that the number of forceps cases has been much reduced since the use of pituitrin.

St. Helens Hospital, Auckland.

During the year 202 cases were confined: 199 children born alive, and ten still-births. There was one maternal death, three deaths of infants; the causes are given in the adjoined table. There were also attended 152 outside cases, in which occurred no deaths of mothers nor of infants.

The Hospital appears during the last year to have quite regained its place in the confidence of the people. Many new patients have entered, and the old ones still continue to come in. No progress has been made with the projected new building which is so badly needed. The adjoining section has not been purchased, and owing to the war nothing further has been done. In the meantime it is necessary to send special obstetric operations, such as Cæsarean sections, to the General Hospital.

Fifteen pupils have been trained and twelve are now in training.

There has been no change in the staff.

The demand for vacancies for midwifery-training keeps up in all the State hospitals, and it is recognized that an excellent practical experience is gained.

Note by Medical Officer.—The year has been on the whole a quiet but successful one. The one maternal death was almost moribund on admission. There were more venereal cases than usual, four syphilitics and five with acute gonorrhœa. There were two cases of gonorrhœa (ophthalmia). Both the Matron and Sub-Matron worked well and harmoniously. The Sub-Matron, Miss Broadley, had a rather serious breakdown towards the end of 1914, but after a good period of sick-leave she has returned to work quite strong and well able to cope with her rather responsible and arduous duties. The pupil-nurses did well in their examinations. Fifteen nurses sat for their examinations during the year and fifteen passed, there being no failures. Nurse C. S. S. McLean was equal first for the Dominion in the December examination. There would have been two Cæsarean sections to report during the year, but owing to the lack of proper operating-theatre facilities I had to transfer them to the District Hospital for operation. Needless to say, I am looking forward to the time when this hospital will be properly equipped.—TRACY R. INGLIS, M.B., Ch.B.

St. Helens Hospital, Christchurch.

During the year 212 cases were confined: 204 children born alive and eight still-births.

There was one maternal death, seven deaths of infants; the causes are given in the adjoined table. There were also attended eighty-three outside cases. No deaths of mothers and no deaths of infants.

I regret to state that the new building for this Hospital has not been commenced. Shortly after the war started it was decided that the building should go on, as it was badly needed, and would also provide work. The plans are now completed and tenders called, and it is hoped to start work shortly.

Dr. Irving is still in charge, with Miss Cameron as Matron and Miss Newman as Sub-Matron.

Twelve pupils have been trained; eleven are now in training.

It is recognized by the medical profession, and so stated at the annual meeting of the B.M.A., that midwifery nursing has been revolutionized since the institution of the St. Helens Hospitals, which in all the centres provide a most satisfactory course of training.

St. Helens Hospital, Dunedin.

During the year 177 cases were confined. 175 children born alive and four still-births. There were no maternal deaths; five deaths of infants; the causes are given in the adjoined table. There were also attended eighty-four outside cases. No deaths of mothers; no deaths of infants.

The work of this Hospital has gone steadily on.

Projected additions, more especially a Nurses' Home, have been abandoned on account of the war, although really urgently needed.

Ten pupils have been trained; ten are now in training. The staff remains the same.

Note by the Medical Officer.—Complications among the babies: One had enlarged thyroid; one had a sixth finger projecting from first interphalangeal joint of little finger; one had laryngeal spasm. There was an epidemic of benign pemphigus, which affected about eight children. There were seventeen babies born prematurely from two weeks to two months; six of these were three sets of twins; four of the prematures died. We had two precipitate labours; one case of phlegmasia; one acute hysteria bordering on mania; three were treated beforehand for eczema and two for pruritis.

H. MACLEAN, Assistant Inspector.

TE WAIKATO SANATORIUM.

The Medical Superintendent, Te Waikato Sanatorium (Dr. Bernstein), reports as follows:—

The patients treated during the year numbered 190; patients discharged during the year numbered 119. Of the discharged patients forty-six made a very considerable improvement and were fit to go to work again. The rest were not really suitable cases for a sanatorium, the disease being too advanced. Fifty-two of them, however, were much relieved and felt well, but will only continue to feel well so long as they are allowed to take life easily. Some have returned to work against advice. Twenty-one made only slight improvement, and ten patients died.

Of course, these results cannot be compared with those of sanatoria who carefully select their cases. Nobody has been refused admission during the past year, although it is regrettable so many advanced cases are still sent here. Many of these advanced cases should have been treated apart from the sanatorium cases proper. They are practically kept in bed, and are best treated in wards. They do not require separate shelters, as this makes it more lonely for them and the administration very difficult. It is important, therefore, that the proper policy of the institution be defined. If the institution is to be kept as a sanatorium proper, and the patients selected from the standpoint that they can be got fit for work again, the buildings are satisfactory, except that extra wards near the main building should be built to accommodate the male patients at the beginning of their treatment, when they may be confined to bed. If it is intended that advanced cases be treated, then still further large wards quite separate from the others are required.

For an illness like tuberculosis, that requires prolonged treatment, distance from home for a sanatorium case is no objection—in fact, it is an advantage—because it is advisable for patients not to see too much of their relatives. But for really advanced cases it is natural that if they have friends or relatives they should be near them. For the intermediate cases a stay in the Sanatorium will be of great educative value in teaching them how to live a proper life and to be no danger to the community.

I have previously pointed out it is of great importance that a sanatorium should not be too small. The larger the sanatorium, within limits, the more efficient is the treatment, and, of course, the more economical.

In the past year the institution has been put in a thorough state of repair, of which it was badly in need. Every part has been painted and the structure is now sound. The number of available beds has been increased by making use of other buildings and the erection of a new shelter. The number of occupied beds has been greater than before, and the male beds have been practically full throughout the year.

Financially the year has been better than previous ones. In spite of the unusually large expenditure for maintenance, due to the extensive repairs and painting this year, and the increase of equipment and stock, which was at a low ebb, the cost has been considerably reduced both absolutely and still more per bed, and this, together with the fact that the receipts from fees and farm have increased, has made the net cost to the Government over £1,600 less than in the previous year. (The statement of receipts and expenditure is sent separately.)

The farm and grounds have been greatly improved, much new land being opened up. A new orchard has been planted. There has been a good supply of fruit, vegetables, and eggs throughout the year, and all the mutton is killed on the estate, and our own pigs are killed for ham and bacon. The swamp at the foot of the farm has been thoroughly drained, and in the coming spring there will be sufficient good pasture for a dairy herd to supply all the milk for the Sanatorium.

I am very pleased to report the friendly spirit to the place manifested by so many medical practitioners throughout the Dominion sending cases for an opinion. This co-operation of the profession is steadily increasing and will be an important factor in quelling the disease.

It appears to me that patients are becoming less afraid to come to the Sanatorium, though great fear exists. When it is the practice to send patients at the first suspicions of the disease there will be some hopes of greater benefits.

Most of the patients also keep in touch with me either by letter from themselves or through their doctor, or come direct to report themselves. This I have previously stated is important, for thus might relapses be detected and quickly treated before becoming advanced.

Practically every patient who has left before being advised to do so has returned for further treatment, sadder and wiser. They generally feel so well that they think they are fit for work before they really are. This spirit is also steadily improving, and patients are being more and more guided by advice, and consequently receive more permanent benefit.

To keep in better touch with patients I would suggest that facilities for examining them be provided in several big centres where one might also come into more personal consultations with the practitioners.

There is now great need of some provision for after-care of the patients.

I am pleased to report that the staff have now settled down to the new conditions, and there have been very few changes—fewer than in any previous year.

It is a pleasure to report that Dr. E. E. Roberts still maintains his connection with the institution as consulting physician.

ALFRED BERNSTEIN,
Medical Superintendent.

APPENDICES.

APPENDIX I.—PUBLIC HEALTH.

A. LOCAL VITAL STATISTICS.

The statistics dealing with births and deaths, the deaths and death-rates from infectious disease, are those of the Registrar-General, and deal only with the City of Auckland and the seven surrounding boroughs—Birkenhead, Devonport, Mount Albert, Mount Eden, Newmarket, Northcote, and Takapuna.

POPULATION.

The mean population for the year is taken to be—

Auckland City	58,983
Suburban boroughs	37,655

The population of Greater Auckland as at 31st December, 1914, is given by the Registrar-General as 116,712, but with the Borough of Onehunga, which is essentially a part of Greater Auckland, 121,714.

BIRTH-RATE.

Per 1,000 of
Mean Population.

Auckland City	23.94
Auckland and suburban boroughs	24.78

The average birth-rate for the years 1904–13 are—

Auckland City	29.26
Auckland and suburban boroughs	27.63

Owing to the domicile of parents of children born in cities being ascertained from and including 1913, and births allocated accordingly, no proper comparison can be made with previous years. The only interest such comparison can have is to show that the apparently heavy city birth-rates in former years were the result of the inclusion of the births in the cities of the children of country residents.

DEATH-RATE.

Per 1,000 of
Mean Population.

Auckland City	10.43
Auckland and suburban boroughs	9.42

The average death-rate for the years 1904–13 are—

Auckland City	12.15
Auckland and suburban boroughs	10.27

NATURAL INCREASE OF POPULATION.

	Births.	Deaths.	Natural Increase.	Increase per 1,000 of Mean Population.
Auckland City	1,412	615	797	13.5
Suburban boroughs	983	295	688	18.3
Auckland and suburban boroughs	2,395	910	1,485	15.4

The increase for ten years (Auckland and suburban boroughs) are—

1904	19.60	1909	18.28
1905	17.36	1910	16.78
1906	17.32	1911	16.32
1907	16.03	1912	19.90
1908	18.07	1913	19.60

INFANT MORTALITY.

In Auckland and suburban boroughs—

Deaths of infants under 1 year were	138
Deaths of infants between 1 and 5 years	53
Deaths of children, under 1 year per 100 births	5.76

CAUSES OF DEATH.

Zymotic Diseases.

The deaths in Auckland and suburban boroughs	Deaths.
Diarrhœal diseases	47
Diphtheria	10
Enteric fever	5
Influenza	4
Whooping-cough	4
Puerperal septicæmia	4
Other zymotic diseases	5
Measles	7
	86

Cancer.

Auckland City and suburban boroughs	88
For the previous five years,—	
1909	58
1910	44
1911	51
1912	67
1913	82

Phthisis and other Tubercular Diseases.

Auckland City and suburban boroughs	71
For the previous five years,—	
1909	58
1910	44
1911	51
1912	56
1913	65

B. GENERAL REPORT OF THE DISTRICT HEALTH OFFICERS FOR THE YEAR 1914.

AUCKLAND HEALTH DISTRICT.—REPORT BY DISTRICT HEALTH OFFICER (DR. MAKGILL).

I have the honour to present the fourteenth annual report for the Auckland Health District.

The two most important features of the past year's work have been the eradication of the small-pox epidemic from the province, and the solution of the problem regarding the disposal of nightsoil in the suburbs of Auckland. These two matters with their endless side-issues occupied the chief part of our attention during the first six months of the year. The remarkably dry winter resulted in a continuous series of typhoid outbreaks among the Natives during the winter and spring months, and, together with various military sanitary matters with which our Department was associated following the outbreak of war, kept the office busy for the latter half of the year.

Through his appointment under the Tongan Government we lost the services of Dr. Monk in the autumn, and his place was taken by Dr. Hughes, who was transferred from the Education Department.

With the departure of the Expeditionary Forces we lost the services of Mr. Shera, our Chief Clerk, and Mr. Grieve, Inspector for Auckland, who volunteered for active service.

During the latter five months of the year I was engaged on military service with the Coastal Defence Force, but by courtesy of the Officer Commanding, Colonel Patterson, I was able to attend at the office during the day.

Attached hereto are appendices relating to infectious disease, Native sanitation, the enforcement of the Food and Drugs Regulations, and sanitary inspections.

R. H. MAKGILL, M.D., D.P.H. (Camb.).

WELLINGTON-HAWKE'S BAY-NELSON-MARLBOROUGH DISTRICT.—REPORT BY DISTRICT HEALTH OFFICER (DR. FINCH).

I have the honour to submit the following report for this district for the year ending the 31st December, 1914.

I took charge of this district at the beginning of April.

The work this year has been considerably different from last year, inasmuch as there has been no such incident as an outbreak of smallpox, which increases to a considerable extent the work of the District Health Officer and Inspectors, and interferes considerably with the ordinary routine work. There has consequently been more opportunity this year for paying more attention to the routine work of sanitary inspection in the district and to the administration of the Sale of Food and Drugs Act.

Inspections have been made and reports furnished on all the water-supplies of local authorities in the district, and where necessary samples have been taken for analysis. This was found advisable, as there was not in many cases any record of any of the water-supplies of local authorities. Very few of the water-supplies are subject to possibilities of pollution in the ordinary way from human sources, and consequently the few water-supplies which do run some risk in this way can be given more attention to.

The hotels throughout the district were thoroughly inspected, and in many cases considerable alterations and improvements were ordered by the Licensing Committee on the recommendations of this Department.

The Inspectors have also had more time and opportunity to give to the administration of the Sale of Food and Drugs Act. Four hundred and seventy-one milk samples were taken throughout the district, and more particularly of the Wellington City supply, and as a result there were forty-four prosecutions. The fines and costs in these cases totalled £427. This amount is probably a very small percentage of the illicit profit that is made by the dishonest members of the milk trade.

Attached hereto are appendices.

H. E. FINCH, M.B. (Oxon.), D.P.H. (Camb.).

CANTERBURY AND WEST COAST HEALTH DISTRICT.—REPORT BY DISTRICT OFFICER (DR. CHESSON).

I have the honour to submit my annual report for the above district for the year ending the 31st December, 1914.

Although I had been paying visits to this district and had generally supervised the work thereof during the absence of Dr. Finch, I did not relinquish my duties in Wellington and permanently take up my residence in Christchurch until the 1st April. Since then I have been permanently quartered here.

In September the district offices were moved from their old unsuitable quarters in Hereford Street into more commodious and satisfactory offices in the old Provincial Building, a change which was eminently satisfactory from every point of view.

Much additional work has been put on to the district office in connection with the regulations under the Sale of Food and Drugs Act, and considerable attention has been given to this branch of the work during the year.

The outbreak of war and the training of contingents for the Expeditionary Forces by the Defence Department necessitated the establishment of a military camp at Christchurch, and this in the first instance was situated on the Addington Show-grounds, it only being anticipated that the men would be there for a few days. Considerable delay, however, occurred in the despatch of the Canterbury Contingent, and it was deemed advisable, after a visit to the camp, to recommend the selection of another site, owing to a number of men being placed on this comparatively small ground under military camp conditions with no proper sanitary conveniences suitable for such a large number of persons in a crowded district. Although the camp was conducted on the best military lines, and every care taken by the Defence authorities, it was feared that insanitary conditions would soon make themselves evident. The military authorities moved the camp to the Trotting Club's ground at Sockburn, which, being farther removed from close settlement, and being a much more extensive site, proved in every way satisfactory both from the military and the public-health standpoint.

The garrisoning of the forts at Lyttelton and the drafting of a large number of men to the various Defence stations on Lyttelton Harbour also brought to light certain insanitary conditions at those places, and at the request of the military authorities I visited the barracks, forts, and other places, and made recommendations to the Defence Department for the improvement of sanitation, which were practically all given immediate effect to.

An outbreak of diphtheria at the New Brighton School necessitated a special inspection of that institution, and it was found that the outbreak was confined to the infants' class, the accommodation for which was most inadequate. The matter was duly reported on, and increased accommodation was provided during the school holidays.

Cases of infectious disease at the St. Albans School and the Normal School also brought to light insanitary conditions existing in those institutions. These were likewise dealt with by the Education Board.

A special visit was made to the Chatham Islands at the request of the Public Service Commissioners, for the purpose of holding an inquiry, report of which has been duly forwarded. This visit necessitated an absence of close on three weeks from Christchurch. With regard to public-health matters in the Chatham Islands there is nothing special to report. Though little attention is given to sanitary matters, which are in a most primitive state owing to the sparseness of the population, no ill effects are evidenced, and the health of the community seems to be fairly satisfactory.

The resignation of Dr. Champtaloup threw the administration of the entire Otago District into this district for some months, and the Buller Hospital Board's district was also added. The appointment of Dr. Sydney Smith to Dunedin in December, however, relieved me of the southern portion—i.e., all south of the Waitaki River. This district now comprises Canterbury (North Canterbury, Ashburton, and South Canterbury), and the whole of the West Coast (Buller, Inangahua, Grey, and Westland).

Visits to the various parts of the district were made during the year, the places receiving special attention being Lyttelton, New Brighton, Sumner, Ashburton, Timaru, Waimate, Rangiora, Westport, Reefton, Greymouth, Hokitika, and Blackball.

Attached hereto are appendices, being tables and data on the following matters: Notifiable infectious disease, dangerous infectious disease, provision for infectious disease, sanitary conditions of district, sanitary conditions of Maoris, sanitary inspections, offensive trades, insanitary buildings, by-laws, legal proceedings, quarantine, disinfection of oversea goods, Immigration Restriction Act, Midwives Act, and Sale of Food and Drugs Act.

HERBERT CHESSON, M.R.C.S. (Eng.), L.R.C.P., D.P.H. (Lond.).

OTAGO AND SOUTHLAND HEALTH DISTRICT.—REPORT BY DISTRICT HEALTH OFFICER (DR. CHESSON).

I have the honour to submit my annual report for the above district for the year ending the 31st December, 1914.

Many changes have been made in the administration of this district during the year. Formerly Waitaki, Maniototo, Vincent, Southland, Wallace, and Fiord formed part of the Canterbury District, Otago being a separate district worked from Dunedin. In May Dr. Champtaloup resigned his position as District Health Officer, and the above-named Hospital Boards districts were included in the Otago Health District, and for a time were administered from Head Office, with Inspector Cameron supervising the work locally, pending the arrival of the newly appointed District Health Officer for that district.

It having been found advisable, however, to attach Dr. Smith to Head Office to assist Dr. Frengley during the absence of Dr. Valintine, the entire district was again attached to the Canterbury District for administrative purposes, and I made fortnightly visits to Dunedin for the purpose of dealing with affairs locally. Dr. Sydney Smith took over the district, however, in the latter part of December.

I attach herewith appendices, being tables and data on the following matters: Notifiable infectious diseases, sanitary inspections, offensive trades, insanitary buildings, by-laws, legal proceedings, quarantine, disinfection of oversea goods, Immigration Restriction Act, Midwives Act, and Sale of Foods and Drugs Act.

Attached hereto is Dr. Champtaloup's report for the Bacteriological and Public Health Laboratory, and Mr. Napier's report from the Public Health Analytical Laboratory.

HERBERT CHESSON, M.R.C.S. (Eng.), L.R.C.P., D.P.H. (Lond.).

C. APPENDICES TO THE REPORTS OF THE DISTRICT HEALTH OFFICERS FOR THE YEAR 1914.

(1.) INFECTIOUS DISEASES.

The diseases declared to be infectious diseases in the meaning of the Public Health Act, and consequently notifiable, are as follows: Scarlet fever, scarlatina, diphtheria, enteric fever, tuberculosis, puerperal fever (including milk-fever, sapræmia, acute sepsis, septicæmia), plague, smallpox, leprosy, cholera, actinomycosis, hydatids, beriberi, blood-poisoning, cerebro-spinal meningitis (including cerebro-spinal fever, cerebral typhus, spotted fever, petechial fever, malignant purpuric fever), poliomyelitis, typhus fever, chicken-pox.

The following table shows the number of cases of infectious disease notified throughout the Dominion:—

Nature of Disease.	Health District.				Total.
	Auckland.	Wellington, Hawke's Bay, Marlborough, and Nelson.	Canterbury, and Westland.	Otago. and Southland.	
Scarlet fever	109	536	521	340	1,506
Diphtheria	379	350	255	111	1,095
Enteric fever	537	269	34	19	859
Tuberculosis	245	307	235	170	957
Blood-poisoning	65	55	16	26	162
Chicken-pox	513	370	147	93	1,123
Smallpox	63	..	..	..	63
Poliomyelitis, cerebro-spinal meningitis, &c.	14	37	83	134	268
Totals	1,925	1,924	1,291	893	6,033

The following table shows the more prevalent infectious diseases in hospital districts during the year ended 31st December, 1914 :—

Health District.	Hospital District.	Scarlet Fever.	Diph- theria.	Enteric Fever.	Tuber- culosis.	Blood- poisoning.	Chicken- pox.	Smallpox.	Infantile Paralysis, &c.	Total.
Auckland ..	Bay of Islands ..	2	14	67	17	2	9	4	1	116
	Marsden-Kaipara ..	5	11	19	6	2	65	2	..	110
	Auckland ..	69	228	104	176	54	331	1	2	965
	Waikato ..	22	69	217	26	4	66	2	7	413
	Thames ..	2	32	44	11	1	30	..	..	120
	Coromandel ..	2	5	1	2	..	..	..	..	10
	Waihi ..	..	15	3	2	1	6	..	2	29
	Bay of Plenty ..	7	5	82	6	1	6	54	2	163
Wellington, Hawke's Bay, Nelson, and Marlborough	Cook ..	4	4	84	13	2	5	..	3	115
	Waiapu ..	3	2	25	3	..	..	..	..	33
	Wairoa ..	1	5	4	26	1	2	..	..	39
	Hawke's Bay ..	46	13	16	34	7	25	..	1	142
	Waipawa ..	20	6	2	1	3	..	..	..	32
	Taranaki ..	22	6	16	8	4	..	..	..	56
	Stratford ..	28	..	2	3	2	3	..	5	43
	Hawera ..	37	3	9	7	2	15	..	..	73
	Patea ..	1	2	20	2	2	9	..	..	36
	Wanganui ..	40	88	51	43	5	..	..	..	227
	Palmerston North ..	53	59	4	18	4	42	..	10	196
	Wellington ..	222	85	25	111	12	194	..	9	658
	Wairarapa ..	30	31	2	13	5	48	..	3	132
	Picton ..	2	..	1	5	..	25	..	..	33
	Wairau ..	13	2	..	4	..	2	..	..	21
	Nelson ..	14	44	8	16	6	..	..	6	94
North Canterbury and Westland	Buller ..	11	7	..	..	..	7	..	..	25
	Westland ..	12	..	..	1	..	..	..	..	13
	Inangahua ..	9	7	..	15	..	..	..	..	31
	Grey ..	132	8	3	1	..	2	..	1	147
	North Canterbury ..	285	149	14	183	13	61	..	68	773
	Ashburton ..	23	4	4	14	1	21	..	1	68
	South Canterbury ..	49	80	13	21	2	56	..	13	234
Otago and Southland	Waitaki ..	15	1	..	20	2	13	..	13	64
	Wallace and Fiord ..	21	14	1	7	2	2	..	9	56
	Vincent ..	18	..	..	3	1	4	..	4	30
	Maniototo] ..	1	1	1	1	..	5	..	4	13
	Southland ..	85	55	3	32	6	13	..	19	213
	Otago ..	200	40	14	107	15	56	..	85	517
Totals ..		1,506	1,095	859	957	162	1,123	63	268	6,033

SCARLET FEVER.

The District Health Officer, Auckland reports :—

The cases notified from the health district during the last five years are—

1910	994	1913	203
1911	367	1914	109
1912	235		

The epidemic which occurred in 1910 has now lost its influence, and the case rate has returned to the normal. As in the previous year, the cases have been mostly in the city and suburbs, with but a few scattered cases in the country.

The District Health Officer, Wellington, reports :—

The cases notified from the health district during the last five years are—

1910	495	1913	760
1911	1,061	1914	536
1912	644		

This shows a slight decrease in the total number. In the Wellington City there were 163 cases, as compared with 235 cases in 1913.

The District Health Officer, Christchurch, reports :—

There has been a considerable increase in the number of cases reported as compared with last year—viz., 521 as against 302—but this was owing to an outbreak in the West Coast districts, where in some localities, owing to laxity in notifications, the disease obtained a hold before measures could be taken to check its spread, and several cases in North Canterbury were distinctly traceable to infection from the west.

That the disease did not spread more freely in the Canterbury districts is attributable solely to the efficiency of the measures taken therein by the Boards and their Inspectors.

DIPHTHERIA.

The District Health Officer, Auckland, reports :—

The cases notified from the health district during the last five years are—

1910	..	..	..	257	1913	..	..	..	247
1911	..	..	..	223	1914	..	..	..	379
1912	..	..	..	260					

The increased case rate referred to in the two previous reports shows no sign of abatement, the colder months being responsible for the heavier returns. Auckland City and suburbs, and Thames and Waihi Boroughs are the districts principally affected. The city shows 66 cases fairly evenly distributed throughout the year, and at no time was there any definite epidemic. In the suburbs it is interesting to note the effect of drainage. Thus Grey Lynn, with its system of slop-water drainage, escapes with 5 cases, while Mount Eden, which is notorious for its absence of sewers, has 32 cases. Mount Albert, which has only a small area sewered, contributed 29 cases, while Onehunga, which has almost completed its drainage system, yields but 8 cases. In Newmarket, which is completely sewered, no cases occurred. Similarly in the country towns the Boroughs of Thames and Waihi, which are quite unsewered, show 15 each, while the well-drained boroughs of Cambridge and Te Aroha had but 2 cases in each.

It might have been hoped that the dry season would have shown a decrease rather than the marked increase in this disease which occurred this year. That the dry spell which began in August had some influence is evident from the drop from 46 and 61 cases notified in June and July to 35 and 30 cases in August and September. But it is disappointing that this disease should not show any tendency to diminish. The distribution shows that this is probably due to the rapid increase of population not being counterbalanced by an improvement in sanitary measures commensurate with the increased needs of a more crowded population.

The mortality in the city and suburbs is 10.

The District Health Officer, Wellington, reports :—

The cases notified from the health district during the last five years are—

1910	..	..	..	341	1913	..	..	..	254
1911	..	..	..	322	1914	..	..	..	350
1912	..	..	..	283					

These figures show that diphtheria has been more prevalent this year. The disease has, on the whole, been of a mild type.

The District Health Officer, Christchurch, reports :—

This disease is endemic in the district, but an outbreak in Timaru assumed the character of an epidemic in the months of May, June, and July, 44 cases having occurred in the borough and immediate neighbourhood, sorely taxing the available hospital accommodation. No special local cause could be assigned to the outbreak, which was distributed over the whole of the borough, but several of the cases were traced to infection from others, and it is reasonable to suppose that carrier cases were responsible for its spread. It would seem that stricter measures should be adopted for more effective isolation of this disease, and the principle of two successive negative swabs being insisted on in all cases before release from isolation, as is done in the North Canterbury Hospital District.

Several cases also occurred late in the year at New Brighton, but these were practically confined to the pupils in the infant classes of the school, the accommodation for which was grossly inadequate, resulting in considerable overcrowding.

ENTERIC FEVER.

The District Health Officer, Auckland, reports :—

The cases notified from the health district during the last five years are—

1910	..	..	..	197	1913	..	..	..	412
1911	..	..	..	346	1914	..	..	..	537
1912	..	..	..	252					

Again the province as a whole shows a high return for enteric fever. Yet Auckland City (30 cases) and suburbs (17 cases) show an unusually low case rate, Mount Eden with 11 cases being the least satisfactory. One suburban outbreak, amounting in all to 20 cases, occurred in the autumn, and was of some interest, in that it was traced to the eating of oysters exposed to sewage-pollution. The oyster-beds affected were those at Mangere, in close proximity to the bridge. So definite was the evidence that persons eating these oysters were being attacked that the Marine Department consented to place notice-boards at the affected parts warning persons against the dangers. The beds were not officially open for use, so that those taking the oysters were committing an illegal act, and the knowledge of this made them very reticent when asked as to whether they had taken oysters at this place. However,

sufficient evidence was obtained to demonstrate the danger, and as even the warning-boards failed to keep off poachers, it was finally decided to destroy the oyster-beds as far as possible—at least, those nearest the road, which offered the most temptation to passers-by. Experiments with various chemicals were not satisfactory, so finally resource was had to destruction by means of a hammer—a tedious business, which occupied some time. The ready co-operation in this matter of Mr. Ridings, Collector of Customs, who controls the oyster-beds, deserves grateful acknowledgment. The mortality within the city and suburbs was 5 cases.

The Native races are again chiefly responsible for the increased number of country cases—Bay of Islands, Thames, Rotorua, Tauranga, Waitomo, and Whakatane Counties have been conspicuous for outbreaks of enteric amongst Natives. Of the 507 cases reported, more than 250 are recognizable as of Maoris or half-castes.

The exemption of Rotorua County, noticed in last report, no longer holds good—the town and county being this year affected to the extent of 71 cases, chiefly amongst the Native population. Of these, only 4 occurred in the town, but many of the settlements round the lakes suffered severely, especially in the spring.

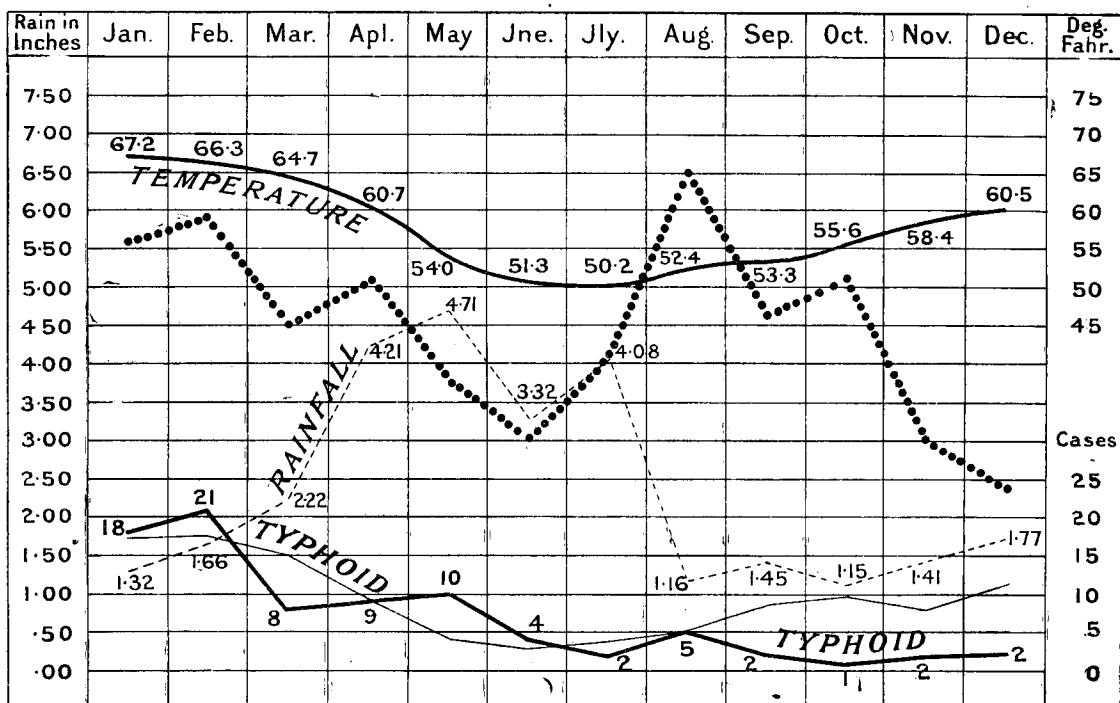
As in former years, many of the severest outbreaks among Maoris occurred in winter and spring, and probably are due to the normal water-supplies being cut off by a shortage of rain. Thus we find at Whakatane 15 cases among Natives in July and 10 in August: 18 cases in Kaitiaki County in August and 20 cases in Rotorua County in September. The rainfall, which usually increases steadily each month from March to July, this year began to decrease in June, and fell to a very low point in August and the succeeding months. Correspondingly the typhoid incidence, which was on the decrease till June, rose in July to a total of 41 cases, and reached its maximum in August with 65 cases. After October the severity of the epidemic appeared to have spent itself, and the numbers notified in November and December—30 and 24 cases—were not much above normal in spite of the continued dry weather.

The accompanying chart and table show the relation of temperature, rainfall, and typhoid so far as Auckland and the suburban boroughs and road districts are concerned. It shows that in this area, with a good permanent water-supply, the typhoid rate was not affected by the dry weather in the latter half of the year, in marked contrast to the effect on the country returns, which practically are wholly influenced by the spread among the Natives. Indeed, in the city and suburban districts, with a water-supply free from danger, the influence of temperature is much more apparent than that of rainfall. Thus, though the weather was very dry during the last six months of the year, the mean temperature was considerably below the average, and the typhoid rate correspondingly low. A possible explanation is that typhoid incidence, when not due to water-supply, is greatly the result of localized insanitary conditions, such as areas of soil polluted by cesspools and defective drains. The activity of the organisms in such areas would be retarded by low temperatures and by excessive dryness of the soil, while warm moist weather would encourage their growth.

Typhoid Fever.

Auckland and Suburban Boroughs and Road Districts.

Typhoid, Temperature, and Rainfall Curves.



The thin typhoid line exhibits the average monthly cases during five years 1909-13. The line formed by the large dots exhibits the total number of cases of typhoid recorded within the whole health district during 1914.

Rainfall and Temperature, 1914. (Auckland Museum Observations.)

				Rainfall Average.		Mean Temperature Average.	
				1914.	Previous 45 Years.	1914.	Previous 45 Years.
				In.	In.	Deg.	Deg.
January	..	..	..	1.32	2.77	67.2	67.1
February	..	..	..	1.66	3.18	66.3	67.1
March	..	..	..	2.22	2.78	64.7	64.3
April	..	..	..	4.21	3.05	60.7	61.7
May	..	..	..	4.71	4.50	54.0	57.2
June	..	..	..	3.32	4.53	51.3	53.8
July	..	..	..	4.08	4.95	50.2	52.3
August	..	..	..	1.16	4.19	52.4	53.0
September	..	..	..	1.45	3.42	53.3	54.8
October	..	..	..	1.15	3.42	55.6	57.0
November	..	..	..	1.41	3.09	58.4	60.4
December	..	..	..	1.77	2.62	60.5	62.4
Totals and means				28.46	42.50	57.9	59.3

The District Health Officer, Wellington, reports :—

The number of cases notified in the health district during the last five years were—

1910	..	..	..	278	1913	..	..	..	420
1911	..	..	..	357	1914	..	..	..	269
1912	..	..	..	288					

This shows a fair decrease. There was a small epidemic among the Maoris at Patea in July and August. In September at Raetihi there were about 20 cases among the Maoris. A small hospital was established at Raetihi by the Wanganui Hospital Board, and all the cases were nursed there.

There were 84 cases of typhoid notified in the Cook Hospital District, 54 of which occurred in the Gisborne Borough.

The installation of drains and water-supply might have been expected to have had a more pronounced effect on the number of cases of enteric fever in Gisborne Borough. The result, however, is not so disappointing as at first appears. Of the 54 cases, 23 occurred in the first two months of the year, and what cases have occurred since, at the time of writing it does not appear as if Gisborne is going to have another epidemic, there having been only two cases in January and two in February, 1915.

The District Health Officer, Christchurch, reports :—

Although there were more cases reported (34) in the district this year than there were last year (19) in the same area, there was no suggestion of an epidemic, the cases being widely distributed both in locality and time, and call for no special comment.

TUBERCULOSIS.

The District Health Officer, Auckland, reports :—

The cases notified from the health district during the last five years are—

1909	..	..	..	137	1913	..	..	..	246
1911	..	..	..	177	1914	..	..	..	245
1912	..	..	..	240					

The District Health Officer, Wellington, reports :—

The number of cases notified from the health district during the last five years are—

1910	..	..	..	199	1913	..	..	..	341
1911	..	..	..	278	1914	..	..	..	307
1912	..	..	..	347					

The District Health Officer, Christchurch, reports :—

Slightly fewer cases were brought under notice, the figures being 235 for this year, as against 262 last. This, however, is of no special significance. The establishment of the King George V Coronation Memorial Hospital for advanced cases makes provision for the reception of a number of the more infective type, and should greatly assist the crusade against the spread of this disease by the removal of such cases from homes where the conditions are not favourable for effective precautions being taken.

BLOOD-POISONING.

The District Health Officer, Auckland, reports :—

The cases notified from the health district during the last five years are—

1910	..	..	..	52	1913	..	..	..	67
1911	..	..	..	55	1914	..	..	..	65
1912	..	..	..	70					

The 65 cases in 1914 were—

Puerperal fever	..	..	34	|	Tetanus	..	..	1
Erysipelas	..	..	17	|	Ophthalmia neonatorum	..	..	1
Hydatids	..	..	1	|	Unclassified	..	..	11

The apparent increase in puerperal cases is probably a result of more definite methods of classification. Formerly many of the cases were reported as septicaemia.

The District Health Officer, Wellington, reports :—

Of the 55 cases of blood-poisoning, 34 were cases of puerperal sepsis.

CHICKEN-POX.

The District Health Officer, Auckland, reports :—

The cases notified from the health district are—1914, 513.

The disease was made notifiable in July, 1913, and to the end of that year 492 cases were notified. The monthly average in 1914 was 43, and the average was exceeded in the months of April, June, July, August, September, and December, the first two months of the year having the smallest number of cases 14 and 11 respectively. A very widespread epidemic occurred in the city and suburbs in August, and some of the cases were sufficiently severe to make us somewhat anxious in view of the recent smallpox outbreak. Several cases were kept under close observation, and on recovery were vaccinated when good reactions were obtained. Later it was found that the disease affected vaccinated and unvaccinated children equally, so that the question was no longer in doubt. An outbreak at Kamo was made the subject of a special visit by the District Health Officer, and suspiciously severe cases were investigated at Huntly, Mangonui, Whangarei, and Dairy Flat.

The District Health Officer, Wellington, reports :—

Three hundred and seventy cases were notified during the year. As probably only a small number were attended by a medical practitioner, it is evident that chicken-pox has been fairly prevalent throughout the district.

The District Health Officer, Christchurch, reports :—

The number of these cases reported cannot be taken as the actual number that have occurred, as only a percentage of these are ever seen by medical men, and the others are either not recognized by the parents or, if recognized, the parents do not know of their obligation to report them. As long, however, as the more pronounced and adult cases are brought under notice, the principal aim of notification of this disease is attained, as it would only be in such cases that the suspicion of possible smallpox would arise.

INFANTILE PARALYSIS.

The District Health Officer, Wellington, reports :—

The inquiries made into these cases cannot be said to have been complete enough for compiling any accurate statistics. The following statements are based mainly on Inspectors' reports, and the replies of medical practitioners to a circular asking for particular information on their cases. In some cases I was able to see the patients, or interview the medical practitioner.

Notification.—49 cases were notified ; of these, 29 were true cases ; of the remaining 20, half were certainly not true cases, and the other half were exceedingly doubtful. The 29 true cases only will be considered.

Geographical Distribution.—22 cases occurred in the district served by the railway-line between New Plymouth and Otaki, the remaining 7 cases being scattered throughout the district.

Age-distribution.—Under two years, 6 ; two to five years, 9 ; five to ten years, 5 ; ten to twenty years, 6 ; twenty to thirty years, 3.

Duration of Epidemic.—From February to September, and the large majority of the cases occurring in March and April.

Type.—There was the usual variation of type. In comparing these cases with accounts of other epidemics the cases in which there was very little paralysis and cases in which complete or almost complete recovery took place, seemed more numerous than were to be expected. On the other hand there were a few severe and 4 fatal cases. The 4 fatal cases were aged four, nineteen, twenty-one, and twenty-two respectively. These cases seem to have resembled clinically influenza followed by Landry's paralysis, but as they occurred during the epidemic, and similar cases are described as *fulminant* cases in accounts of other epidemics, they were probably due to infection by the same organism. To call these cases anterior poliomyelitis acuta or infantile paralysis is evidently absurd. It is evidently necessary to bear in mind that this disease is not confined to children, and the lesion is not always confined to the cells of the anterior horn of the spinal cord.

Methods adopted to prevent spread of Disease.—A circular was sent to all medical practitioners. Inspectors were instructed to make special inquiries in reference to exposure to dust or hay, prevalence of flies, &c. Isolation of patient was enforced as far as possible, and disinfection of the premises carried out. In absence of much precise knowledge of the causes of the spread of this disease, one cannot derive much satisfaction from using these sorts of weapons to check its spread.

(2.) DANGEROUS INFECTIOUS DISEASES.

SMALLPOX.

The District Health Officer, Auckland, reports:—

The notifications of cases of smallpox were, with the exception of one case in September, confined to the first four months of the year, thus:—

January	..	..	..	..	..	47
February	..	..	..	..	..	3
March	..	..	..	..	..	11
April	..	..	..	..	..	1

62

The case notified in September was in a European living at Whangarei, but subsequent investigation did not confirm the diagnosis. Of the 62 cases, only 3 were in Europeans and the majority of the cases were in outlying Native settlements in the Whakatane County.

At the beginning of the year we had to deal with the spread of smallpox among the Natives living in the most out-of-the-way parts of the province. Thus the settlements in the Urewera country and round Waima and Taupo were suffering, the disease having spread from the outbreak occurring in Te Teko in December, 1913. Similarly, in the north the disease kept reappearing in the outlying settlements round Hokianga. Practically no cases were found in any of the populous centres except one European in Auckland and one in Whangarei, notified in January, and one in Huntly in February.

The bulk of the Natives and many of the Europeans in accessible districts had been vaccinated, but the outlying parts had in a great measure escaped the general vaccination campaign of the previous year, and thus constituted a danger. The problem was to get at these more or less nomadic Natives, so as to confer the protection of vaccination upon them. The restrictions as to Natives travelling were therefore continued, and only those who could present certificates from certain appointed officers were allowed to travel. As an extra precaution, certificates enabling the Natives to visit Auckland only held good for the journey to the city, and they had to attend at this office for a permit to enable them to leave again. In this way a very large number of Natives unsuccessfully vaccinated earlier were attended to a second time at this office. Valuable service was rendered by Messrs. Webb, Sharp, Connor, Short, Blaubaum, and Whitten, senior medical students, who travelled into the most outlying districts of the east coast during the earlier months of the year, vaccinating all Natives they could reach. Later when these gentlemen had to return to their classes at Dunedin three medical officers were appointed, to each of whom a special district was allotted, their instructions being to visit every Native settlement or house and attend any gatherings of Natives and vaccinate any not already protected. In this way about one thousand Natives were vaccinated. Dr. Duncan had the district north of Auckland, Dr. Newnham Davis the eastern division, where the majority of the unvaccinated Natives were found, and Dr. Childs the western counties. This service was continued till October, when it was found that few, if any, Natives remained unvaccinated, and coincidentally the epidemic had been stamped out. Valuable assistance in attaining this end was received from the nurses engaged in Native work and the nurses attached to the Native missions.

Advantage was taken of Land Court meetings and other Native gatherings, such as that at the ceremony at Orakau, when all Natives present were examined by our Inspectors, and any not already showing good marks were vaccinated. At first such Native gatherings were discouraged, but later in the year, when we felt that we had a majority of the Natives protected, we were glad to take advantage of these opportunities to test the thoroughness of our work. The restrictions against Natives travelling were finally removed in July—three months after the last authentic case of smallpox had been reported. The eradication of the disease was due to universal vaccination of the susceptible Native race and to nothing else, for with these people living in out-of-the-way places isolation was impossible, while one could not claim that any marked improvement had been effected in the sanitary conditions under which they live, as the subsequent widespread outbreaks of typhoid only too plainly demonstrated. The leading Natives recognized the value of vaccination, and gave us every assistance in their power, and in this connection special mention should be made of the help received from the chief Rua, whose people in the Southern Whakatane district were chiefly affected by the epidemic.

This campaign entailed a very great amount of work not only in the field, but also at the office, where the correspondence regarding the issue of Native permits alone filled several large files in a few months. The accountancy work also which resulted was very heavy, especially the aftermath of vaccination fees and other claims of medical men and Hospital Boards following the epidemic of the previous year. The work of our nurses and Inspectors in the field was most arduous, but in spite of all obstacles was carried through cheerfully and conscientiously and with a minimum of friction. The medical officers engaged in vaccination-work deserve much praise for the thoroughness with which they scoured their respective districts for unprotected Natives, overcoming the difficulties of lack of roads and absence of civilized accommodation. The work of Dr. Newnham Davis in the wholly uncivilized Urewera country is especially worthy of mention in this respect.

It is satisfactory to feel that our weakest point—the susceptible Native race—is now protected from the invasion of smallpox for a good many years to come.

PLAGUE.

The District Health Officer, Auckland, reports:—

Again it is satisfactory to report absence of plague in man or rodents. Examination of rats has been conducted regularly, 10,659 having been examined, of which 4,752 have been submitted to bacteriological examination and found to be free from *bacillus pestis*.

The District Health Officer, Wellington, reports no cases of dangerous infectious diseases in his district.

LEPROSY.

The District Health Officer, Christchurch, reports :—

No fresh cases have been admitted to the lazarette on Quail Island, there being still 2 active cases and the recovered Maori who continues to act as nurse to the blind case. Swabs and specimens have been taken from the Maori for bacteriological examination, but always with a negative result.

Mr. Mackenzie still continues as caretaker, and contributes largely by his tact and kindness to secure the comparative happiness of these patients.

(3.) PROVISION FOR INFECTIOUS DISEASE.

The District Health Officer, Auckland, reports :—

Point Chevalier Hospital.—Strenuous efforts have been made by persons owning land in the vicinity of this hospital to have it removed. It is, however, most conveniently situated, and no better site is offered. Wherever such an institution might be placed there would be a local outcry against it, and the Hospital Board would only find itself out of the frying-pan into the fire. The value of this institution was well demonstrated during the smallpox outbreak in 1913. During the past year only one case—a white patient—was treated there. As a sort of compromise with local prejudice, the Hospital Board has opened the grounds for use as a public park while the hospital is not occupied.

Provision for Tuberculosis Cases.—The Auckland Board has made no move towards providing more open-air treatment for consumptives. Most of their cases are sent to the Government sanatorium at Cambridge. A conference at which Dr. Bernstein and the District Health Officer attended was held in August, when the Board represented that financial conditions prevented them launching out to any extent. They were advised as a temporary measure to increase the accommodation at the Costley Home, while the Sanatorium would accept such of their cases as were fit to travel. The proposal to build at the Tamaki site has been abandoned.

The typhoid outbreaks, being chiefly among Maoris in outlying places, has been dealt with largely by erecting temporary camps. Thus no special strain has been thrown on the hospital accommodation except at Rotorua, where the hospital accommodation had to be supplemented by tents.

Prosecution for resisting the nurse and Inspector in removing cases to hospital had to be undertaken in one case at Taumarunui against some Natives.

In one instance a patient suffering from tuberculosis—a married woman, who was mentally affected—was forcibly removed to the Costley open-air wards, as she was endangering the health of the children.

The District Health Officer, Wellington, reports :—

Gisborne.—The hospital is now completed, and there is provision for 14 cases of infectious disease.

Stratford.—A new infectious hospital, containing 6 beds, has been completed.

Napier.—The provision of a new up-to-date infectious-diseases hospital in place of the one on the present site, which is inadequate, is now under consideration. Four shelters and better kitchen and sanitary accommodation have been provided for chronic consumptives.

Patea.—The Board has decided to erect additional accommodation, which will be available, if required, for isolation of cases of infectious diseases.

Masterton.—The erection of a few shelters for chronic consumptives has been considered by the Board.

The District Health Officer, Christchurch, reports :—

Tuberculosis.—The King George V Coronation Memorial Hospital was opened on the 3rd June, providing accommodation for 44 patients in more advanced stages than would be suitable for treatment in the Sanatorium shelters. Since its opening some cases admitted have so far improved as to warrant their transfer to the Sanatorium.

Scarlet Fever.—A ward for 19 beds was erected at Bottle Lake Hospital, replacing some old shelters. The permanent accommodation provides now for 41 cases, but in emergency a further 12 cases can be comfortably housed. New nurses' quarters have also been erected at this hospital.

The want of special accommodation for infectious diseases was felt in Greymouth, when an epidemic of scarlet fever necessitated accommodation being found for 18 cases at one time. This was met by utilizing wards in the Old Peoples' Home, necessitating the housing of the women in the General Hospital and crowding the men into fewer rooms. Fortunately this did not last long.

(4.) SANITARY CONDITION OF DISTRICTS.

The District Health Officer, Auckland, reports :—

Auckland City.

The inclusion of Grey Lynn Borough in the city area during the past year marks an important advance in the Greater Auckland movement which one must regard as being essentially of sanitary importance. The attitude of the Grey Lynn Borough Council was always satisfactory from the Health Officer's point of view, but with the extension of the sewerage system to that district the need for their existence as a separate body ceased to exist, and their merger with the city will lead to the simplification of sanitary administration, as well as having economic advantages.

The efforts on the part of the more parochial element to frustrate the inclusion of the Remuera Road District also led to an inquiry, at which the Health Officer gave evidence showing the various sanitary disabilities which this suburb suffered. Remuera will join the city during the present year, and it is hoped Epsom, Newmarket, and Eden Terrace will follow immediately.

The health of the city has remained satisfactory during the year, the returns of typhoid cases being especially satisfactory considering the prevalence of this disease elsewhere.

The opening of the outfall sewerage works early in the year has now made it possible to connect all houses in the city, including Grey Lynn, to the new system, and will result in greatly diminishing the number of houses served by the old insanitary nightsoil system.

The opening of Myers's Park led to the demolition of a number of more or less dilapidated buildings, and provides a new air-space in the centre of the older parts of the town.

Drainage and Nightsoil Disposal.

Auckland Suburbs.—Among the local bodies not yet incorporated in the city the most important sanitary advance during the year has been the final solution of the old-standing difficulty as to the disposal of nightsoil. This was not accomplished without a struggle, and the work of the Auckland Health Office during the first five months of 1914 is largely the history of the effort to overcome local jealousy and ignorant opposition over this question. We were fortunate in having the whole-hearted support of Mr. O. Nicholson, Mayor of Mount Eden, without whom the final solution would not have been reached.

In the annual report for last year I mentioned the final collapse of the old system, and the failure of the clauses in the Lands Empowering Bill which were intended to temporarily settle the difficulty. Under this Act a temporary depot in a suitable locality was secured in the Avondale Road District. There was much active opposition on the part of the residents at first, and, indeed, police assistance had to be secured on several occasions. However, the opposition was overcome, and it was hoped the site would serve till the completion of the outfall sewerage works, and the connection thereto of the Arch Hill sewer enabled us to adopt the flushing-tank system of disposal. Unfortunately it was found that the area in use was under the jurisdiction of the Public Trustee, and, as his approval could not be obtained, the occupation of the site under the Lands Empowering Act became illegal, necessitating the removal elsewhere of the depot. After further efforts to secure the only really suitable site in the district—that in the Mount Roskill area—a site less suitable, but not actually leading to danger to the surroundings, was found after much effort at Mount Albert, and here the work was carried on under the most stringent conditions as to preventing nuisance till the flushing-tank was completed. At the request of the residents the nightsoil was trenched in instead of being ploughed, and the surface, after covering, was treated with lime and kerosene—all at the expense of the Department.

Meantime the securing of a site for the flushing-tank was meeting with infinite difficulty. The approval of the Drainage Board had first to be secured to the general principle, but fortunately we had the support of their engineer. We were naturally limited to the sewer-line, which fortunately ran through an unpopulated area. But though the position was suitable, we had to face the sentimental objection of the local authority in whose district the site lay, and the natural opposition of the owners of neighbouring properties. After much heartburning and many somewhat heated meetings these matters were settled and the work taken in hand, the Government advancing the money in the form of a loan to the various local bodies concerned.

The flushing-tank system came into use on the 19th July, and after a few preliminary difficulties as to working were overcome, involving the provision of a larger outfall pipe, has continued in regular use without causing the smallest nuisance or inconvenience to the neighbourhood, save for the unavoidable noise of the carts as they pass along the roads. The disposal of the nightsoil is now effected in a wholly sanitary manner, and the long distance which the carts formerly had to traverse to the depot is avoided. The carts, too, can be effectively washed in the tank and leave the depot clean. The floor of the building is covered in concrete, and can be readily flushed down, while the tank itself empties completely. It would be difficult on entering the building later in the day to detect any trace of the purpose for which it is constructed. A plentiful flush of water and a little care on the part of the man in charge ensures a very satisfactory result. No blockage in the sewer has occurred, the only noticeable result being a periodic increase in the work required to be performed by the screening apparatus at the outfall works.

The One-tree Hill district is now sewered in the most populous areas, but as a nightsoil service is still necessary in the outlying parts, the Board has secured a suitable site and erected a flushing-tank similar in most respects to that at Mount Albert, which is now working well.

The work of the Drainage Board has progressed so far that it is now possible in many suburban areas to provide sewerage connections. The opening of the Arch Hill sewer has thus provided for a large part of Mount Albert, Eden Terrace, part of Point Chevalier, and the more urgent parts of the Mount Eden Borough. It is for these bodies now to take advantage of the facilities offered, and this is being done in Eden Terrace, which in the course of the present year will be able to abandon the nightsoil service entirely. In Mount Eden the need for drainage in the clay areas is especially felt, and it is satisfactory to know that the Council proposes to secure a loan at an early date for sewerage purposes.

On the eastern side, as already mentioned, the One-tree Hill Board has sewered the more needful parts of the district, which sewerage-work is progressing at Epsom. The greater part of Remuera also has sewerage connections. In Ellerslie the Town Board are laying sewers, but a difficulty has arisen in regard to the disposal of the sewage. The Board proposed to discharge into the septic tank provided for the group of workers' cottages, and so into the porous scoria rock, but we have objected to this on the ground that it would endanger the Onehunga and Manukau water-supplies. The sewage can be carried to junction with the Onehunga reticulation, or, if treated in the septic tank, must be sufficiently treated in aerating-beds before discharging into the subsoil.

Northcote.—A drainage scheme has been prepared and permission obtained from the Harbour Board to discharge the treated effluent into the harbour.

Avondale.—Proposals for a drainage scheme have been discussed, but little can be done till the Drainage Board's sewer is completed through Arch Hill.

Onehunga.—Some uneasiness was caused as regards the discharge of sewage into the harbour by the occurrence of typhoid among those taking oysters from the beds on the Mangere foreshore. There was some reason to think that earlier in the year the system of discharging the tank only at the middle of ebb tide was not always observed, and this in certain states of the wind may have affected the Mangere beaches. However, any such deficiencies were remedied, and when in November I made a thorough inspection of the foreshores in the neighbourhood of the outfall no trace of pollution could be seen. The large body of sea-water passing out with the ebb tide is evidently sufficient to secure the oxidation of the sewage.

Water-supply.

The spread of population in the suburbs has caused a heavy increase in the demands on the water-supplies, and this year the exceptionally dry season has shown that the limit of safety has been reached. Further auxiliary supplies must be sought for those districts now dependent on the local springs at Onehunga, and those which draw their supply from Lake Takapuna.

A severe outbreak of gastro-enteritis in the Onehunga-Ellerslie district was obviously due to some infection in the water-supply, and a series of analyses of the water confirmed this suspicion. The source of contamination was probably the result of disturbance of the ground in the neighbourhood of the springs in an attempt to seek a more plentiful water-supply. Fortunately the contamination was only temporary, and the water rapidly returned to its normal state of purity. These springs generally show a high degree of purity, but a comparison of the analyses extending back some twelve years shows a steady increase in the proportion of nitrates. This is doubtless due to remote contamination from the ever-increasing population of the catchment-area, and indicates that apart from its insufficiency this source of supply cannot be relied upon for an indefinite period. A number of townships along the Main Trunk line from Ellerslie southwards to Papakura must now be regarded as suburban areas, and are increasing in population steadily. All these places will soon require water-supplies, and as there are available good catchment-areas in the Maungatawhiri and Hunia Ranges, it would seem reasonable to establish a Water-supply Board dealing with all these places and the south-eastern parts of Eden County by means of one comprehensive scheme. Some move in this direction is contemplated by the Onehunga Borough Council and the Manukau Water Board. The Mount Roskill Board have a small scheme in hand whereby they can supplement the supply at present drawn from the Manukau Trust. The source is from a deep well in the volcanic area from which the water is pumped to a reservoir. This will augment the former supply sufficiently for immediate needs. In the Epsom Road District there is a small but populous area wholly without water-supply, and, owing to the dry weather, the householders here suffered severely. The Epsom Board derive their supply from the Manukau Trust, but owing to some extraordinary oversight this area is excluded from the operations of that Trust, and the Road Board are unable to evolve any solution for what appears to be a simple enough situation to those not versed in the Gilbertian difficulties which arise from the absurd system of local government by small and wholly inefficient bodies. This case forms one of the many anomalies which will be removed by the inclusion of these suburban Boards in a Greater Auckland.

On the northern side of the harbour the four suburban boroughs had to exercise strict economy in the matter of water-supply, as the level of Lake Takapuna fell to a point dangerously near that at which the pressure of the sea will overcome that in the lake. These bodies are rather unfortunately situated in the matter of water-supply, since there is no satisfactory auxiliary source within reasonable distance, and an expensive scheme must soon be faced. The Devonport Borough Council are trying to make use of one of the natural reservoirs of water often found beneath the volcanic hills round Auckland. This may afford a temporary relief, but cannot be regarded as a permanent solution of the difficulty, as the supply must be very limited, and, though pure at present, is much exposed to possibilities of contamination. A comprehensive scheme shared between the boroughs—or, better still, handled by a large body resulting from the union of these boroughs—is much required.

Disposal of Refuse.

The disposal of household refuse in the more populous suburbs is an ever-increasing source of difficulty. At Mount Eden, for example, an old crater is used as a dump, and, though precautions are taken, it is a very unsatisfactory method of dealing with the waste from ten thousand persons. Newmarket was making use of one of the harbour reclamations, and thereby created a very serious nuisance. At Devonport a gully is being reclaimed with refuse, with the result that the neighbouring houses are infested with rats, and often in warm, moist weather are seriously inconvenienced by foul odours. In many of the suburbs no effort is made to deal with refuse. One of the benefits which will follow the inclusion of the suburbs in a greater city will be that modern methods of dealing with refuse can be introduced.

Sanitary Conditions of Country Districts.

In the country towns generally there has been distinct progress in sanitary matters during the year, and many of these places are models so far as their needs and means go of sanitary virtue. Te Aroha and Cambridge, as usual, coming first in this respect.

Many townships are handicapped from the first by having developed from a group of hastily constructed shanties needlessly crowded together. One of the principal sanitary needs of New Zealand is legislation which will prevent this overcrowding of buildings in rural districts. Later, when a town emerges from the primary chaos the local authority recognizes the need for some restriction in this direction, and building by-laws are passed limiting the subdivision of areas. But these towns are

generally handicapped by a nucleus of the original shacks and shanties from which it developed. A very simple remedy would be the addition of a clause to the Public Health Act wherein it is laid down that, pending the adoption by the local authority of by-laws dealing with overcrowding, it shall not be lawful to erect a dwelling on any section of land of less area than a quarter of an acre, and the definition of "dwelling" should include hotels and residential shops. This clause would afford a most necessary basis for any later town-planning scheme. The reports of the country Inspectors show that already the Plumbers' Registration Act is bearing good fruit in the country districts by securing a better standard of sanitary plumbing.

Thames.—There is good reason to hope that the handicap from which the Thames has suffered—the division of authority as regards water-supply—will soon be removed. A Commission is now dealing with the matter. When this matter is decided a sewerage scheme will be possible. Great improvements have been effected in the Karaka Creek by the formation of a concrete invert.

The Thames-Paeroa district generally has suffered less this year from typhoid than formerly, a result doubtless of the improved sanitary conditions which Inspector Franklin reports have been established among the Natives.

Hamilton.—This town is growing to such an extent that it should get rid of the last relics of its primitive days, and adopt the usages which become necessary where large numbers of persons live in one community. A municipal abattoir is one of its chief needs, and the removal from the midst of the town of the cattle sale-yards. With the object of improving the sanitary condition of these yards the expenditure of £1,500 was proposed, and much indignation was aroused by my protesting against this course on the ground that the yards should be removed altogether instead of patching them up. It is to be feared that the supposed interests of a few persons have received undue consideration in this matter.

Te Awamutu.—This town is now a borough. During the year an excellent water-supply from Pirongia Mountain was introduced, thus paving the way to general progress and improvement.

Te Kuiti.—The borough sewers have been extended, and a weekly system of refuse-removal in the central part of the town introduced.

Taumarunui.—Here also a refuse-removal scheme has been adopted.

Rotorua.—The septic-tank system of treatment for the town sewage has hitherto been somewhat primitive. This year it has been overhauled and placed on a more modern basis, especially as regards the filtration-beds. The keeping of poultry in small yards has given rise to much trouble. Unfortunately, the Tourist Department did not see fit to adopt the by-laws dealing with this matter suggested by the Health Department. The adoption of by-laws limiting the area for building-sections to a quarter of an acre in unsewered parts of the town has been productive of beneficial results.

Tauranga.—The sewerage scheme for the town is now almost complete. The sewage received treatment in a septic tank, the effluent from which is discharged into the sea at ebb tide only.

Whangarei.—The extension of the sewer to the southern end of the town is an important sanitary advance. The difficulty as regards the disposal of the Hospital drainage will now be removed. The question of refuse-disposal has engaged some attention, and a suitable spot for dumping this has been secured. It is desirable, however, that a destructor should be provided as soon as possible.

Dargaville.—A suitable water-supply has been secured, and will before long be installed, unfortunately at considerable expense for a town of this size. A scheme for drainage has been prepared and approved by the Department.

Helensville.—The work of connecting the houses to the sewer is proceeding. Unfortunately the Board have been very lax in the matter of by-laws, with the result that much of the plumbing-work is extremely bad and will require to be removed, thus causing the unfortunate householder needless expense.

The District Health Officer, Wellington, reports:—

Wellington.—At Miramar good progress has been made in connection with premises with the drainage scheme. Nearly all the houses on the flat portion of the borough have been connected.

Onslow.—No progress has yet been made with the water-supply and drainage scheme.

Petone.—Good progress is being made with the drainage-works, the contract of which is rendered difficult owing to the high level of the subsoil water and the sandy nature of the ground. The estimated cost has been exceeded.

Upper Hutt.—The water-supply has now been completed, and about half the houses are connected. The porous nature of the subsoil facilitates the disposal of drainage.

Martinborough.—The water-supply has now been completed.

Greytown.—The ratepayers have approved by a two-thirds majority of a loan for the installation of a water-supply and a drainage scheme; estimated cost, £20,000. Material has been ordered from England.

Masterton.—The water-supply mains are in course of duplication.

Eketahuna.—An extension of the drainage scheme is under consideration.

Havelock North.—The new water-supply is nearing completion. Some 3½ miles of drainage has been laid. It is expected that these works will be completed early this year.

Gisborne.—The drainage from the freezing-works which flowed into the Tarahura River has now been piped direct to the sea. Considerable defects were found in the methods adopted for the laying of the house drains, and in certain points in connection with plumbing-work. It is not easy to find out how this condition of things arose, but in order to put an end to it I offered to send Inspector Middleton there for one month at the expense of the Council, in order to put all such details of construction of all sanitary work on a proper basis. This offer the Borough Council accepted. It is, unfortunately, only another instance of a local body spending large sums of money—in this case £200,000—

and the main object, the improvement of the public health, being liable to be defeated by lack of attention to details, or trying to economize in the expense of supervision.

New Plymouth.—Inspector Feilder made a detailed report on Mangotuka Stream. The extension of the drainage system is the only way to improve matters.

Patea.—A water-supply is to be installed, the water being obtained from an artesian well.

Waverley.—Owing to faulty construction, the dam for the water-supply burst. The water-supply scheme has therefore been delayed. The poll for the drainage scheme was defeated by 8 votes.

Wanganui.—The outlets of the sewers are being improved by being carried out to low-water mark. The whole of the Aramoho district is now sewered, and Durie Hill is now being attended to. The rubbish-removal service is being improved, but will not be satisfactory until the Borough Council do the work themselves, and charge the cost to the rates instead of charging individuals.

Gonville.—Good progress is being made with the extension of the drainage scheme. As in the case of Petone, this work has been carried out under considerable difficulties in the way of shifting sand and subsoil water.

Mangaweka.—The work of connecting to the sewers is now in progress.

Taihape.—A sewerage system has been installed, but, as is often the case, property-owners have not in many cases connected their premises to the sewer. The Borough Council has compelled a few individuals to connect in cases where their attention has been drawn to the special need of it, but has not enforced connections as a routine practice, which obviously should be done.

Marton.—The water-supply has on several occasions been unsatisfactory. Analysis shows that the filtered water is sometimes little, if any, better than the unfiltered. This is probably due to the Bell filter not being used in the proper manner. Investigations are now being made to see if more scientific use can be made of this filter.

Feilding.—The Department has approved, under the provisions of section 66, of the expenditure of £1,200 on the extension of the sewerage system.

The District Health Officer, Christchurch, reports:—

Christchurch.—The City of Christchurch has been enlarged by including the district of North Richmond, formerly part of the Waimairi County, and it has been found necessary, as this is outside the Drainage Board's area, to recommend the City Council to adopt special by-laws for that area.

The water-supply of the city has been increased by the sinking of additional wells.

Great improvements have taken place in the general condition of the city during the past year.

It would seem desirable from a sanitary point of view if the boundaries of the city were still further increased to include Opawa and the small boroughs adjoining the present boundary of the city.

Heathcote County.—A drainage scheme has been installed in the Cashmere Riding, dealing with the sewerage from the Hills suburb of Christchurch. Owing to the hilly nature of the district it was necessary to divide this into two separate systems, each of which discharged through a septic tank and filter-beds on the banks of the Heathcote River.

The scheme has not yet been sufficiently long in operation to judge whether the system of disposal will be satisfactory or otherwise.

Lyttelton.—Improvements have been made in the stabling-accommodation in the town by the erection of new brick stables with up-to-date stabling and proper manure-receptacles.

The water-supply has been improved so as to secure an efficient service to houses on the higher levels.

Complaint was made on two or three occasions of the dumping of spittoons into the harbour from the passengers' cabins of the ferry-steamers, but since action has been taken in this matter the trouble has ceased. Considerable pollution unavoidably takes place by the discharge from the sanitary conveniences of the vessels in the harbour into the comparatively confined area of the harbour, where there is no current to take the matter out to sea. A small sewer from the town also continues to discharge into this harbour.

New Brighton Borough.—Public conveniences, which were badly needed, have been erected. Some trouble was caused by the defective state of the side channels, but these are now being put into proper order, they having been defectively laid in the first instance, and many of the culverts being not of sufficient size to carry away the waste water which is permitted to discharge therein for want of better means of disposal. It will be necessary for this borough to soon consider the question of a proper drainage system.

Rangiora Borough.—The saleyards, which are situated in the business portion of the town, became a nuisance during the winter months, from want of being properly paved and drained. After considerable correspondence and discussion, the Saleyards Company are now taking the matter in hand of providing proper paving and drainage.

Owing to insufficient water-supply for the flushing of side channels these became very offensive. The Borough Council are now considering means to provide sufficient water for this purpose. I have also recommended the Borough Council to consider the question of a proper public water-supply.

Sumner.—A destructor has been erected to deal with the refuse of the borough.

It is intended as soon as possible to carry out an extension of the sewerage system, and include a pumping plant to enable the effluent to discharge at Sumner Head. Considerable nuisance was caused by the sewerage being washed on to the foreshore, but this was found to be due to the discharge of public conveniences into the effluent-pipe of the septic tank. Needless to say, action was taken to cut off this connection. At low water the end of the present effluent-pipe is exposed, and has been the cause of considerable complaints from residents at the south-eastern end of the borough. The Borough Council has been recommended to extend the present outfall into deeper water, as it will necessarily be some two or three years before the proposed new system can be put into operation.

Woolston Borough.—The condition of the Heathcote River owing to the discharge of trade wastes was brought under my notice by the Council, which have certainly grossly polluted what was once, I understand, a clear stream. The matter has been referred to the Drainage Board, who now have control of this river, with a view to establishing standards for trade wastes discharged therein. Condemnation notices were served with regard to two old premises. These, however, are still standing, though they are now in such a condition as to there being no chance of their being inhabited.

Ashburton Borough.—No progress has been made with regard to the proposed sewerage scheme for this borough. This work is badly needed to replace the existing pan system in the more densely populated portion of the town, where some nuisance has been caused by this system. Permits have been given for the erection of two septic tanks in the borough, but it is not desirable that many of these installations should be put in, and the permits for these two were only given after very careful consideration.

Ashburton County.—The sanitary condition generally is fairly satisfactory.

Timaru Borough.—Early in the year the northern sewer outfall discharging into the sea at the Dashing Rocks, near Smithfield, was completed, and the work of connecting the houses is being pushed on with. Portions, however, at both north and south ends of the borough are so situated that connections cannot be made into the existing sewers, and it will be necessary to install a pumping plant to deal with these areas. The work in connection with the southern portion is being gone on with.

Complaints have been made with regard to offensive odours being noticed in business premises in Stafford Street, due apparently to the condition of the old George Street sewer. Considerable improvement has been effected by the proper trapping of stormwater drains connected thereto, but there is no doubt the smell is largely accounted for by the discharge therein of the gasworks effluent. The Post Office also discharges into this old sewer, and, although the Borough Council has complained to the Post Office officials with regard to their failure to connect with the new system, nothing has so far been done. I understand, however, that it is proposed as soon as possible that a connection with the new sewer will be made.

The water-supply for the borough has been improved by the laying of larger mains during the year. The supply is drawn from Pareora River, and conveyed to a reservoir of sufficient capacity for fifty-seven days' supply at 30 gallons per head.

Refuse-removal is not satisfactory, and I think it would be better if the work was undertaken by the Council instead of being let to a contractor. At present the refuse is dumped over a cliff on to the foreshore about half a mile from the southern boundary of the borough, and some nuisance was caused thereby, and in consequence I made recommendations to the Borough Council for the better conduct of this depot.

Waimate.—All the houses in the present drainage area have been connected with the sewerage system, which seems to be working quite satisfactorily. An extension, however, of the system is urgently needed, and the Borough Council has the matter in hand. The water-supply is drawn from a creek in Kelso Bush, about four miles from the borough. It is conducted by gravitation to a concrete reservoir near the town, which has a capacity for an eleven-day supply at 30 gallons per head, with a pressure of 100 lb. to the square inch. All premises in the borough are connected to the water-supply.

Temuka.—Only a small area of this borough is sewered, and in this area connection has not been enforced, and consequently there is a condition of pan-closets being next door to premises connected with the sewer. The Borough Council has been recommended to enforce their by-laws with regard to connection with the sewered area. The outfall, however, is not satisfactory, and the question of extending the system and treating the effluent by means of a septic tank before discharging into the river is now being considered.

The borough has a high-pressure water-supply derived from the Waihi River, but all the premises have not been connected thereto.

Geraldine.—So far this borough has not gone in for a sewerage scheme, and there is consequently some pollution of watercourses running through the borough by discharge of waste water. A nuisance has arisen owing to the state in which these watercourses have been allowed to get into. The borough has been recommended to take measures to improve this condition. Other premises get rid of their waste water by discharge into soak-pits, and some septic tanks have been installed.

The borough has a high-pressure water-supply derived from the Waihi River, which is conveyed by an open race to the north end of the borough, and thence out to a reservoir, giving a pressure of 80 lb.

South Canterbury generally.—The sanitary conditions seem to be satisfactory.

Greymouth.—The general sanitary condition of this borough is by no means satisfactory, and there is little prospect of improvement until a new sewerage system is installed. Unfortunately, the local authorities on the West Coast do not seem to seriously consider the advantages of effectively carrying out their powers as sanitary authorities, and no assistance is given by the Greymouth Borough Council in connection with the demolition of insanitary buildings.

The water-supply of the borough is obtained from the Grey River, which is liable to considerable pollution, but so much money has been spent on this matter that it is hardly likely that any improvement will be effected for some time to come. A gravitation scheme could be obtained from what is known as the 10-Mile at an approximate cost of £30,000.

Blackball.—A scheme is under consideration by the Grey County Council for a sewerage scheme and water-supply for this township.

Cobden.—The Grey County Council has also under consideration a drainage scheme for this township.

Reefton.—The sanitary condition of this township continues to be fairly satisfactory.

Runanga.—The prospect of arranging for a sewerage scheme and water-supply, although badly required, is not great, but the Borough Council is now considering a nightsoil-removal system.

(5.) SANITARY CONDITION OF THE MAORIS.

The District Health Officer, Auckland, reports:—

The smallpox epidemic and the very widely diffused typhoid outbreaks among Natives have made the work of this branch exceptionally heavy. The number of smallpox cases dealt with was not great, but the method adopted—fortunately with great success—for stamping out the disease by means of universal vaccination entailed much detailed work, as shown in the section of this report dealing with smallpox.

Typhoid proved a much more difficult disease to combat. Some 250 cases are known to have occurred, and probably there were many others the existence of which, in accordance with Native custom, were concealed. At the following Native settlements outbreaks were dealt with:—

Tauranga	.. Judea	January.
Upper Wanganui	.. Taumarunui, Manunui, and Kakahi	January–October.
Mangonui	.. Sweetwater and Awanui Dis- trict	July–October.
	Mangonui	November–December.
Whakatane	.. Poroporo	April–July.
Whangaroa	.. Matauri Bay	May–June.
Lower Waikato	.. Kohunga	July.
Hokianga	.. Waima	September.
Bay of Islands	.. Matarawa	October.
	Kaikohe	April.
Rotorua ..	.. Rotoiti-Ngongotohi and Ohi- nemutu	July–December.
Matamata	.. Okoroire and Putaruru	November–December.

Thus the whole year round typhoid was epidemic. Eight temporary camps were established to deal with typhoid cases as follows:—

	Cases.	
Judea ..	5	Nurse Anderson.
Poroporo ..	10	„ North.
Manunui ..	5	„ Moore.
Kakahi ..	8	„ Moore.
Rawene ..	4	„ Byrn.
Kaikohe ..	4	„ Byrn.
Kohunga ..	6	„ Grigor.
Matauri Bay ..	5	„ Byrn.
Matarawa ..	20	Miss Bagley.

A camp hospital for the treatment of smallpox cases was established at Waimana in January, in charge of Nurse Taare.

A severe outbreak of measles accompanied with pneumonia occurred at Parenga in December.

As usual, a great deal of difficulty arose in getting the Natives to bring their sick into these camps, and still more when it was proposed to take the cases to general hospitals. This feeling was especially strong in the Taumarunui district, in which the Natives are particularly backward and ignorant. They even assaulted Nurse Moore on one occasion when the cases from the temporary camps at Manunui were being transferred to the Hamilton Hospital. The principal assailants contracted typhoid, and one of them subsequently died, so no legal action was taken in this instance; but two Natives who obstructed Inspector Calderwood were prosecuted and fined £1 5s. each.

The legislation requiring the registration of deaths among Natives is now in force, but permits of too much time elapsing between the death and the date of registration to be of any value for preventative purposes. A number of deaths probably are still unregistered.

Some apprehension was felt when recruiting for the Native Expeditionary Force began, owing to the spread of typhoid involving practically all Native settlements. A warning was issued, however, and the recruiting officers endeavoured to avoid drawing troops from the areas most in danger, and it served also to discourage Natives from crowding into the township.

Tohungaism is still widely practised, and often greatly hampers the work of the Department. Two cases were dealt with, both being Europeans. One, a Mrs. Hill, had for years practised exclusively among Maoris, and as a result certain cases of typhoid had not received proper attention. She was prosecuted under the Tohunga Suppression Act, and sentenced to six months imprisonment. The other case was that of a man named Hogg, who practised among the Natives in the Rotorua district and gave much trouble during the typhoid epidemics. He was prosecuted for representing himself to be a medical practitioner, and was fined £25 or given three months' imprisonment.

A good many changes and new appointments were made in the Native nursing staff during the year. Nurse McKinven, who succeeded Nurse Dawson, took up work in the Thames district, Nurse Moore was appointed to Upper Wanganui district, and Nurse Grigor to the Waikato district. Nurses Byrn, Taare, and Mataira resigned towards the end of the year, Nurse Ferguson taking up the work of the former at Bay of Islands in December. Nurse Stephenson's health unfortunately broke down in December, and Nurse Wright took her place at Rotorua. Nurse Grigor had the misfortune to contract first measles and then typhoid fever during the period she was dealing with the hospital camp at Kohunga, but fortunately made an excellent recovery.

The work performed by these nurses is often very trying, and, owing to the difficult conditions they have to nurse under, there is a certain amount of danger. They have to face long wearisome journeys, and often active opposition from the older type of Native. Even the younger and better educated Natives learn but slowly and uncertainly to adopt sanitary methods, so the nurses have

constant disappointments and difficulties. The patience and pluck they display in spite of all these disabilities is admirable, and has earned for them more recognition and support than they have hitherto received. It is satisfactory, however, to note that the Hospital Boards are beginning to appreciate the value of the work done. Agreements have been made with the Bay of Islands and Waikato Boards as to payment of their expenses, and the latter have provided a horse and equipment for the nurse stationed at Taumarunui. The Bay of Plenty Board have also provided a horse, and find it in paddocking, for the nurse at Tauranga.

The Thames Hospital Board have from the first given every support to the Native nurse, and this year have received a demonstration of the value of her services, for their district, despite the spread of typhoid generally among the Natives in the province, has been singularly free from the disease. At Rotorua, also, among the Natives living at Whakarewarewa there has been little disease—a result no doubt of the special supervision which has been exercised over this settlement during the past two or three years.

There are therefore sufficient signs of progress to warrant the Department in making every endeavour to encourage the Native nursing branch. More nurses are required, especially at Opotiki East, Hokianga, and in the Mangonui County, where conditions are especially bad. The Department also should recognize the discouraging conditions under which the nurses work, and could reasonably make further efforts to secure for them comfortable housing and means of transport.

A special word is due to Miss Bagley, on whom falls the chief burden of organizing this service. The establishment of eight or nine hospital camps during the year at short notice, and in more or less inaccessible places, is no small work, and speaks well for the system she has established.

The Inspectors in the various infected districts have throughout given loyal support and assistance to the nursing staff in establishing these camps. Should the need ever arise, our Army Medical Service would find the elements for a field hospital organization already well established and ready for service at a moment's notice in any part of the province.

The following medical officers have been appointed to attend Natives in their districts during the year :—

Dr. Phippen	..	..	..	..	..	..	Wellsford.
Dr. Latchmore	..	..	..	..	..	..	Taupo.
Dr. Macfarlane	..	..	..	..	..	..	Te Puke.
Dr. Smith	..	..	..	..	..	..	Rawene.

The District Health Officer, Wellington, reports :—

The largest typhoid epidemic of the year occurred at Raetihi. The Wanganui Board established a temporary hospital in the schoolhouse, to which all the cases were removed. There was a small epidemic among the Natives at Patea and a few cases in the Cook and Waiapu districts.

Nurse Cormack, Te Karaka, reports having visited 30 pas, inspecting and instructing, paying altogether 92 visits, attending 77 cases of sickness, including 3 confinements, and 23 sick babies, during the year nursing throughout 16 cases typhoid fever. Most of the pas show a decided improvement as regards general health.

Nurse Lewis, Otaki, was granted twelve months' leave on the 26th May to attend to private business in England. Advice has been received that she has gone to the war with one of the nursing divisions.

Nurse Te Au, who is relieving her, reports since the 26th May she has visited 13 pas, inspecting and instructing, paying 1,306 visits since she took over. She has attended 226 cases of illness, 3 confinements, 7 deaths. The general health in all pas has been exceptionally good.

The following extracts from Nurse Beetham's report on the work in Taranaki District are of more than ordinary interest, and may be taken as a sample of the effects that may be looked for from the establishment of Native nurses :—

"The total number of patients attended and advised during the year 1914 is 174.

"There was most sickness during the months of March and August, when the number of patients totalled 22 and 23 respectively. During June and July the number totalled 17 and 18, while in February, April, and October the number was down to 14.

"The greatest decrease in sickness proved to be in the months of May and December, the number of patients in the latter being 7 only.

"The year has proved remarkably free from epidemics, whooping-cough being the only persistent one; and though other epidemics have prevailed amongst the Europeans, the Natives have not been affected.

"The district has been free from enteric fever, though I believe one or two Native patients received treatment in the Hospital.

"Chest complications are most frequently met with, and demand, I suppose, half of one's time. There has been a great amount of sickness amongst infants and children. A great amount of time is devoted to this portion of the work, and instruction given to the relatives *re* correct management, &c.

"The people are most negligent in the artificial feeding of infants; the feeding of children is little better.

"The subject of diet is probably one of the most difficult things to instil into the Native mind, both in sickness and in health.

"It is difficult to give a correct estimate of the birth-rate; 17 totals the number that I have been able to record. Registration is now being steadily enforced, and will prove a great assistance in our work as well as elevating the race. It is only quite recently that compulsion has been resorted to in this Native district; consequently many objections and arguments are raised by the people as to the necessity of it.

"Obstetric nursing is greatly required. The people persist in adhering to their old customs, and, generally speaking, assistance is not sought till complications have arisen.

"I have recorded 16 deaths, 4 of that number being unattended by doctor or nurse. Seven were incurable cases.

"After three years' work in the district one notices many improvements. Though slowly, progress is undoubtedly being made as regards sanitation. We cannot hurry these people—'Taihoa' will for ever be their watchword.

"Three years ago Kate Marae Pa was the dirtiest and most neglected pa in my district. To-day I compare the two in my mind's eye, and the improvements, I consider, are remarkably good, taking all into consideration.

"Each year brings a greater decrease in the number of pa inhabitants. They are becoming more enlightened, and leaving the pas. They build their own little European cottages, and work far more independently and with greater zeal."

Nurse Walker, of the Waiapu district, has also some interesting remarks to make on her work. Unfortunately, the remarks she makes as regards the sly grog-selling are applicable to other districts besides Waiapu:—

"During the year I have noticed a general improvement in sanitation. Mostly all the Natives in this district have their houses built in the European style, and those that have not are fast pulling down their old whares and rebuilding in the modern style. They are slowly getting into the way of keeping their houses clean. Some are more easily taught than others. As a rule, they have very little furniture, just the bare necessities. Their bedding has almost a daily airing in the sunshine.

"Consumption is a prevalent disease among them. They have been instructed to use antiseptics, and to expectorate into tins, which are afterwards burned.

"Typhoid fever has been much less during the year, strict instructions have been given to them regarding precautions.

"It is, of course, hard to deal with their superstitions, which they seem to cling to, especially the older ones. The younger generation seem to be forgetting it. In spite of it all, I try to meet them as much as I feel is right.

"Most mothers breast-feed their infants, the majority of whom get on exceedingly well. Those that are obliged to feed them artificially are usually mothers suffering from consumption. The chief ailment has been diarrhoea, and sometimes gastric trouble.

"I find that cows' milk suits them better than patent foods. They are not careful enough in the preparation of patent foods.

"The children, on the whole, are in better health in summer than in winter. They enjoy the open air, and indulge freely in both sea and river bathing. The skin-diseases are less, proving that cleanliness and fresh air is a good tonic.

"A great trouble here, or perhaps the greatest, is the drink question. This is a prohibited district for the Natives, but the amount of sly grog-selling that goes on is simply appalling. Useless pakeha men make quite a big living in this way, selling drink at twice its value. The Natives take it to their homes, and men, women, and children partake of it freely and become intoxicated. At all Maori settlements they have sheds in which to store it. At every funeral, tangi, or entertainment of any kind the majority are drunk. Three different school-teachers have told me of their pupils being drunk after attending a tangi. One small child of about five was seen by a teacher to be drunk, and carrying a bottle of liquor. This sort of indulgence must surely be injuring their health. The Natives while in this state become very savage, and it is not the nicest thing for me to be going among them while they are in this state."

The District Health Officer, Christchurch, reports:—

Medical attendance on Natives in all the principal pas in the district has now been arranged for.

Tuberculosis seems prevalent amongst the race, and this is especially noticeable at Tuahiwi, where tuberculin treatment is still largely carried out.

Three special health tents have been provided for special cases in this pa, and more will be sent up should occasion demand.

Taken as a whole, the conditions under which the Natives live in the pas in this district are fairly satisfactory as compared with some of the districts in the North Island, although there is considerable room for improvement.

The appointment of a District Nurse for Maoris will no doubt greatly assist in improving the general conditions.

(6.) SANITARY INSPECTION.

The District Health Officer, Auckland, reports:—

In the earlier part of the year the work in connection with the smallpox epidemic kept the country Inspectors very busy, and later the continual outbreaks of typhoid among the Natives kept them working at high pressure.

The Hamilton Borough, having decided to employ an Inspector who could devote himself to borough work only, relieved Mr. Bennett of this part of the work, but we lost the services of Mr. Furness from our Auckland staff, as he was appointed to the Hamilton Inspectorship. To take his place in the Hospital Board work Mr. Wilkinson was selected.

The division of the Marsden-Kaipara Hospital Board into two independent Boards upset the arrangement as regards the employment of Mr. Shenton in that district. The Kaipara Hospital Board elected to employ an Inspector independently of the Health Department. Mr. Shenton was transferred to the permanent staff of the Department, and an arrangement was made with the Whangarei Board to pay a subsidy for his services in their district.

With the outbreak of war we lost Mr. Grieve's services from our departmental staff, as he joined the Expeditionary Force for foreign service. His special work in connection with the Sale of Food and Drugs Act has been taken over so far as possible by Mr. Shenton.

The following tables indicate the work done by the Inspectors during the year:—

SUMMARY OF SANITARY INSPECTIONS, CANTERBURY AND WEST COAST DISTRICT.

District.	Food-sellers' Premises.										Factories.				General.								Nuisances.						Plumbing-inspections.		Drains tested	
	Butchers.	Milk-shops.	Dairies.	Fishmongers.	Fruiters.	Food Auction-rooms.	Restaurants.	Ice-cream Hawkers.	Grocers.	Various.	Bakerhouses.	Laundries.	Butter-factories.	Various.	Dwellings.	Schools.	Hotels.	Boarding-houses.	Offensive Trades.	Septic Tanks.	Various.	Overcrowding.	Keeping of Animals.	Offensive Accumulations.	Various.	Inspected.	Abated.	New Work.	Old Work.	New Work in Feet.	Old Work in Feet.	
<i>North Canterbury</i> —																																
Total number inspected	165	13	8	62	6			12	72		17				808	16	93	7	17	31	22	5	23	80				48	12	2,768	247	
Number in which defects existed	60	2	3	30				6	2		5				106	4	7	1	2	5		2	14	36								
Number requiring requisitions under Public Health Act or local by-laws	5	2	2	1				1	1		3				88	2	3	1	1	5		2	9	28								
<i>Ashburton</i> —																																
Total number inspected	42			2					13		2				17	3	1			2			3				1					
Number in which defects existed	25			2																			2									
Number requiring requisitions under Public Health Act or local by-laws	2			1																												
<i>South Canterbury</i> —																																
Total number inspected	12		5	2	3				35		9				251	11	20	2	7	14	8		6	13		16	20	851		11,152	410	
Number in which defects existed	8										3				3		2			1			4	3								
Number requiring requisitions under Public Health Act or local by-laws	1														1		1						3	7								
<i>Inangahua</i> —																																
Total number inspected	19	4	18		1						6				179	6	18	10					4	17		21						
Number in which defects existed															12																	
Number requiring requisitions under Public Health Act or local by-laws															2																	
<i>Grey</i> —																																
Total number inspected	110	17	13	39	5	1	6				22	3			915	40	99	17	38	61			4	86		96				170		
Number in which defects existed	1										4				234	2	16			3			1									
Number requiring requisitions under Public Health Act or local by-laws															2								1									

Grey.—3 insanitary buildings pulled down; 1 insanitary bakehouse pulled down.

SUMMARY OF SANITARY INSPECTIONS, OTAGO AND SOUTHLAND DISTRICT.

District.	Food-sellers' Premises.								Factories.			General.							Nuisances.					Plumbing-inspections.		Drains tested.					
	Butchers.	Milk-shops.	Dairies.	Fishmongers.	Embalcers.	Food Auction-rooms.	Restaurants.	Ice-cream Hawkers.	Grocers.	Various.	Bakery-shops.	Laundries.	Butter-factories.	Various.	Dwellings.	Schools.	Hotels.	Boarding-houses.	Offensive Trades.	Septic Tanks.	Various.	Inspected.	Abated.	New Work.	Old Work.	New Work.	Old Work.	New Work.	Old Work.		
<i>Otago</i> —																															
Total number inspected ..	86	82	22	40	93	34	12	11	114	12	40	2	..	1	683	18	18	15	54	13	73	5	84	219	..	180	..	141	275	155	
Number in which defects existed ..	36	18	13	17	24	5	2	5	11	..	6	..	..	..	112	..	2	3	14	2	10	1	32	116	..	14	..	1	98	1
Number requiring requisitions under Public Health Act or local by-laws ..	8	9	13	..	1	..	..	4	1	..	4	..	..	..	79	..	..	1	5	2	10	..	17	91	..	8	..	..	80	..
<i>Southland</i> —																															
Total number inspected ..	16	2	12	1	1	..	1	..	1	..	21	..	..	..	267	12	9	..	1	1	15	..	3	21	3	20	18	1	12	590
Number in which defects existed ..	4	..	3	..	1	..	..	..	1	..	8	..	..	..	53	1	2	..	..	1	4	..	3	20	3	..	..	..	3	..
Number requiring requisitions under Public Health Act or local by-laws ..	4	..	3	..	1	..	..	..	1	..	6	..	..	..	53	..	2	..	..	..	..	..	3	18	3	..	..	..	..	..
<i>Wallace and Ford</i> —																															
Total number inspected ..	12	..	2	..	2	..	1	..	3	..	13	..	..	..	85	8	10	..	..	..	6	..	..	5	2	3	5	..	..	..
Number in which defects existed ..	5	..	1	..	..	..	..	..	1	..	6	..	..	..	15	..	4	..	..	..	4	..	..	5	2	2	..	..	..	..
Number requiring requisitions under Public Health Act or local by-laws ..	5	..	1	..	..	..	..	..	1	..	6	..	..	..	15	..	4	..	..	..	2	..	..	5	2	..	..	..	..	..
<i>Waitaki</i> —																															
Total number inspected ..	38	5	2	16	23	3	5	..	9	5	13	..	..	12	104	12	21	6	..	2	2	..	33	34	6	45	..	22	64	18
Number in which defects existed ..	16	1	..	8	8	1	1	..	1	1	5	3	22	1	3	1	1	15	14	1	44	..
Number requiring requisitions under Public Health Act or local by-laws ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	..	..	..	1	..	2	1	1	..	..	..	12	..
<i>Maniototo</i> —																															
Total number inspected ..	4	..	..	2	5	..	1	..	5	..	4	..	..	..	23	3	5	1	..	..	..	..	7	9	..	9	..	2	6	4
Number in which defects existed ..	2	..	..	1	3	..	..	..	1	..	1	..	..	..	3	..	1	..	..	..	..	..	5	5	..	..	..	..	6	..
Number requiring requisitions under Public Health Act or local by-laws ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
<i>Vincent</i> —																															
Total number inspected ..	12	..	..	2	8	..	..	..	13	..	12	..	..	..	72	6	13	3	..	..	4	..	22	26	..	14	..	5	..	4
Number in which defects existed ..	4	..	..	1	4	..	..	..	1	..	3	..	..	..	13	..	3	1	..	..	1	..	8	12	..	..	..	1	..	..
Number requiring requisitions under Public Health Act or local by-laws ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

Otago.—Houses pulled down, 68 ; houses repaired, 25. *Waitaki*.—Buildings repaired, 15. *Waitaki*.—Buildings repaired, 4. *Maniototo*.—Buildings pulled down, 1 ; buildings repaired, 3. *Vincent*.—Buildings pulled down, 2 ; buildings repaired, 4.

The District Health Officer, Wellington, reports :—

Inspector Middleton remains attached to the District Office as departmental Inspector for special sanitary work, more particularly for the administration of the Sale of Food and Drugs Act.

Wellington.—In addition to the Boroughs of Onslow and Levin, the Hutt County and the Upper Hutt Town Board have appointed the Hospital Board's Inspectors as Sanitary Inspectors for their respective districts.

Wairarapa.—Inspectors Cairns and Keay continue to act as Sanitary Inspectors for all the local authorities in the Hospital Board's district. In this district, therefore, the administration is on better lines and more complete than in other Hospital Board districts.

Hawke's Bay.—The Town Board of Havelock North is arranging with the Hospital Board for the services of Inspector Gardiner as Sanitary Inspector, more particularly in the inspection of drainage and plumbing-work in connection with the new drainage scheme which is now being installed.

Cook.—The newly formed Mangapapa Town Board is trying to arrange for the services of Inspector York. The Cook and Waikohu Counties had previously delegated their powers under the Health Act to the Hospital Board.

Wanganui.—Inspector Pargeter is in charge of the district for the purpose of infectious disease. As Inspector Wilson, who was stationed at Marton and was acting as Sanitary Inspector for some of the local bodies, has resigned his position as an officer of this Department, the Hospital Board is now considering the appointment of a second Inspector who will probably be stationed at Taihape. Many of the local bodies in the district will then probably avail themselves of the services of the Board's Inspectors as Sanitary Inspectors.

Patea.—Owing to the resignation of Inspector Wilson, who was acting as Inspector for this district, the Hawera and Stratford Boards have now agreed to let Inspector Gray act for the Patea Board on the same basis of contribution as was existing between the Hawera and Stratford Boards, and the Patea Board has also agreed to this.

Taranaki.—Inspector Feilder, who was temporarily appointed as Inspector, *vice* Inspector Kendall, who is acting as clerk of works for the new hospital, carried out his duties very satisfactorily until his resignation to take up a position in the Labour Department.

The Secretary of the Board has been appointed to act as temporary Inspector. This can hardly be considered a satisfactory arrangement, and the only excuse is its temporary nature.

Nelson.—The Nelson Borough arranged with the Board for the services of Inspector Coltman to assist in the sanitary inspections of the city. This should enable a large number of minor defects which have not been properly attended to for some time to be put right, and gradually a better standard of sanitation obtained in the city.

In other districts no change has been made in the carrying-out of sanitary inspection.

The District Health Officer, Christchurch, reports :—

The work of sanitary inspection has gone on as usual, there being no change in the inspecting staff of the Department or Hospital Boards.

INSPECTION OF HOTELS.

The District Health Officer, Wellington, reports :—

During the year 159 hotels were inspected and reported on by the Sanitary Inspectors. Extracts from these reports, with recommendations, were forwarded by me to the Licensing Committees. In several cases new drainage with modern sanitary fittings was ordered by the Licensing Bench. The recommendations of the Department have been given effect to in the large majority of cases. In a few cases adverse influences have been too strong for the recommendations of the Department to be given effect to. As the result of an important judgment of the Supreme Court, the following circular was sent to all Inspectors :—

"Doubt has frequently been expressed by Licensing Committees as to their powers to enforce the recommendations of Inspectors in regard to sanitary improvements, &c. The following summary of a case which went to the Supreme Court for decision is therefore of interest :—A.B., licensee of the — Hotel, was on the 25th May asked to carry out the following improvements : A new range and hot-water service be put in the hotel, and a pipe to be connected with the bath to take the water therefrom. The yard to be gravelled ; the stable and water-closet to be thoroughly cleaned ; the yard, stable, and water-closet to be kept clean in future ; ceiling of kitchen to be painted, and leak in same attended to.

"On the 5th June, as these improvements had not been carried out, the Committee refused to grant any renewal of license, but stated that if requirements were complied with by the licensee before the next quarterly meeting they would then be prepared to grant a renewal. A temporary license was granted for three months. At the quarterly meeting, held on the 2nd September, it was shown that the requirements had still not been carried out, and the premises were not being maintained as required. On these grounds the renewal of license was refused.

"The licensee applied in the Supreme Court for a mandamus to compel the Licensing Committee to grant a renewal of his license. The application was heard in the Wellington Supreme Court on the 3rd November before Mr. Justice Hosking, who found that the action of the Committee was valid and effective, and for those reasons the motion for a mandamus was dismissed."

The District Health Officer, Christchurch, reports :—

There were 231 hotel premises visited by the Inspectors, and reports were made to the Licensing Committees. Some of the Committees seemed doubtful as to their powers to enforce sanitary improvements, but the decision given by the Supreme Court in the case mentioned in your memorandum of the 7th December last should be of assistance to these Committees, and, in consequence, I anticipate more support being given to the Department's recommendations.

(7.) OFFENSIVE TRADES.

The District Health Officer, Wellington, reports :—

Sites at Feilding and at Taihape for the proposed establishment of freezing-works and offensive trades in connection therewith were inspected.

A permit was granted for the establishment of the offensive trade of fellmongering at Hastings.

The District Health Officer, Christchurch, reports :—

No new permits have been applied for and no fresh premises have been erected.

Early in the year some complaint was made with regard to the disposal of drainage at the Christchurch abattoirs, but suggestions made as to ploughing the ground seemed to have had the desired effect, no further complaint having been made.

The question of the contamination of the Heathcote River by offensive-trade works situated on the banks thereof is referred to in another portion of the report.

Taken as a whole, the offensive-trade premises are fairly well conducted.

The District Health Officer, Dunedin, reports :—

Trouble arose at the Burnside Works, a nuisance being created by offensive gases from the fertilizer department. The company first of all put in an Ozonair apparatus. This, however, was not satisfactory, and they subsequently put in an installation of scrubbers. Since then the nuisance seems to have been considerably modified.

(8.) INSANITARY BUILDINGS.

The District Health Officer, Auckland, reports :—

Notices for the condemnation of buildings under the Public Health Act have been issued as follows : Auckland City, 1 dwelling ; Takapuna, 1 dwelling ; Waiuku, 1 stable ; Panmure, 2 dwellings ; Raurimu, 1 building ; Ngaruawahia, 1 dwelling ; Frankton, 2 piggeries ; Paeroa, 1 dwelling.

Notices for structural alterations under the Public Health Act have been issued as follows : Auckland City, 1 dwelling ; Whangarei, 2 dwellings ; Huntly, 1 butcher's shop ; Karangahake, 2 dwellings ; Panmure, 4 dwellings.

Notices under the regulations under the Sale of Food and Drugs Act for alterations to buildings in which food is prepared or stored have been issued as follows : Rotorua, 2 restaurants, 1 general store ; Cambridge, 1 fish-shop ; Huntly, 1 butcher's shop.

Inspection of buildings prior to removal from one district to another have been made as follows : Auckland City to Point Chevalier, 3 ; Auckland City to Swanson, 1 ; Auckland City to Epsom, 1 ; Tamaki West to One-tree Hill, 1.

A Court order for the demolition of a building condemned in the Takapuna Borough was obtained.

The District Health Officer, Wellington, reports :—

The following insanitary buildings were condemned : Tolaga Bay, 1 ; Pokarae, 1 ; Mangapapa, 1 ; Gisborne, 1 ; Eltham Borough, 3 ; Hawera Borough, 1 ; Foxton, 3 ; Palmerston North, 1 ; Masterton, 3 ; Eketahuna, 1 ; Pahiatua, 1 ; Wellington and suburbs, 10 ; and requisition for repairs in lieu of demolition for 29 buildings.

The District Health Officer, Christchurch, reports :—

Condemnation certificates in connection with insanitary buildings were issued as follows : Christchurch, 5 ; Woolston, 1 ; Doyleston, 1 ; Timaru, 1 ; Reefton, 1 ; Greymouth, 5 ; Grey County, 6.

With regard to the premises condemned in Greymouth, the Borough Council gave notice in each case to the owner to pull down, but they appear to consider that having done this it is not their place to press the matter further. As a consequence, there is a deadlock, and the buildings still remain.

With regard to the other buildings, all these have either been destroyed or repaired to the satisfaction of the Department and the local authority.

The District Health Officer, Dunedin, reports :—

Insanitary buildings dealt with as under,—

Hospital District.				Condemned.	Repaired under Requisition.
Otago ..	..	..	..	68	25
Southland	..	..	..	7	15
Waitaki..	..	..	..	..	4
Maniototo	..	..	..	1	3
Vincent	..	..	..	2	4

(9.) BY-LAWS.

The District Health Officer, Auckland, reports :—

Sanitary by-laws were dealt with for the following local bodies : One-tree Hill (advised as to addition to by-law *re* buildings ; drainage by-law approved) ; Eden Terrace (amended drainage and plumbing by-laws approved subject to certain corrections ; amended by-laws *re* buildings frontages approved) ; Epsom (drainage by-laws approved) ; Rotorua (advised respecting by-laws relating to the erection of buildings, keeping of fowls, &c.) ; Northcote (amendments to the drainage by-laws approved, also general by-laws but with protest with regard to areas) ; Helensville (drainage and plumbing by-laws approved) ; Tauranga (amendments in drainage by-laws agreed to) ; Mount Albert

(departmental models for drainage and plumbing supplied and adopted); Auckland City (sanitary conveniences for public buildings approved); Waiuku (models supplied for general sanitary and drainage by-laws); Mount Wellington (general sanitary models supplied and agreed to); Otahuhu (alterations in drainage by-laws suggested approved).

The District Health Officer, Wellington, reports :—

Sanitary by-laws were dealt with for the following local bodies : Patea Borough, Wairoa Borough, Havelock North Town Board, Upper Hutt Town Board, Mangapapa Town Board, Wangamomona County.

The District Health Officer, Christchurch, reports :—

The Riccarton Borough passed by-laws regulating the area and frontage of sections on which buildings may be erected.

The Waimairi County Council also adopted by-laws regarding the installation of septic tanks and the deposit of nightsoil.

The Christchurch City Council also have in hand the remodelling of their present by-laws, and these will probably include special plumbing and drainage by-laws relating to districts recently included in the city and outside the Drainage Board's area, and also by-laws relating to septic tanks, the licensing of milk-vendors, and dealing with stables.

The Rangiora Borough also drafted general sanitary by-laws, but it having been ascertained that this body had delegated its powers to the Hospital Board, it was unable to proceed with its by-laws under the Public Health Act. They are now making their by-laws solely under the Municipal Corporations Act.

The New Brighton Borough have also drafted sanitary by-laws, but these, however, have not yet been finally passed.

LEGAL PROCEEDINGS UNDER PUBLIC HEALTH ACT AND LOCAL BY-LAWS.

Defendant.	Offence.	Under what Act or By-laws.	Date of Hearing.	Name of Magistrate.	Result of Proceedings.		Remarks.	
					Fines.	Costs.		
Wellington District.								
W. D., Gisborne	Dirty privies and yard	Public Health Act	27/7/14	Mr. Barton ..	£ s. d. 2 0 0	£ s. d. 1 7 6		
F. B., Eltham..	Offensive accumula- tion	Borough by-laws	22/12/14	J.P. ..	0 17 6	1 8 0		
J. S., Wanganui	Dirty yard ..	„	18/7/14	Mr. Kerr ..	1 0 0	and costs		
Canterbury and West Coast District.								
F. M., Christ- church	Failure to abate nui- sance	Waimairi County	29/7/14	T. A. Bailey ..	..	1 1 0	Convicted.
A. H., Christ- church	Insanitary dwelling	Woolston Borough	26/8/14	„ ..	..	..	Given one month to do work.
T., Christchurch	Failure to notify in- fectious case	Public Health Act	10/9/14	„ ..	2 0 0	0 17 6		
Otago and Southland District.								
B., Dunedin ..	Insanitary stables ..	Dunedin City by- laws	27/3/14	Mr. Bartholomew	0 10 0	0 7 0		
K., Dunedin ..	„ ..	Ditto ..	27/3/14	„	0 5 0	0 7 0	} A second charge.	
„ ..	„ ..	„ ..	27/3/14	„	0 5 0	0 7 0		
T., Dunedin ..	Insanitary drains ..	„ ..	1/4/14	Mr. Widdowson	..	2 8 0		
D., Dunedin ..	Milk-adulteration ..	Sale of Food and Drugs Act	10/7/14	Mr. Bartholomew	3 0 0	0 17 6		
H., Dunedin ..	„ ..	Ditto ..	10/7/14	„	2 0 0	0 17 6		
L., Dunedin ..	„ ..	„ ..	10/7/14	„	5 0 0	0 17 6		
A., Dunedin ..	„ ..	„ ..	14/9/14	„	0 10 0	1 18 6		
E., Dunedin ..	„ ..	„ ..	14/9/14	„	..	..	Convicted and dis- charged, as he is an old-age pensioner.
R., Dunedin ..	„ ..	„ ..	14/9/14	„	0 10 0	1 18 6		
H., Invercargill	„ ..	„ ..	12/8/14	Mr. Hutchinson	1 0 0	3 2 6		
C., Invercargill	„ ..	„ ..	16/9/14	„	5 0 0	3 2 6		
M., Gore ..	„ ..	„ ..	11/12/14	Mr. Young ..	15 0 0	3 19 6		

(10.) QUARANTINE INSPECTION OF OVERSEA AND INTERCOLONIAL VESSELS.

The District Health Officer, Auckland, reports :—

Vessels were inspected at ports in this district as follows: Auckland, 285; Dargaville, 3; Kawakawa, 2.

The District Health Officer, Wellington, reports :—

Vessels were inspected as under at ports in this Health District : Wellington, 156; Gisborne, 6; Napier, 12; New Plymouth, 13; Wanganui, 9; Picton, 1.

The District Health Officer, Christchurch, reports :—

Port.	Port Health Officer.	Number of Vessels inspected.
Lyttelton	Dr. Upham	44
Timaru	Dr. Thomas	11
Greymouth	Dr. Morice]	2
Westport.. ..	Dr. Monson	10 (since May, 1914)

The District Health Officer, Dunedin, reports :—

Port.	Port Health Officer.	Number of Vessels inspected.
Dunedin	Dr. Ogston	8
Port Chalmers	Drs. Hodges and Borrie	18
Bluff	Dr. Torrance	55
Oamaru	Dr. Douglas	1

(11.) DISINFECTION OF OVERSEA GOODS.

The District Health Officer, Wellington, reports :—

Six packages oversea goods fumigated during the year.

The District Health Officer, Christchurch, reports :—

No disinfections were made, but several bales of waste material were inspected and passed.

The District Health Officer, Dunedin, reports :—

Two bales of cotton waste from oversea were disinfected. Four bales were prohibited altogether.

(12.) IMMIGRATION RESTRICTION ACT.

The District Officer, Wellington, supplies the following particulars of persons reported to Customs Department :—

- Aug. 1.—W. H. G., s.s. "Ruapehu"—epileptic : Bond executed.
 11.—W. F. B., s.s. "Athenic"—consumptive.
 Oct. 3.—F., s.s. "Ruahine"—melancholia : Returned to London.
 " 3.—A., s.s. "Tainui"—infirm : Bond executed.
 " 14.—G., s.s. "Marama"—chest trouble : Returned to London.
 " 19.—I., s.s. "Rotorua"—consumption : Child, dying condition ; allowed to land.
 " 19.—M. F., s.s. "Rotorua"—insane : Returned to London.
 Nov. 6.—Mrs. T., s.s. "Ionic"—insane : Returned to London.
 " 16.—S. McC., s.s. "Turakina"—insane : Returned to London.
 " 16.—A. T., s.s. "Turakina"—infirm : Bond executed.
 " 24.—B. S., s.s. "Ulimaroa"—heart-disease and infirm : Bond executed.

The District Health Officer, Christchurch, supplies following particulars of persons reported to Customs Department :—

- Jan. 3.—T. C., s.s. "Willochra"—syphilitic.
 Mar. 6.—J. F., s.s. "Rangitira"—syphilis.
 May 8.—R. W. N., s.s. "Zealandic"—syphilis.
 " 9.—W. G. G., s.s. "Zealandic"—tuberculosis.
 June 20.—M. L., s.s. "Batsford"—syphilis.
 " 22.—B. B., s.s. "Kaipara"—tuberculosis.
 " 25.—J. H., s.s. "Harmatris"—syphilis.
 Aug. 1.—A. T., s.s. "Waihora"—tuberculosis.
 Sept. 2.—F. C., s.s. "Remuera"—syphilis.

The District Health Officer, Dunedin, supplies the following particulars of persons reported to Customs Department during the year 1914 :—

- Jan. 26.—W. H. G., *ex* s.s. "Orari"—syphilis : Removed to hospital for treatment under shipper's guarantee.
 Nov 21.—M. F., *ex* s.s. "Tongariro"—dementia : New-Zealander ; allowed to land.

(13.) PRIVATE HOSPITALS AND MIDWIVES ACT.

The District Health Officer forwards Miss Bagley's report as follows :—

During the year all the private hospitals have been inspected, in some cases more than once, for various special reasons, and reports supplied. The Sanitary Inspectors have also examined and reported upon the drainage arrangements of all licensed private hospitals in the district.

Thirteen private hospitals have closed down. Ten new licenses were issued. Four licensees have had their licenses transferred to new and improved premises. Two private hospitals have changed hands. One license has been revoked consequent upon the licensee having had her name removed from the Midwives Register.

On the whole, the conduct and staffing of the private hospitals in this district shows signs of improvement. Qualified nurses are being employed more, and there is less need for the granting of concessions under the Act with regard to licensees and resident managers.

Reports that illicit private hospitals are being conducted are continually being dealt with, and many houses have been visited and searched in view of this. On only one occasion was there available evidence sufficient to convict, and the offender was on that occasion fined only £2, and cautioned by the Magistrate.

MIDWIVES.

The inspection of the midwives has not been as thorough this year as is desirable, although most of the registered midwives in the country districts have been visited and their kits examined.

Warnings have been sent to many unregistered women who were known to be illicitly practising as midwives, there not being sufficient evidence available to convict in the event of the prosecution of these. From the number of inquiries received it would seem that the public are becoming more anxious for better midwifery and nursing attention, and more dubious of the ministrations of the unqualified woman. There is no doubt that the district nurses and subsidized midwives appointed by the Hospital Boards and the emergency services of the Native District Nurses have provided much improvement in nursing facilities for the country districts.

The Bay of Islands Board has three subsidized midwives in different parts of its district. The Whangarei Board, the Kaipara Board, and the Auckland Board have each got one; while the Waikato Board salaries in full two trained midwives in its district. Many more such nurses and midwives are still required.

Two midwives have been removed from the register in this district, one for a serious breach of the regulations, and one for having been convicted under the Tohungas Act and sentenced to six months' imprisonment.

The District Health Officer, Wellington, reports :—

Inquiries were made into two fatal cases of puerperal septicæmia, both of whom had been attended by the same midwife. As a result, legal proceedings are being taken.

The District Health Officer, Christchurch, reports :—

One private hospital was closed for a few days for disinfection after a case of puerperal septicæmia which had died on the premises.

In other puerperal cases reported, the midwives attending were temporarily suspended pending disinfection.

(14.) THE SALE OF FOOD AND DRUGS ACT.

The District Health Officer, Auckland, reports :—

The regulations in regard to labelling are for the most part being strictly carried out by the manufacturers. Some lines of goods have caused a great deal of correspondence, notably aerated waters and cordials. These compounds known as "summer drinks" are for the most part made from essences in regard to which the aerated-water manufacturers have very little idea of the method of manufacture, and in many the border-line between "natural" and "artificial" is very indefinite. In regard to the articles bearing fancy names, there is often a good deal of doubt as to the correct method of describing on the label. Many lines hitherto posing as "limejuice," "cider," and so forth have now to appear labelled "artificial." Some important decisions have been made in regard to lines as to which some doubt has hitherto existed—thus, the so-called "vinegar essence," a substance made of acetic acid coloured with caramel or malt-extract, is now no longer permitted to be sold.

In order to meet the manufacturers of tomato-sauce who hold that apple is an essential flavouring, a sauce known as "tomato-chutney sauce," containing not over 10 per cent. of apple, is now allowed to be sold.

A good deal of work has resulted from an investigation into the weights of packages of tea and of butter. Over 300 samples of each have been weighed in various parts of the district. On the whole the results have been satisfactory, especially in regard to tea. With the butter packages a large number were very slightly underweight, but only to the extent of a small fraction of an ounce, and, as the total deficiency over some hundreds of samples only amounted to a few ounces, it is probable that the defect is due to imperfect methods rather than a deliberate attempt to make a profit.

A good deal of attention has been paid to ice-cream, and it was found that very many of the makers were selling as ice-cream what was merely milk and arrowroot. The trade was circularized, and later some prosecutions were undertaken.

A circular was issued to biscuit-makers in regard to the declaration of the weight of the contents of packages of biscuits. Some difficulty has been found in regard to small lines of fancy biscuits, which vary greatly in weight.

Considerable advance has been made in the direction of enforcing that part of the regulations dealing with the protection of foodstuffs from dirt and flies and vermin. In the city area the City Council authorities had passed by-laws identical with our regulations on these matters, and have undertaken a campaign on lines which have been mutually accepted. Thus the methods of dealing with the various kinds of fruit and vegetables have been decided, and already good results are in evidence. In the country districts the same methods are being followed by our Inspectors, and in most of the larger towns the fruit is now being displayed in protected cases.

In the construction of butchers' premises also many improvements can be seen, and the old fly-ridden, grease-smeared butchers' shops are disappearing.

Action under these regulations has been taken to close or alter several insanitary premises wherein foodstuffs were stored or prepared. Thus in Rotorua alterations have been made in two restaurants and a general store. In Cambridge a fish-shop was partially pulled down, and in many other districts minor improvements have been secured.

The routine campaign as regards adulteration of milk has been carried on systematically, and the result of the increased penalties inflicted by the Magistrates has been most satisfactory.

A large number of observations of loaves, as regards weight, have been made, and a good many prosecutions have resulted. The higher price of flour, due to the war, and the resulting cost of bread has had a tendency to induce some of the more unscrupulous bakers to reduce the weight of the loaf.

The District Health Officer, Wellington, reports:—

Milk-adulteration.—The Department has been more successful during the last year in obtaining convictions and penalties more in accordance with the crime than previously. It is evident, though, that heavier penalties will have to be inflicted to put a stop to the large amount of adulteration that is being carried out. The good effect of heavy penalties is shown by the fact that in one town where two milk-vendors were fined £20 and £30 respectively numerous samples taken in that town since have all proved to be unadulterated. In two cases the decision of the Magistrate was appealed against, and the case was taken to the Supreme Court. In Palmerston North the Magistrate's judgment in favour of the Department was appealed against by the defendant on the ground that the letter of the law in regard to the taking of samples had not been observed. The facts were that the Inspector handed the vendor three bottles which contained approximately one pint. The vendor filled the three bottles from the can, and in so doing had to take more than one dip. The contention was that the Inspector had purchased not one sample of milk but three separate samples. His Honour Mr. Justice Edwards dismissed the appeal on the grounds that the statute neither directly nor by necessary implication required the Inspector to divide the sample with his own hands. There was nothing to prevent him from procuring division to be made by another person in his presence and under his superintendence. His act in so making the division through the agency of the appellant's servant was rather to the benefit of the appellant than otherwise. By no possibility could she be thereby prejudiced. The case of *Smith v. Savage* showed that minute technical objections devoid of merit were not to be favoured in the administration of this Act, and was indeed a much more doubtful case than the present.

In the other case the Department appealed against the decision of the Magistrate. The Magistrate's decision was to the effect that it was no offence under the Sale of Food and Drugs Act for adulterated milk to be sold to a member of the public, but only to an officer under the Act. His Honour the Chief Justice upheld the Department's contention that the value of the Act would be greatly impaired if this judgment was correct. In the course of his judgment His Honour expressed the opinion that "any common informer might prosecute, and that, in cases where an officer or person was not proceeding under the special provisions of sections 4, 5, 7, and 8, it was not necessary to comply with the provisions of those sections. It would impair the influence of the Act and make it of little value if no one could be prosecuted unless a sample was taken, and the proceeding under section 7 followed. In cases like the present, if the contention of the respondent were correct, adulterated food might be sold wholesale, and a conviction of the seller be impossible, however guilty he might be. The appeal would therefore be allowed, and the case remitted to the Magistrate with the Court's decision."

The history of this case is an interesting one as showing the difficulties the Department has to contend with in administering the Act. The following copy of my letter to the City Council gives the chief features of this case:—

(1.) On the 24th February, 1914, a sample of milk was obtained from J——. The Analyst's certificate shows it contained annatto and 29 per cent. of water. On the 17th April J—— was convicted and fined £1 10s. costs. She swore in Court that she had obtained the milk from I——, and had not tampered with it.

(2.) On the 13th March a sample of milk was taken from A——. The Analyst's certificate shows it contained annatto and 23·6 per cent. of water. On the 8th May A—— was convicted and fined £1 and costs. A—— swore in Court that he had obtained the milk from I——, and had not tampered with it.

(3.) On the 20th March a sample of milk was obtained from a private customer, M——, which had just been left by I——, employee. This employee refused to give the Inspector a sample from the milk on the cart. This man was prosecuted for obstruction, but the case was dismissed. M——'s milk contained 20 per cent. of water and annatto. On the 15th May I—— was prosecuted for selling this adulterated milk to M——. The case was dismissed.

(4.) The Department then decided to prosecute I—— for selling adulterated milk to A—— on the 13th March. The case was heard in April, and was dismissed. The Department then appealed to the Supreme Court, where His Honour Chief Justice Stout upheld the contention of the Department that I—— should have been convicted. The case was therefore referred back to the Magistrate, and on the 12th March, 1915, I—— was fined £20 and costs. At the hearing of this case I—— admitted adding annatto, but denied having added water. There was no direct evidence to prove that I—— had added water. At the time these samples were taken in 1914 the amount of milk that I—— was dealing with and the amount of water he added gave him a clear illicit profit of £2 per day, and after he ceased adulterating he was obtaining 105 gallons per day from the farmers instead of 70 gallons. During the last few months since I—— was aware he was going to be prosecuted several samples have been taken and found to comply with the standard. The S.M. in giving judgment appears to have paid undue importance to his complying with the law since he had been found out. It is obvious that the fine, apart from I——'s legal expenses, can be paid several times over out of the profits made if the adulteration had been continuing for some time, as would appear had been the case.

In this case, as the adulteration was wilful, the maximum penalty was £200 or two months' imprisonment, and the fine of £20 was inflicted in the Magistrate's Court. It certainly does not seem an adequate penalty. Fortunately, the matter did not end here, as the City Council, in consequence of the facts disclosed in my report, decided not to grant a license to this dairyman to sell milk.

Food-shops, &c.—A systematic inspection of premises where food is sold or prepared for sale has been made throughout the district. As a result, great improvements have been effected, mainly in butchers' shops and premises used for manufacture of small goods, ice-creams, &c. So far it has not been necessary to take any legal action. It is certainly creditable to the Inspectors that they have been able to get so many improvements without any prosecutions. There are generally one or two leading tradesmen in each town whose premises have already complied in the main with the provisions of the regulations, or who admit that improvements are necessary, and as soon as one or two have got their premises in proper order the recalcitrant ones have to recognize that they cannot expect to get much sympathy from the public or the S.M. if they continue to resist.

Labelling.—Much time has been occupied in advising on the correctness of labels submitted for approval. Most of the common articles of food, such as tea, coffee, butter, jam, cordials, vinegar, &c., are now correctly labelled. The correct interpretation of the regulations is not in some cases an easy matter, and some of the difficulties will have to be met by amendments. Often what appears to be a somewhat trivial point is found to be an important one from the commercial point of view.

The District Health Officer, Christchurch, reports:—

In Christchurch an inspection was made of butchers' shops, small-goods factories, bacon-curing premises, fish and poultry premises, ice-cream factories, and other food premises, and directions were given where necessary to make the premises comply with the provisions of the regulations, the details as far as the City was concerned being as follows: Fish-shops, 28; small-goods factories, 36; bacon-curing premises, 5; fish and poultry premises, 13; ice-cream factories, 5. Similar inspections were carried out in Ashburton and the county, with the result that most of these premises now comply fully with the regulations. Similar work has been carried out at Lyttelton, New Brighton, Papanui, Kaiapoi, Woodend, Amberley, Rangiora, Oxford, Cust, Kaikoura, Sumner, Timaru, Temuka, Waimate, and Greymouth, and it is to be hoped that next year all food premises in the district will have been similarly dealt with.

In addition to samples taken under the Act many samples of milk were taken in order to ascertain the quality obtainable on the farms, and also the milk-supplies of the various hospitals and institutions were tested. Unofficial samples were also taken of other foodstuffs for the information of the Department.

Labelling also received a considerable amount of attention, and many interviews were granted to representatives of various firms to assist them in getting their labels into proper form.

The weights of most brands of butter and tea put up in the district were likewise tested to see that they complied with the net weight stated on the labels.

There is work in this district for at least one Inspector who would have no other duties to perform than inspection under the regulations. Unfortunately I have no such officer. Inspector Kershaw, whom I should be able to solely detail on this work, has also to act as Inspector for the Ashburton Hospital Board.

SUMMARY OF SAMPLES TAKEN.

Where purchased.	Samples taken.		Results of Weighing or Analysis.			
	Number.	Nature.	Complying.	Non-complying and Warning given.	Non-complying and Proceedings taken.	Rendered defective in Transit.
<i>Auckland District.</i>						
Auckland (in and around)	64	Milk	50	1	12	..
"	10	Bread	5	2	3	..
"	14	Ice-cream	4	9	1	..
"	6	Cordials	6	..	..	..
"	1	Whisky	1	..	..	..
Hamilton (in and around)	17	Milk	13	3	1	..
"	10	Bread	8	2	..	..
"	8	Butter	8	..	..	..
"	19	Tea	18	..	..	..
"	3	Coffee	2	1	..	..
"	4	Cocoa	4	..	..	..
Rotorua (in and around)..	5	Milk	4	1	..	..
"	4	Bread	..	4	..	..
"	7	Butter	..	7	..	..
Taumarunui (in and around)	21	Milk	17	..	4	..
"	6	Bread	6	..	..	..
Thames (in and around)	9	Milk	6	..	..	3
Whangarei (in and around)	14	"	12	..	2	..
"	1	Bread	..	1	..	..
"	4	Butter	4	..	..	..
"	3	Ice-cream	2	1	..	..
"	6	Cordials	6	..	..	..
Dargaville (in and around)	1	Milk	1	..	..	..

SUMMARY OF SAMPLES TAKEN—continued.

Where purchased.	Samples taken.		Results of Weighing or Analysis.			
	Number.	Nature.	Complying.	Non-complying: Warned.	Prosecuted.	Rendered defective in Transit.
Wellington - Hawke's Bay - Nelson District.						
Napier	8	Bread	2	3	3	..
"	11	Milk	9	1	1	..
Gisborne	20	"	14	2	4	..
New Plymouth	18	"	12	2	4	..
South Taranaki	6	Bread	4	2	..	..
"	37	"	35	2	..	..
"	16	Milk	15	..	1	..
Wanganui (in and around)	22	"	16	3	3	8*
"	2	Vinegar .. .. .	..	1	1	..
Palmerston North	28	Milk	9	4	7	..
Wellington (in and around)	285	"	243	12	30	..
"	6	Cream	2	3	1	..
"	6	Pepper	6	..	..	..
"	12	Paraffin-oil	7	3	2	..
"	6	Vinegar	6	..	..	..
"	27	Bread	22	3	2	..
"	21	Smoked fish	18	3	..	..
"	8	Whisky	8	..	..	..
Wairarapa and South Wairarapa	30	Milk	15	5	4	6†
Blenheim	4	"	2	..	2	..
"	2	Bread	2	..	..	..
Nelson	37	Milk	26	1	4	..
"	4	Bread	2	2	..	6‡
Canterbury - West Coast District.						
Christchurch (in and around)	196	Milk	143	24	19	..
"	15	Bread	8	5	2	..
"	11	Vinegar	5	5	1	..
"	2	Butter .. .. .	..	2	..	..
"	6	Tea	4	2	..	..
"	30	Jam§ .. .. .	..	..	..	..
"	1	Jelly§ .. .. .	..	..	..	..
Ashburton	22	Bread	10	12	..	..
Timaru	5	Tea	4	1	..	..
"	2	Malted food .. .. .	..	..	2	..
Otago and Southland.						
Dunedin	61	Milk	46	1	7	7
Oamaru	7	"	7	..	..	..
Invercargill	33	"	30	1	2	..
Gore	12	"	10	1	1	..
Queenstown	2	"	2	..	..	..
Bluff	3	"	3	..	..	..
Dunedin	141	Bread	131	10	..	..
Clyde	16	"	12	4	..	..
Alexandra	14	"	10	4	..	..
Ophir	10	"	10	..	..	..
Papanui	20	"	15	5	..	..
Palmerston	8	"	8	..	..	..
Oamaru	88	"	88	..	..	..
Enfield	8	"	8	..	..	..
Waipata	8	"	8	..	..	..
Edendale	2	"	2	..	..	..
Otautau	1	"	1	..	..	..
Riverton	3	"	2	1	..	..
Dunedin	2	Butter	2	..	..	..
"	3	Condensed milk	3	..	..	..
"	8	Vinegar .. .. .	..	8	..	..
Lumsden	1	Tea	1	..	..	..
Riversdale	1	"	1	..	..	..
Dunedin	6	Chocolate .. .. .	..	..	..	6
"	1	Lime-water	1	..	..	..
"	2	Baking-powder .. .. .	..	..	2	..
"	3	Cream of tartar .. .. .	..	3	..	..

* Per unregistered : 1 broken in transit. † Not registered. ‡ Broken in trans § Forwarded to Dominion Analyst.

FOOD-INSPECTIONS FROM 1ST JANUARY TO 31ST DECEMBER, 1914 *continued.*

Food and Drugs inspected.	Where.	Date.	Action taken.
<i>Wellington - Hawke's Bay - Nelson District.</i>			
20 lb. assorted fruit	Hawera	9/1/14	Destroyed by owner's consent.
160 lb. currants	Eltham	24/1/14	No action taken.
4 sacks flour	"	15/4/14	"
29 1/2-lb. tins Swiss milk	"	7/7/14	Condemned and destroyed.
1 shoulder bacon	"	7/7/14	"
40 lb. bananas	Stratford	2/3/14	Destroyed by owner's consent.
6 lb. grapes	"	2/3/14	"
20 lb. pears	"	27/4/14	"
2 cases apples	"	15/8/14	"
1/2 cwt. carrots	"	15/8/14	"
25 lb. bananas	"	15/8/14	"
15 lb. bananas	Kaponga	24/1/14	"
94 mutton-birds	Wanganui	18/9/14	Burned at rubbish-tip.
99 cases apples	"	11/11/14	Destroyed.
3 boxes butter	"	19/5/14	Sent to soapworks.
2 tons onions	"	20/11/14	Destroyed at rubbish-tip.
5 cwt. potatoes	"	20/11/14	"
2 sacks oysters	Palmerston North	20/9/14	Destroyed.
Crayfish	"	31/8/14	"
3 cases flounders	"	9/10/14	"
2 tins whitebait	"	13/10/14	"
10 boxes almonds	Wellington	23/1/14	"
46 boxes figs	"	29/1/14	"
3 boxes almonds	"	29/1/14	"
4 sacks fish	"	6/2/14	"
100 lb. currants	"	6/2/14	"
2 boxes almonds	"	11/2/14	"
20 cases bananas	"	13/2/14	To be picked over.
20 cwt. hazel-nuts	"	16/2/14	Reshipped to exporters.
2 carcasses pigs	"	26/2/14	Destroyed.
15 gallons milk	"	28/2/14	"
14 boxes Jordan almonds	"	12/3/14	"
5 gallons milk	"	9/6/14	Destroyed (can patched with soap).
300 packets evaporated apples	"	13/8/14	Destroyed.
1 carcass pork	"	13/2/14	"
1 case apples	Masterton	2/2/14	"
1	"	2/2/14	"
1 bundle flounders	"	2/6/14	"
Quantity bananas	"	31/7/14	"
" whitebait	"	15/10/14	"
20 lb. fruit	"	30/11/14	"
1 bag potatoes	Featherston	8/4/14	"
Quantity bananas	Carterton	10/9/14	"
Meat	Greytown	29/7/14	"
12 lb. onions	"	23/10/14	"
<i>Canterbury - West Coast District.</i>			
5 cases almonds	Christchurch goods-shed	2/2/14	Permission given to pick over; then re-inspected before marketed.
32 cases walnuts	Ditto	5/10/14	Permission given to clean and pick over; then reinspected before used.
12 cases figs	Christchurch	28/3/14	Sent to destructor.
Fish (10 cwt.)	Greymouth	13/6/14	Destroyed.
"	"	26/6/14	"
"	"	15/9/14	"
<i>Otago - Southland District.</i>			
112 lb. saccharine	Dunedin	3/2/14	Seized and destroyed.
1 cwt. dog-biscuits	"	3/2/14	"
528 1-lb. tins Cerebos salt	"	3/2/14	"
7 cwt. tea	"	7/2/14	Sound.
24 cases malt-extract	"	7/2/14	"
8 cases biscuits	"	7/2/14	Condemned.
1 1/2 cwt. confectionery	"	7/2/14	"
93 cwt. raisins	"	18/2/14	Sound.
22 sacks flour	Port Chalmers	3/3/14	"
1 cwt. coffee	"	3/3/14	"
4 cwt. ship's biscuits	"	3/3/14	"
2 cases pickles	"	3/3/14	"
21 cases cerebos fruit-salts	"	17/3/14	Seized and destroyed.
102 12-lb. boxes Fry's cocoa	"	17/3/14	Sound.
47 cases Symington's coffee	Dunedin	"	"
2 cwt. Fry's chocolates	"	7/4/14	"
110 lb. butter	"	7/4/14	Condemned.
1,050 lb. ham	"	7/4/14	"
66 cases bananas	"	7/4/14	"
150 lb. confectionery	"	7/4/14	"
3,380 lb. bacon	"	7/4/14	"
22 rolls bacon	"	1/9/14	No action taken.
8 hams	"	1/9/14	"
10 cheese	"	1/9/14	"
12 tins honey	"	1/9/14	"

FOOD-INSPECTIONS FROM 1ST JANUARY TO 31ST DECEMBER, 1914—continued.

Food and Drugs inspected.	Where.	Date.	Action taken.
<i>Otago - Southland District—continued.</i>			
12 rolls bacon	Dunedin	12/11/14	Seized and destroyed.
4	13/11/14	.. ..
4 boxes eggs	Invercargill .. ..	.. ..	Destroyed.
2½ cases dates
4 boxes apples
3 crates rabbits
164 tins condensed milk
4 bags oysters	7/14	.. ..
6½ rolls bacon	7/14	.. ..
200 boxes figs	7/14	.. ..
8 boxes frozen fish	7/14	.. ..
147 lb. corned beef	7/14	.. ..
5 cases mutton-birds	7/14	.. ..
Tea	Waipia	14/10/14	No action taken.
Butter	14/10/14	.. ..
Tea	Ophir	15/10/14	.. ..
Butter	15/10/14	.. ..
63 cases bananas	Dunedin	27/1/14	Condemned.
81 lb. bacon	11/2/14	.. ..
12 cases biscuits	11/2/14	.. ..
3 cases lollies	4/3/14	.. ..
70 lb. ham	4/3/14	.. ..
100 lb. bacon	4/3/14	.. ..
20 lb. butter	4/3/14	.. ..
80 lb. butter	26/5/14	.. ..
248 lb. bacon	21/10/14	.. ..
44 lb. butter	21/10/14	.. ..
412 lb. bacon	12/11/14	.. ..
1,056 lb. cheese	16/12/14	.. ..
10 cases bananas	16/12/14	.. ..

LEGAL PROCEEDINGS UNDER THE SALE OF FOOD AND DRUGS ACT, 1908.

Defendant.	Offence.	Date of Hearing.	Name of Magistrate.	Result of Proceedings	
				Fines.	Costs.
Auckland District.					
A. B., Mount Roskill	Selling adulterated milk	23/3/14	Mr. Frazer	£ 5 0 0	£ 0 17 0
J. R. H., Whangarei	"	28/6/14	Mr. Page	10 0 0	0 7 0
C. J. B., Owango	"	13/8/14	Mr. Hazelden	2 0 0	"
W. J. D., Owango	"	13/8/14	"	4 0 0	"
J. C., Manunui	"	13/8/14	"	4 0 0	"
S. W., Waihi	Selling short-weight bread	18/8/14	Mr. Burgess	2 0 0	0 7 0
W. R., Waihi	"	18/8/14	"	2 0 0	0 7 0
G. S. H., Waihi	"	18/8/14	"	2 0 0	0 7 0
C. H., Otahuhu	Selling adulterated milk	26/8/14	Mr. Frazer	2 0 0	0 17 0
T. S., Parnell	Selling short-weight bread	31/8/14	Mr. Cutten	3 0 0	4 0 0
C. B., Cambridge	"	6/9/14	Mr. Rawson	1 0 0	9 0 0
R. S., Ngaruawahia	"	8/9/14	"	2 0 0	0 7 0
G. and C., Te Kuiti	"	15/9/14	"	3 0 0	0 7 0
P. and L., Te Kuiti	"	15/9/14	"	3 0 0	0 7 0
G. G., Whangarei	Selling adulterated milk	6/10/14	Mr. Page	2 0 0	0 17 6
W. M., Taumarunui	"	15/10/14	Mr. Hazelden	20 0 0	0 10 6
F. H. G. L., Taumarunui	"	15/10/14	"	5 0 0	0 10 6
A. F., Avondale	"	4/11/14	Mr. Frazer	2 0 0	3 6 6
W. G., Cambridge	"	8/12/14	Mr. Rawson	3 0 0	0 19 0
E. H., Auckland	"	11/12/14	Mr. Cutten	2 0 0	0 19 0
B. and B., Kingsland	Adulterated ice-cream	18/12/14	"	1 0 0	0 19 6
Wellington - Hawke's Bay - Nelson District.					
G. F., Gisborne	Selling adulterated milk	12/8/14	Mr. Barton	30 0 0	0 17 6
"	Selling adulterated food without informing purchaser	12/8/14	"	Convicted and discharged.	"
G. T., Gisborne	Selling adulterated milk	12/8/14	"	20 0 0	0 17 6
G. T., Gisborne	Selling adulterated food without informing purchaser	12/8/14	"	Convicted and discharged.	"
J. W. H., Waipukurau	Selling light-weight bread	26/2/14	Mr. McCarthy	10 0 0	"
D. T., Napier	"	22/6/14	"	Case dismissed on technical point.	"
W. E., Dannevirke	"	25/6/14	"	5 0 0	0 7 0
A. M. B., Dannevirke	Selling adulterated milk	24/7/14	"	2 0 0	0 17 4
W. D. G. C., Hawera	"	3/8/14	Mr. Kendrick	10 0 0	0 17 8
T. B., Wanganui	"	21/7/14	Mr. Kerr	5 0 0	0 7 0
B. McG., Wanganui	"	22/7/14	"	5 0 0	0 7 0
H. W. W., Wanganui	"	23/7/14	"	5 0 0	0 7 0
D. R. W., Wanganui	Selling vinegar not up to standard	"	"	5 0 0	"
H. H., Palmerston N.	Selling adulterated milk	19/8/14	Mr. Poynton	10 0 0	0 19 6
J. McL., Palmerston N.	"	26/8/14	"	10 0 0	0 19 6
E. M. G., Palmerston N.	"	5/10/14	"	20 0 0	0 19 6
A. G., Palmerston N.	"	1/10/14	"	0 10 6	0 19 6

LEGAL PROCEEDINGS UNDER THE SALE OF FOOD AND DRUGS ACT, 1908—continued.

Defendant.	Offence.	Date of Hearing.	Name of Magistrate.	Result of Proceedings.	
				Fines.	Costs.

Wellington - Hawke's Bay - Nelson District—continued.

F. D., Foxton ..	Selling adulterated milk ..	30/10/14	Mr. Poynton ..	£ s. d. 20 0 0	£ s. d. 0 19 6
A. W., Palmerston N.	" ..	9/11/14	" ..	20 0 0	3 13 6
W. A., Wellington ..	" ..	7/5/14	Mr. Cooper ..	1 0 0	1 4 0
S. B., Wellington ..	" ..	12/6/14	" ..	10 0 0	0 19 6
R. V. B., Levin ..	" ..	3/9/14	Mr. Poynton ..	20 0 0	2 1 6
A. J. S., Wellington ..	" ..	11/9/14	Mr. Cooper ..	0 10 0	2 0 6
H. S., Wellington ..	" ..	11/9/14	" ..	5 0 0	2 0 6
F. J., Wellington ..	" ..	11/9/14	" ..	Dismissed; not to be	scals said efficient.
C. J. D., Wellington ..	" ..	18/9/14	" ..	5 0 0	0 17 6
J. G., Lower Hutt ..	" ..	7/10/14	" ..	20 0 0	2 2 6
H. M., Wellington ..	Milk below standard ..	20/11/14	" ..	0 10 0	0 17 6
C. C. and C., Wellington ..	" ..	27/11/14	" ..	5 0 0	1 18 6
I. O. S., Wellington ..	Selling adulterated paraffin ..	21/12/14	" ..	Convicted	1 18 6
V. and A., Wellington ..	" ..	21/12/14	" ..	" ..	0 17 6
F. M., Lower Hutt ..	Selling short-weight bread ..	4/11/14	" ..	1 0 0	0 9 0
W. G., Mangaroa ..	Using milk-can patched with soap ..	14/8/14	" ..	5 0 0	1 12 0
J. E., Hayward's ..	Using milk-can, broken surface ..	9/10/14	" ..	Convicted	0 9 0
A. S., Mangaroa ..	" ..	9/10/14	" ..	" ..	0 9 0
P. B., Wellington ..	Selling unsound fruit ..	24/7/14	" ..	5 0 0	1 1 0
R. J., Wellington ..	Selling adulterated milk ..	17/4/14	" ..	1 0 0	0 7 0
R. J., Wellington ..	" ..	17/4/14	" ..	Convicted	0 7 0
W. C., Mangaroa ..	" ..	13/5/14	" ..	20 0 0	1 7 6
W. C., Mangaroa ..	" ..	13/5/14	" ..	Convicted	0 7 0
A. D., Wellington ..	" ..	21/8/14	" ..	1 0 0	0 17 6
A. D., Wellington ..	" ..	21/8/14	" ..	Convicted	0 17 6
A. C., Lower Hutt ..	" ..	9/12/14	Mr. Riddell ..	3 0 0	1 17 6
T. H., Te Horo ..	" ..	31/7/14	Mr. Poynton ..	20 0 0	1 5 0
E. W., Otaki ..	" ..	31/7/14	" ..	10 0 0	1 5 0
W. K., Otaki ..	" ..	31/7/14	" ..	20 0 0	1 5 0
T. T., Te Horo ..	" ..	31/7/14	" ..	5 0 0	1 5 0
H. M. T., Te Horo ..	" ..	31/7/14	" ..	10 0 0	1 5 0
G. W., Masterton ..	" ..	18/9/14	Mr. Reid ..	3 0 0	0 17 6
B. W. T., Masterton ..	" ..	18/9/14	" ..	2 0 0	0 17 6
S. K. A., Carterton ..	" ..	8/10/14	" ..	0 5 0	0 17 6
A. F., Blenheim ..	" ..	8/9/14	Mr. Loughnan ..	5 0 0	0 17 6
W. P., Blenheim ..	" ..	22/9/14	" ..	5 0 0	0 17 6
H. C., Nelson ..	" ..	18/9/14	Mr. Evans ..	3 0 0	1 17 6
F. S., Nelson ..	" ..	28/8/14	" ..	1 0 0	0 17 6
S. E., Nelson ..	" ..	28/8/14	" ..	3 0 0	0 17 6
A., Nelson ..	" ..	" ..	" ..	5 1 0	and costs

Canterbury and West Coast District.

N. C., Lyttelton ..	Selling adulterated milk ..	28/1/14, 4/5/14	Mr. Bishop ..	2 0 0	0 17 6
C. S., Christchurch ..	" ..	12/5/14	Mr. Bailey ..	1 0 0	2 19 6
W. C., Christchurch ..	" ..	12/5/14	" ..	1 0 0	2 19 6
S. B. W., Christchurch ..	" ..	22/9/14	" ..	2 0 0	2 19 6
G. J., Christchurch ..	" ..	22/9/14	Mr. Bishop ..	3 0 0	2 19 6
T. McC., Christchurch ..	" ..	22/9/14	" ..	20 0 0	2 19 6
J. P. P., Christchurch ..	Selling light-weight bread ..	22/9/14	" ..	3 0 0	2 19 6
McK. and S., Christchurch ..	" ..	22/9/14	" ..	3 0 0	2 19 6
A. J. D., Christchurch ..	Selling adulterated milk ..	1/12/14	" ..	2 0 0	2 19 6
T. W., Christchurch ..	" ..	1/12/14	" ..	3 0 0	2 19 6
T. B., Christchurch ..	" ..	1/12/14	" ..	2 0 0	2 19 6
R. E., Christchurch ..	" ..	1/12/14	" ..	2 0 0	2 19 6
W. G., Christchurch ..	" ..	1/12/14	" ..	2 0 0	2 19 6

D. LABORATORY REPORTS.

BACTERIOLOGICAL LABORATORY, WELLINGTON.

Report by Mr. J. A. Hurley, Government Bacteriologist, Wellington.

I have the honour to report on the work done in the bacteriological laboratory and vaccine station during the year ending the 31st March, 1915.

In the laboratory the number of examinations made was 5,432. This is an increase of 38 per cent. on the number for the preceding year. The details of the examinations are shown in the attached classified lists. The fees for outside work since the 1st January, 1914, amount to £1,033 1s. The amount outstanding on the 31st March was £348, but a considerable portion of this sum has since been collected. As regards the work done for the Public Health Department and the Charitable Aid Board, I estimate it, on the basis of the half-fee rate paid by public hospitals and the special fees paid by the Department for similar work, at not less than £700.

In the vaccine station forty-four calves were inoculated, and from these a quantity of lymph, equal to 60,000 tubes, was collected. The required reserve stock, equal to 20,000 tubes, has always been ready for immediate delivery, and there have been distributed in New Zealand 7,900 tubes and 397 c.c. of calf-lymph. To Rancagua, in Chile, and to the French Government in Tahiti, 2,500 tubes have been supplied. The quality of the lymph has been good, and the reports received have been satisfactory. The total value of the lymph, at 6d. per tube, which is a low estimate, and is half the lowest price paid by the Department when supplies were received from other sources, is £1,500. The cost of production is less than 2d. per tube.

In the importing and distributing branch of the Vaccine Station the quantity of sera imported, such as diphtheria antitoxin and tetanus antitoxin, also increased last year. A greater number of medical practitioners and public hospitals in both Islands each year obtain their supplies from the Department.

In every branch the work has been strenuous, and much overtime and Sunday work has been necessary, especially since the early part of the present year. I have again to acknowledge the loyal assistance of each member of the staff. There has always been a cheerful volunteer to meet the emergencies which not unfrequently happen in a laboratory of this kind.

Table showing Results of Examinations of Pathological Specimens, 1st April, 1914, to 31st March, 1915.

Material.	Object of Examination.	Result.		Total.
		Positive.	Negative.	
Sputum	Microscopical examinations—			
	For tubercle bacillus ..	128	387	515
	„ other conditions ..	129	49	178
	Cultural examinations ..	..	..	88
	<i>Total for 1914</i> .. ..	..	..	781 880
Purulent discharges ..	Microscopical examinations—			
	For gonococcus ..	37	67	104
	„ tubercle bacillus ..	11	36	47
	„ other pathogenic organisms	273	40	313
	Cultural examinations ..	240	25	265
	<i>Total for 1914</i> .. ..	..	..	729 595
Pleuritic fluid	Microscopical examinations—			
	For tubercle bacillus ..	3	21	24
	Other conditions ..	18	3	21
	Cultural examinations ..	14	8	22
	<i>Total for 1914</i> .. ..	..	..	67 40
Cerebro-spinal fluid ..	Microscopical examinations ..	19	7	26
	Cultural examinations ..	8	18	26
	<i>Total for 1914</i> .. ..	..	..	52 44
	<i>Total for 1914</i> .. ..	..	..	..
Synovial fluid	Microscopical examinations ..	11	..	11
	Cultural examinations ..	4	7	11
	<i>Total for 1914</i> .. ..	..	..	22 Nil
	<i>Total for 1914</i> .. ..	..	..	..
Stomach-contents	<i>Total for 1914</i>	26	12	38
	<i>Total for 1914</i> .. ..	..	..	7
Fæces	Chemical	11	6	17
	Microscopical	18	3	21
	Cultural	8	5	13
	<i>Total for 1914</i> .. ..	..	..	51 31
	<i>Total for 1914</i> .. ..	..	..	..
Urine	Chemical .. ..	..	..	987
	Microscopical .. ..	..	..	664
	Cultural .. ..	..	..	412
	<i>Total for 1914</i> .. ..	..	..	2,063 830

Table showing Results of Examinations of Pathological Specimens—continued.

Material.	Object of Examination.	Result.		Total.
		Positive.	Negative.	
Blood	Widals-Typhoid	59	136	195
	„ Paratyphoid	50	182	232
	Cell counts Differential counts ; estimate hæmoglobin .. .. .	..	..	118
	Wassermans .. .. .	..	..	88
	Cultural	8	8	16
	Chemical	8	1	9
	<i>Total for 1914</i> .. .. .	..	..	658 432
Swabs	For diphtheria	84	195	279
	<i>Total for 1914</i> .. .. .	..	..	213
Examinations for parasites ..	For hydatids	6	11	17
	„ sputa	2	5	7
	„ other parasites	2	5	7
	<i>Total for 1914</i> .. .. .	..	..	31 49
	<i>Total for 1914</i> .. .. .	..	..	28 73
Animals examined	Rats .. .. .	..	..	6
	Guinea-pigs .. .. .	..	..	18
	Others .. .. .	..	..	4
	<i>Total for 1914</i> .. .. .	..	..	28 73
Foods	Artificial .. .. .	..	..	6
	Milk .. .. .	..	..	10
	Others .. .. .	..	..	3
	<i>Total for 1914</i> .. .. .	..	..	19 10
Water .. .. .	.. .. .	..	..	6
	<i>Total for 1914</i> .. .. .	..	..	21
Solid tissues requiring section	.. .. .	..	..	288
	<i>Total for 1914</i> .. .. .	..	..	214
Unclassified		..	..	..
Dressings (surgical) .. .. .	.. .. .	..	..	3
Disinfectants .. .. .	.. .. .	..	..	3
Clothing .. .. .	.. .. .	..	..	3
Sewage .. .. .	.. .. .	..	..	2
Drugs .. .. .	.. .. .	..	..	3
Calculi .. .. .	.. .. .	..	..	2
<i>Total for 1914</i> .. .. .	.. .. .	..	..	16 21
	<i>Total for 1914</i> .. .. .	..	..	253 303
Vaccines (autogenous), (not including typhoid vaccines)	.. .. .	..	..	50
	<i>Total for 1914</i> .. .. .	..	..	153
Examination of calf-lymph ..	.. .. .	..	..	5,432
	<i>Total for 1914</i> .. .. .	..	..	3,916

Details of Urinary Examinations.

Method.	What sought	Result.		Total.
		Positive.	Negative.	
Chemical—				
Quantitative	Estimation of urea .. ..	..	..	176
	.. sugar .. ..	..	..	64
	.. albumin .. ..	..	..	21
	.. chlorides, &c. .. ..	..	..	174
Qualitative .. ..	.. albumin	71	192	263
	.. sugar	50	188	238
	.. others	29	22	51
				987
Cultural	For B. coli	180	52	232
	.. gonococcus	3	6	9
	.. B. typhosus	6	18	24
	.. others	80	67	147
				412
Microscopical	For tubercle bacillus	23	105	128
	.. casts, pus, &c.	398	138	536
				664
				2,063
Total for 1914				830

Summary of Work performed at the Vaccine Station for the Year ending 31st March, 1915.

Calves inoculated .. ..	..	..	..	..	..	..	..	..	44
Total for 1914 .. ..	..	..	..	..	..	..	..	..	71
Post mortem of calves .. ..	..	..	..	..	..	..	..	..	44
Total for 1914 .. ..	..	..	..	..	..	..	..	..	44
Cultural examination of lymph .. ..	..	..	..	..	..	..	..	..	80
Total for 1914 .. ..	..	..	..	..	..	..	..	..	153
Amount of lymph prepared .. ..	..	..	..	3,205 c.c.	(sufficient for 128,000 inoculations).	..	..	..	..
Total for 1914 .. ..	..	..	..	14,053 c.c.	..	1,006,480	..	..	..
Amount of lymph issued in tubes .. ..	..	..	..	7,919 c.c.,	equal to 15,838 doses.	..	..	..	..
.. bulk .. ..	..	..	..	397 c.c.,	..	15,880	..	..	..
									31,718
Total for 1914 .. ..	..	..	..	..	..	..	..	..	347,614
Typhoid vaccine—Amount issued (at 500 mills. per dose), equal to .. ..	..	..	..	..	..	..	..	..	57,292 doses.
Tuberculin dilutions .. ..	..	..	..	..	..	..	..	..	74
Amount of lymph sent out of New Zealand .. ..	..	..	..	..	..	..	..	..	2,500 tubes.

BACTERIOLOGICAL AND PUBLIC HEALTH LABORATORY, DUNEDIN.

Report for the Year ending 31st December, 1914, by Professor Champtaloup.

This report does not include the work of the clinical and pathological laboratories or the laboratory work in connection with the University classes of bacteriology and public health.

On the 1st April the University of Otago took over full control of the laboratory and staff, the Public Health Department and the Otago Hospital Board agreeing to make an annual contribution for work carried out on their behalf.

The laboratory is still situate within the Hospital buildings, but during the year the public of Dunedin and Otago subscribed £8,000, which, with a Government subsidy of a similar amount, is to be expended in erecting a complete pathological and bacteriological block on a site of half-acre which has been secured opposite the main hospital building.

During the year the following investigations have been continued or completed: (a) An investigation into the type of tubercle bacillus present in the lesions of children under sixteen years of age; (b) an investigation into the action of sensitized bacterial vaccines in puerperal sepsis and other conditions; (c) an investigation into the pathological significance of yeast-like cells in catheter specimens of urine.

During the greater part of the year we have been fortunate in having had the services of Dr. J. T. Bowie, who efficiently supervised the routine work of the laboratory, when our time was largely taken up with University work.

Specimens examined and reported on.

SPUTA.				
	Positive.	Negative.	Total.	
Examination for the tubercle bacillus	132	318	450	
General bacteriological examination .. .. .	..	..	239	
Total specimens of sputa examined .. .. .	..	..	689	

THROAT SWABS FOR DIPHTHERIA.

Positive.	Negative.	Total.
86	177	263

All suitable swabs are examined direct, and in a few cases immediate positive reports can be issued. Cultures are examined after twelve hours' and again after twenty-four hours' incubation. In one case only was the diphtheria bacillus found after twenty-four hours' incubation, where it had not been detected after twelve hours. No cases of Vincent's angina were reported during the year.

WIDAL REACTION.

	Positive.	Negative.	Total.
For typhoid	14	63	77
For paratyphoid fever	0	3	3
Total .. .. .	..	..	80

WASSERMAN REACTION IN SYPHILIS.

Positive.	Negative.	Total.
25	32	57

The original reaction (slightly modified) is the method used. The increased number of positive reactions as compared with previous years is partly due to the fact that practitioners are availing themselves more and more of the reaction in diagnosis, and partly because the number of cases of syphilis in the primary and secondary stages is on the increase in this district, which has in the past been singularly free from the disease.

EXAMINATION OF SMEARS AND EXUDATES FOR THE SPIROCHÆTA PALLIDA.

Positive.	Negative.	Total.
5	4	9

URINE.

	Positive.	Negative.	Total.
Tubercle bacillus	26	21	47
Typhoid bacillus	2	1	3
Streptococci	5	..	5
Staphylococcus (aureus or albus)	18	..	18
B. coli communis (group) including B. lactis ærogenes	43	..	43
Gonococcus .. .. .	..	1	1
Pneumococcus	1	..	1
Influenza bacillus	1	..	1
Sporothrix .. .. .	..	2	2
Torula	2	..	2
Enterococcus	1	..	1
Sterile specimens .. .. .	..	..	28
Total specimens .. .. .	..	..	152

The most noticeable feature of this group is the large increase of positive examinations for the tubercle bacillus, 26 as compared with 3 in 1912. In the majority of cases the result was confirmed by animal inoculation.

BACTERIOLOGICAL EXAMINATION OF PUS FROM VARIOUS SOURCES (BACTERIA ISOLATED).

Pneumococcus	11	B. lactis ærogenes	1
Gonococcus—positive, 10; negative, 7	17	Diphtheroids	15
Staphy. aureus	45	Strep. actinomyces—negative, 1	1
Staphy. albus	14	Sporothrix—negative, 1	1
B. coli	16	Sterile	14
Streptococci	31	Mixed infection—various	2
Tubercle bacillus—positive, 1; negative, 2	3		
B. proteus	1	Total specimens	174
B. friedlander	2		

BODY FLUIDS : BACTERIOLOGICAL EXAMINATION.

	Pleural Fluid.	Ascitic Fluid.	Arthritic Fluid.	Cerebro-spinal Fluid.	Miscellaneous.	Total.
B. influenza .. ..	..	..	..	2	..	2
Staphy. aureus .. ..	..	..	1	..	..	1
Tubercle	1	..	..	4	..	5
Streptococci	2	2	1	..	1	6
Pneumococcus	3	..	..	1	..	4
B. coli	1	1	..	1	2	5
Hooklets—negative, 1 ..	1	..	..	..	..	1
Sterile	11	3	6	9	5	34
Total	19	6	8	17	8	58

BODY FLUIDS : CYTOLOGICAL EXAMINATIONS.

Pleural fluid .. ..	..	..	..	..	..	..	11
Ascitic fluid .. ..	..	..	..	..	..	..	2
Arthritic fluid .. ..	..	..	..	..	..	..	5
Cerebro-spinal fluid ..	..	..	..	..	..	..	13
Blood films .. ..	..	..	..	..	..	..	15
Miscellaneous .. ..	..	..	..	..	..	..	1
Total .. ..	..	..	..	..	..	..	47

BLOOD CULTURES.

B. coli .. ..	..	..	..	..	..	..	1
Staphy. aureus .. ..	..	..	..	..	..	..	1
Streptococci .. ..	..	..	..	..	..	..	7
Sterile .. ..	..	..	..	..	..	..	10
Total .. ..	..	..	..	..	..	..	19

FEMALE GENITAL TRACT: EXAMINATION OF MORBID DISCHARGES.

	Intra Uterine Discharges.	Cervical Discharges.	Fallopian Tube.	Total.
Gonococcus	1	1	1	3
Staphylococcus aureus ..	3	..	..	3
Staphy. albus	2	2	..	4
Streptococci	20	1	..	21
B. coli	7	..	..	7
Diphtheroids	4	2	..	6
Pneumococcus	1	..	..	1
Sterile	6	..	4	10
Total .. ..	..	..	..	55

MISCELLANEOUS EXAMINATIONS.

	Positive.	Negative.	Total.
Catgut for sterility .. .. .	..	23	23
Milk for tubercle	1	20	21
Nasal discharge .. .. .	..	1	1
Fæces for parasites .. .. .	..	3	3
Fæces for typhoid bacilli	1	2	3
Hairs for ringworm	2	2	4
Cysts, &c., for hydatids	3	8	11
Precipitin reaction for hydatids .. .. .	..	1	1
Lung-puncture .. .. .	..	1	1
Nodules for actinomycos .. .. .	..	1	1
Disinfectants for germicidal efficiency .. .. .	..	..	2
Films for malarial parasites	2	..	2
Total .. .. .	..	..	73

WATER ANALYSIS : BACTERIOLOGICAL.

Total 11

AUTOGENOUS BACTERIAL VACCINES.

	Not sensitized.	Sensitized.
Staphylococcus aureus	9	1
Streptococcus	4	12
Gonococcus	6	..
B. coli.	9	2
Pneumococcus	3	..
B. friedlander .. .. .	..	3
B. diphtheria .. .. .	..	1
Micrococcus catarrhalis	1	..
Total	32	19

The output of autogenous vaccines has been largely reduced by the preparation every six to twelve months of polyvalent stock vaccines of virulent and recently isolated staphylococci and streptococci. In hospital and outpatient practice, lesions which after investigation are found to be due to either of these groups of organisms are treated in the first place by the corresponding laboratory stock vaccine, and an autogenous vaccine resorted to only in cases where subsequent events indicate it.

During the year the following stock vaccines were prepared :—

Stock Vaccine.	Quantity in Bulk.
Staphylococcus aureus (6 strains)	2,000 cc.
Streptococcus vaccine (12-15 strains)	1,000 cc.
Streptococcus (6 puerperal strains)	500 cc.
Sensitized streptococcus (puerperal)	200 cc.

SERA.

During the year the following sera have been prepared in the laboratory :—

Polyvalent antistreptococcal serum (horse).
 Hæmolytic sera rabbit *v.* sheep.
 Hæmolytic sera rabbit *v.* human.
 Antityphoid serum.

MISCELLANEOUS.

All tuberculin required in the hospital and much of that used in the district for diagnosis and treatment is diluted and put up ready for use.

Salvarsan and neo-salvarsan injections are also prepared ready for use, the intravenous route being almost entirely used. Several doses of salvarsanized serum have been prepared for practitioners.

THERAPEUTIC INOCULATION.

The practice of this department is now largely carried out by the Resident Medical Staff acting under the advice of the laboratory. Doubtful or difficult cases and patients from outside the hospital district are treated at the laboratory.

Summary of Analyses made in the Dominion Laboratory, Wellington.

Nature.	Object of Analysis.	Number.
FOR THE PUBLIC HEALTH DEPARTMENT.		
Acid "Shamrock"	Nature	1
Baking-powder	Purity	6
Castors	Capacity	1
Cider	Alcohol and preservatives	2
Cocoa	Purity	1
Coffee and chicory	Labelling	1
Colouring-matter	Re smoked fish	5
Cream	Purity	9
Cream of tartar	"	3
Fish (smoked)	Colouring-matter	25
Formalin	Formaldehyde	2
Grape-juice	Alcohol	2
Hubbard's rusks	Starch	1
Ice-cream	Purity	4
Ice-cream powder	Nature	1
Infants' food	Analysis, general	5
Lactogal	"	1
Lemon squash	Purity	1
Lemon essence	Analysis, general	1
Lemonade-powder	"	1
Limejuice	Purity	8
Lime-water	"	1
Liquid paraffin	"	17
Margarine	"	4
Milks	"	527
Nuts	Soundness	2
Oatmeal	Poisoning	1
Oil of lemon	Analysis, general	2
Paint	Lead	1
Pepper	Purity	4
Pickles, mixed	"	1
Preservatives	Analysis, general	7
Quinine port wine	"	2
Raspberry fruitex	"	1
Raspberry balm	Purity	2
Rutter process	Re milks .. .. .	..
Sugar of milk	Purity	1
Sulphur dioxide	"	1
Soccoline	"	1
Tea	"	1
Tinplate-ware	Lead	1
Vinegar	Purity	14
Whisky	Alcohol	13
Water	Analysis, general	34
Zinnatite	"	1
		720

POLICE DEPARTMENT.

Exhibits	Poisons	16
Sheep-dip	Analysis, general	2
Spirits	Adulteration	3
Stomach and contents	Poisons	5
		26

SUMMARY.

Public Health	720
Police	26
Total	746

Report on the Public Health Department's Laboratory, Dunedin, by O. J. W. Napier, B.A. (hon.). Camb., Government Analyst for Otago.

The work done in this laboratory from 1st April to 31st December, 1914, was necessarily rather limited, as this was the first year that work in connection with the Sale of Food and Drugs Act of 1908 was carried on in Dunedin. The work for the Public Health Department, as will be seen below, was mostly confined to the examination of milk samples, it being considered that this was by far the most important subject to be investigated, as, of course, milk lends itself far more easily to adulteration than any other food.

Unfortunately, owing to the war, none of the laboratory equipment ordered from England in May has yet arrived, and this lack of sufficient apparatus and also somewhat cramped quarters made it impossible to attempt any more work. However, ample space for work will be available in April, 1915, on the completion of the new University buildings, when the main Public Health Laboratory will be more than three times the size it is at present. In the basement of the new buildings there will also, in addition, be a bench for water-analysis, in a room free from all possible contamination with ammonia vapours.

During the year 1915 we hope to widen the scope of our work and to examine a much wider range of foodstuffs, &c., including infants' and diabetic foods, cordials, ice-creams, and air of schools and places of amusement, and also drugs.

On the arrival of the apparatus from England it is intended also to carry out the cryoscopic test for the detection and determination of adulteration of milk with water. The importance of this test is fully dealt with by the Dominion Analyst in the appendix to his forty-seventh annual report, for 1914.

The total number of samples received and reported on from 1st April to 31st December, 1914, was 183. Of these, 123 were for the Public Health Department, and were nearly all taken under the Sale of Food and Drugs Act, 1908; 19 were for other Government Departments; and 41 for firms and private individuals.

The analyses are classified as follows :—

1. Milks	..	..	..	..	..	..	..	112
2. Butters	..	..	..	..	..	..	..	2
3. Margarines (Customs Department)	..	..	..	..	..	..	..	5
4. Waters	..	..	..	..	..	..	..	18
5. Examinations for the Police Department	..	..	..	..	..	..	..	2
6. Miscellaneous	..	..	..	..	..	..	..	44
Total	..	..	..	..	..	..	..	183

The nature of the analyses done for the various Government Departments is shown as follows :—

Public Health Department.—Samples taken by the Inspectors of this Department under the Sale of Food and Drugs Act, 1908, were almost entirely confined to milks, a few samples of butters, vinegars, and chocolate being taken as well.

Of the 112 samples of milk collected, 12 were below standard in solids other than milk-fat, and 2 below standard in milk-fat. No preservative was found in any of the samples. The average analysis of these milks was :—

	Per Cent.
Fat	4.09
Solids not fat	8.65
Total solids	12.74

The following are three of the most varied results obtained, and are of interest :—

	Fat, per Cent.	Solids not Fat, per Cent.
Highest in fat	8.1	8.62
Lowest in fat and solids not fat	2.8	6.95
Highest in solids not fat	5.2	9.55

The butters were genuine butter-fat and contained borax within the prescribed limits, the water being well below the maximum allowed (16 per cent.).

The vinegars, comprising both locally manufactured vinegars and vinegars made by English firms, all complied with the regulations, and contained no adulterants.

Customs Department.—The only samples analysed for this Department were five samples of margarine, four of which complied with the Margarine Act of 1908, but one of which did not comply, in that it was strongly coloured with anatto and contained no sesame-oil.

Police Department.—Two cases were investigated for this Department, one case of suspected poisoning in which no trace of poison either organic or inorganic could be found, and the other a case of strychnine poisoning in which a quantity of strychnine was isolated from the specimens submitted by the Department.

Defence Department.—The 12 samples examined for this Department consisted of 6 samples of water drawn from the ballast-tanks of the troopship "Ruapehu." These were examined for their chlorine-content. The water was to be used for horses, and the examination was for the purpose of ascertaining whether the ballast-tanks were sufficiently free of sea-water. The chlorine-content of these six samples was below 10 parts in 100,000.

The other six samples were two of coffee and chicory, one of black pepper, one of white pepper, and two of condensed milks. The analyses were to ascertain whether the samples complied with the Army Service Corps Regulations.

Details of samples analysed according to the list above :—

1. Milk : 112 samples for the Public Health Department.
2. Butter : 2 samples for the Public Health Department.
3. Margarine : 5 samples for the Customs Department.
4. Water : Of the 18 samples analysed, 10 were for drinking purposes, six for the Customs Department (q.o.), and two for the Otago Acclimatization Society for the purpose of ascertaining suitability for fish-stocking.
5. Examinations for Police Department (q.o.).
6. Miscellaneous.—The 44 samples under this heading include patent foods for infants and invalids (to ascertain if these conformed with the regulations for labelling under the Sale of Food and Drugs Act, 1908), condensed milks, rice, coffee, pepper, chocolate, milk, sugar, limejuice, vinegar, oils, guanoses, phosphate rocks, samples of coke and steel for sulphur, and also two samples of human milk.

Schedule of specimens analysed from 1st April to 31st December, 1914 :—

1. MILK.

(Contributed by the District Health Officer.)

No.	Locality.	No.	Locality.
3-8	Dunedin.	64-65	Queenstown.
9-11	Invercargill.	66-71	Dunedin.
12-17	Dunedin.	72-75	Gore.
18-23	Invercargill.	84-89	Dunedin.
24-29	"	90-96	Oamaru.
30-35	"	97-104	Dunedin.
36-41	Dunedin.	105-108	Gore.
42-47	"	109-113	Dunedin.
48-53	Invercargill.	114-119	"
54-59	"	121-123	Bluff.
60-63	Gore.		

2. BUTTER.

(Contributed by the District Health Officer.)

No.	Locality.
1 and 2	Dunedin.

3. MARGARINE.

(Contributed by the Customs Department.)

No.	Locality.
B8-12	Dunedin.

4. WATERS.

No.	Locality.	Contributor.
B14	Milton	Milton School Committee.
B15 and 16	Balclutha	Balclutha Corporation.
B18-24	Dunedin and neighbourhood	Dunedin City Corporation.
B31 (6)	T.s. "Ruapehu," Port Chalmers	Defence Department.
B32 and 33	Leith, Dunedin	Otago Acclimatization Society.

5. MISCELLANEOUS.

No.	Nature of Specimen.	Locality.	Contributor.
76-83	Vinegar ..	Dunedin ..	District Health Officer.
120	Chocolate ..	" ..	" ..
B1-2	Malt liquor ..	" ..	Murdoch and Co. "
B3	Vinegar ..	" ..	Marshall's Proprietary.
B4	Human milk ..	Christchurch ..	Hospital.
B5	Malt liquor ..	Dunedin ..	Murdoch and Co.
B7	Food for infants ..	" ..	R. Hudson and Co.
B13	Vinegar ..	" ..	Marshall's Proprietary.
B17	Malt liquor ..	" ..	Murdoch and Co.
B25	Steel ..	Green Island ..	Otago Rolling-mills.
B26-28	Guano ..	Dunedin ..	N.Z. Loan and Mercantile Agency Company.
B29-30	Coke ..	Green Island ..	Otago Rolling-mills.
B34	Limejuice ..	Dunedin ..	Taine and Co.
B36	Spindle-oil ..	" ..	A. E. Usherwood and Co.
B37	Rice ..	" ..	W. Gregg and Co.
B38	Moist refuse ..	" ..	" ..
B39	Limejuice ..	" ..	Wellpark and Co.
B40	Human milk ..	Christchurch ..	Hospital.
B41	Castor-oil ..	Dunedin ..	A. E. Usherwood and Co.
B42 and 43	Coffee and chicory ..	" ..	Defence Department.
B44 and 45	Pepper ..	" ..	" ..
B46 and 47	Condensed milk ..	" ..	" ..
B49	Milk-sugar ..	Edendale ..	Sugar of Milk Company, Edendale.

APPENDIX II.—HOSPITAL AND CHARITABLE AID.

TABLE I. SHOWING RECEIPTS OF HOSPITAL AND CHARITABLE AID BOARDS FOR THE YEAR ENDED 31ST MARCH, 1915.

Governing Bodies.	Balance from last Year.	Contributed by Government.	Contributed by Local Authorities: Ordinary Levies.	Voluntary Contributions.	Rents, Interests, and Dividends.	Recoveries from those assisted (other than those included in Column 2).	Payments on Account of Patients, &c., made by other Hospital and Charitable Aid Boards.	Receipts from other Sources.	Total.
	£	£	£	£	£	£	£	£	£
HOSPITAL AND CHARITABLE AID BOARDS.									
Bay of Islands	381	2,704	2,271	293	63	1,227	..	284	7,224
Whangarei	277	3,237	2,584	754	2	1,960	267	72	9,154
Kaipara	1,473	500	1,186	58	..	369	..	30	3,617
Auckland	5,447	26,041	23,160	73	2,012	11,821	212	3,076	71,842
Waikato	647	6,778	8,902	255	468	2,423	..	620	20,093
Thames	1,891	3,506	2,922	27	22	1,964	..	652	10,984
Waihi	63	1,798	1,500	236	..	742	347	15	4,701
Coromandel	149	675	330	325	2	222	..	17	1,721
Bay of Plenty	390	26	808	204	..	84	..	100	1,613
Cook	966	7,672	8,681	460	34	1,644	..	407	19,864
Waiapu	62	700	1,100	413	..	357	..	34	2,667
Wairoa	269	1,143	818	81	..	480	..	44	2,834
Hawke's Bay	1,719	6,477	6,760	3,001	96	2,908	1,311	576	22,848
Waipawa .. .. .	..	5,588	3,587	1,411	..	1,079	..	230	11,895
Taranaki	547	3,403	3,206	248	56	3,653	71	355	11,539
Stratford	730	1,039	1,160	7	5	1,002	4	14	3,960
Hawera	1,638	1,904	1,934	22	..	657	..	307	6,462
Patea	138	584	715	..	237	503	..	25	2,202
Wanganui	3	6,545	5,165	910	1,279	1,796	..	393	16,091
Palmerston North	2,977	11,080	7,785	185	25	1,875	..	312	24,239
Wellington	5,438	22,401	20,848	616	3,704	6,648	66	809	60,529
Wairarapa	2,360	2,845	4,341	72	8	1,964	91	332	12,012
Wairau	2,866	3,893	5,529	81	44	970	220	56	13,658
Picton	185	812	980	5	41	638	102	312	3,076
Nelson	18,270	6,371	4,722	1,163	530	1,852	..	343	33,252
Westland	194	3,210	2,169	705	102	1,649	..	45	8,073
Buller	259	3,380	1,871	1,189	58	1,781	..	37	8,576
Inangahua	113	2,002	1,600	479	..	781	..	51	5,027
Grey .. .. .	..	2,771	2,325	15	..	1,707	..	275	7,094
North Canterbury	3,363	27,159	28,726	3,023	394	10,442	187	134	73,428
Ashburton	508	1,529	2,111	76	35	713	26	464	5,461
South Canterbury .. .. .	..	6,363	5,250	332	30	1,766	72	291	14,104
Waitaki	802	891	731	8	4	839	38	2	3,316
Otago .. .. .	..	19,574	15,831	1,849	833	8,131	1,567	5,979	53,763
Vincent	379	1,171	687	276	5	289	16	38	2,862
Maniototo .. .. .	..	1,198	719	205	..	467	..	19	2,608
Southland	373	7,154	5,324	833	304	3,233	111	141	17,474
Wallace and Fjord	390	1,311	1,548	131	4	633	..	22	4,038
Totals	55,268	205,434	189,886	20,021	10,397	81,270	4,710	16,916	583,900
SEPARATE INSTITUTIONS.									
<i>Hospitals—</i>									
Mercury Bay	531	386	..	407	..	227	..	15	1,566
Oamaru	2,520	443	..	358	1,118	431	130	262	5,262
Totals	3,050	830	..	765	1,118	658	130	276	6,828
<i>Charitable Institutions—</i>									
Jubilee Institute for the Blind	767	3,067	..	2,219	1,694	283	320	..	8,349
Wellington Society for the Relief of Aged and Needy	6,822	401	..	487	351	213	..	10	8,284
Wellington Ladies' Christian Association	678	58	..	148	33	..	..	11	929
Wellington Convalescent Home	1,478	164	..	116	100	126	..	..	1,984
St. Andrew's Orphanage, Nelson	35	515	..	908	17	682	350	15	2,523
Reefton Ladies' Benevolent Society	122	148	..	104	3	..	..	29	406
Hawke's Bay Children's Home	152	318	..	433	136	597	..	21	1,656
Totals	10,054	4,671	..	4,416	2,334	1,901	670	86	24,131
GOVERNMENT INSTITUTIONS.									
<i>Maternity Homes—</i>									
St. Helens Hospitals—									
Auckland .. .. .	..	568	..	..	..	868	..	230	1,666
Wellington .. .. .	..	1,040	..	..	..	813	..	281	2,134
Christchurch .. .. .	..	693	..	..	..	757	..	220	1,669
Dunedin .. .. .	..	913	..	..	..	656	..	165	1,733
<i>Consumptive Sanatorium—</i>									
Cambridge .. .. .	..	3,003	..	25	..	2,671	..	1069	6,768
Totals .. .. .	..	6,218	..	25	..	5,764	..	1,964	13,971
Grand totals	68,372	217,152	189,886	25,227	13,849	89,592	5,510	19,242	628,831

TABLE II.—SHOWING THE EXPENDITURE OF HOSPITAL AND CHARITABLE AID BOARDS FOR THE YEAR ENDED 31ST MARCH, 1915.

Governing Bodies.	Hospital Maintenance.	Charitable Aid.		Public Health.	Subsidies to Medical Associations.	District Nursing.	Administration.	Capital.	Amounts paid to other Hospital and Charitable Aid Boards.	Rents, Rates, and Interest.	Other Expenses.	Total.
		Indoor Relief.	Outdoor Relief.									
HOSPITAL AND CHARITABLE AID BOARDS.												
Bay of Islands ..	£ 3,210	£ 180	£ 579	£ 456	£ 415	£ ..	£ 264	£ 1,279	£ ..	£ ..	£ 19	£ 6,402
Whangarei ..	3,824	1,002	319	76	..	60	397	764	6	14	25	6,488
Kaipara ..	1,840	337	241	47	..	52	331	547	17	..	8	3,419
Auckland ..	29,030	13,105	9,768	625	..	54	1,694	8,144	35	..	5,632	68,087
Waikato ..	10,127	1,078	585	596	370	316	579	2,161	..	349	674	16,834
Thames ..	4,193	1,318	461	116	..	7	436	1,342	286	..	35	8,193
Wairarapa ..	3,805	..	448	22	..	..	271	110	..	..	2	4,657
Wairarapa ..	1,276	54	91	..	..	..	108	147	8	30	9	1,723
Coromandel ..	939	..	310	492	..	41	213	1,333	232	..	139	3,701
Bay of Plenty ..	5,917	1,076	268	338	37	242	730	10,427	..	107	385	19,528
Cook ..	1,407	31	2	698	..	227	85	314	..	3	17	2,785
Wairarapa ..	1,772	..	53	160	..	6	105	538	32	33	15	2,715
Hawke's Bay ..	12,086	3,345	880	160	..	..	780	4,572	137	86	73	22,119
Waipawa ..	6,043	1,634	486	129	..	..	295	1,736	137	2	162	10,624
Taranaki ..	6,037	1,459	214	143	..	329	659	168	..	170	153	9,333
Stratford ..	1,960	206	234	198	..	..	192	652	50	83	309	3,884
Hawera ..	3,289	101	273	477	..	68	306	1,025	531	54	..	6,124
Patea ..	1,494	174	..	175	..	..	115	..	..	78	100	2,136
Wanganui ..	9,026	1,896	481	780	..	518	786	1,132	..	147	468	15,232
Palmerston North ..	5,421	591	1,003	201	..	50	465	15,032	31	35	218	23,048
Wellington ..	35,268	8,849	2,317	547	..	94	2,773	4,615	..	1,044	940	56,448
Wairarapa ..	7,359	748	1,171	632	..	390	560	958	51	3	33	11,903
Wairarapa ..	3,447	701	434	194	..	182	182	11,059	108	97	279	16,685
Wairarapa ..	2,059	217	73	19	..	..	82	434	220	112	50	3,267
Picton ..	4,416	1,614	1,487	294	39	..	455	1,609	26	..	380	10,320
Nelson ..	7,135	184	613	7	42	..	554	378	23	85	..	9,021
Westland ..	3,934	953	149	11	1,078	..	306	600	..	15	156	7,201
Buller ..	2,488	55	768	137	..	..	198	21	..	..	..	3,667
Inangahua ..	5,274	237	681	327	..	..	287	212	58	..	182	7,258
Grey ..	32,076	11,781	3,575	921	110	997	2,604	23,499	49	411	2,682	78,705
North Canterbury ..	2,904	74	151	201	..	..	304	1,197	143	18	108	5,099
Ashburton ..	7,857	1,396	1,462	266	..	615	692	850	26	35	11	13,210
South Canterbury ..	2,904	1,076	552	201	..	183	186	28	356	..	..	2,583
Waitaki ..	26,792	7,405	4,509	638	..	..	3,328	15,901	405	358	633	59,969
Otago ..	1,654	..	315	..	92	..	257	..	263	..	23	2,604
Vincent ..	1,099	73	97	67	..	..	173	97	59	..	268	1,932
Maniototo ..	9,962	3,314	826	333	50	344	910	1,403	440	56	367	18,005
Southland ..	2,278	291	144	50	..	..	198	994	..	4	2	3,960
Wallace and Ford ..	..	..	..	..	..	..	..	..	..	..	..	..
Totals ..	268,694	66,557	36,019	10,734	2,233	4,775	22,862	115,279	3,728	3,430	14,556	548,868

TABLE III.—SHOWING HOSPITAL STATISTICS FOR YEAR ENDED 31ST MARCH, 1915.

Hospitals controlled by Boards.	Staff.				Number of Beds.				Average Number of Staff per Diem receiving Board.		Average Number of Occupied Beds per Diem.		Average Number of Occupied Beds per Diem to each of Nursing Staff.		Number of Patients under Treatment during Year.		Deaths.	Individual Average Days' Stay.	Average Annual Cost of Maintenance and Administration per Occupied Bed per Annum.		Patients' Payments per Occupied Bed per Annum.		Average Annual Cost of Maintenance and Administration per Occupied Bed after deducting Patients' Payments.		Weekly Maintenance Charge.				Number of Patients.	Out-patients.															
	Honorary.	Medical.		Nursing.		For Males.	For Females.	Children's Cots.	Isolation.	Total.	Average Number of Occupied Beds per Diem.	Average Number of Occupied Beds per Diem to each of Nursing Staff.	Male.	Female.	Total.	Deaths.			Individual Average Days' Stay.	Average Annual Cost of Maintenance and Administration per Occupied Bed per Annum.	Patients' Payments per Occupied Bed per Annum.	Average Annual Cost of Maintenance and Administration per Occupied Bed after deducting Patients' Payments.	£	s.	d.	£	s.	d.			£	s.	d.	£	s.	d.									
		Stipendiary.	Resident.	Non-resident.	Trained Nurses.																																Probationers.	Housemaids, and Launderesses.	Wardmen, Porters, and Gardeners.						
																																								Resident.	Non-resident.	Trained Nurses.	Probationers.	Housemaids, and Launderesses.	Wardmen, Porters, and Gardeners.
26	(a)5	2	39	63	42	36	168	118	112	75	69	374	311.0	3.0	2,427	1,856	4,283	278	26	101.8	17.4	84.4	2	2	0	4,787	18,926																		
Wellington	17	(a)7	..	21	84	25	32	153	158	96	25	57	336	284.0	2.7	2,424	1,586	4,010	338	26	105.3	24.7	80.6	2	2	0	3,015	15,706																	
Auckland	20	(a)6	4	24	63	27	15	118	128	110	32	24	294	226.0	2.6	1,708	1,247	2,955	242	28	104.5	24.5	72.9	1	15	0	2,891	12,379																	
Dunedin	9	(a)6	..	22	73	37	22	133	97	75	40	26	238	205.0	2.2	1,903	1,477	3,380	220	22	103.4	20.6	82.8	1	15	0	1,030	1,949																	
Christchurch	..	3	..	7	31	15	8	62	59	28	8	15	110	93.0	2.5	803	477	1,280	60	27	103.4	20.6	85.2	2	2	0	1,030	1,949																	
Waikato	..	4	2	1	11	35	22	8	72	70	52	22	164	118.0	2.5	689	437	1,126	105	38	104.2	19.0	85.2	2	2	0	1,030	1,949																	
Napier	6	1	..	9	21	10	6	46	48	25	18	12	103	78.0	2.6	570	372	942	48	30	88.9	..	..	1	1	0	1,047	2,011															
Wanganui	..	..	..	7	18	13	3	38	45	25	12	6	88	70.0	2.9	547	360	907	76	28	88.9	19.9	69.0	1	15	0	1,047	2,011														
Southland	2	1	..	9	21	10	6	46	48	25	18	12	103	78.0	2.6	570	372	942	48	30	88.9	19.9	69.0	1	15	0	1,047	2,011																	
Palmerston North	..	..	3	6	15	7	4	29	29	33	5	20	87	58.0	2.9	498	421	919	48	23	99.5	31.1	68.4	1	4	6	259	1,779															
Thames	..	1	..	6	12	8	2	27	40	18	7	6	71	54.0	3.0	399	289	688	44	28	78.6	29.2	49.4	1	4	6	259	1,779																	
New Plymouth	..	..	4	7	23	6	3	36	28	19	6	22	75	53.0	1.7	402	306	708	50	28	119.9	52.9	67.0	2	2	0	..	..															
Cook	4	1	..	9	22	11	9	48	78	39	7	14	138	50.0	1.7	431	222	653	36	28	130.5	25.1	105.4	£1/10 to	£1/8	25	100																		
Timaru	4	1	..	5	22	11	3	39	43	34	8	8	93	49.0	1.8	405	297	702	48	25	116.4	16.5	99.9	1	15	0	248	2,188																	
Nelson	..	1	..	4	13	9	2	28	33	31	10	6	80	49.0	2.9	326	212	538	48	34	90.9	25.2	65.7	1	15	0	300	2,600																	
Wairarapa	..	..	2	5	12	6	2	20	30	16	..	13	59	38.0	3.2	228	185	413	22	33	107.3	19.5	87.8	1	1	0	..	..															
Whangarei	..	1	..	5	11	6	1	18	21	17	9	6	53	35.0	2.2	347	230	577	31	22	117.2	44.3	72.9	1	8	0	..	..															
South Wairarapa	3	1	..	3	6	5	2	16	22	11	1	..	34	28.0	3.1	135	58	193	17	52	95.9	19.3	76.6	£1 to £3/3	£1 to £3/3	..	..	..														
Dannevirke	2	..	..	4	6	6	3	19	24	16	3	..	43	26.0	2.6	198	99	297	17	32	116.8	18.9	97.9	1	8	0	..	..															
Masterton	3	..	..	6	7	7	2	22	18	13	2	15	48	26.0	2.0	240	160	400	17	24	142.6	29.8	112.8	£1/1 to £3/3	£1/1 to £3/3	..	..	..														
Wairau	..	..	2	2	8	4	3	17	22	8	2	10	42	24.0	2.4	196	118	314	24	28	133.2	27.5	105.7	1	11	6	..	..															
Waipawa	..	..	1	4	5	6	2	17	30	20	2	..	52	22.0	2.4	222	129	351	19	23	149.9	31.2	118.7	1	8	0	..	..															
Hawera	..	..	1	4	6	4	2	14	19	12	6	6	43	21.0	2.1	198	114	312	14	25	170.4	29.8	140.6	2	2	0	..	..															
Wallace and Ford	..	..	1	3	6	4	1	14	18	14	..	8	40	21.0	2.3	166	100	266	24	28	114.4	25.8	88.6	1	4	6	..	..															
Westport	..	..	2	2	8	5	2	15	20	11	3	..	34	19.3	1.9	141	82	223	35	31	173.2	60.8	112.4	1	10	0	..	..															
Ashburton	..	..	2	4	5	5	2	12	21	5	5	12	43	19.2	2.1	209	98	307	30	23	167.1	37.1	130.0	£1/11/6 to	£2/12/6	12	20																
Rawene	..	..	1	1	3	2	1	7	9	9	2	..	20	16.2	4.0	60	64	124	8	47	71.3	24.9	46.4	1	15	0	..	..															
Gore	..	..	1	2	3	3	1	8	9	8	2	2	21	15.3	3.1	118	90	208	10	27	110.5	40.6	69.9	1	15	0	..	..															
Stratford	..	..	1	..	2	3	2	9	12	5	5	6	25	14.4	2.4	130	113	243	15	27	147.3	68.8	78.5	2	2	0	4	8															
Picton	..	..	..	2	6	2	7	10	10	9	2	14	35	11.9	2.4	95	119	214	6	20	..	..	..	1	11	6	6	..											
Northern Wairoa	..	..	1	3	2	3	1	8	10	7	1	..	18	11.6	2.3	129	56	185	10	23	170.3	28.3	142.0	1	15	0	..	..															
Waimate	..	..	1	1	4	3	2	7	9	13	2	..	39	11.0	2.2	111	63	174	8	23	162.6	29.7	132.9	1	15	0	35	388															
Okaki	1	..	1	4	..	5	3	7	9	7	2	..	18	10.4	3.0	128	52	180	19	21	160.9	24.3	136.6	2	2	0	..	..															
Tihape	..	..	1	4	..	5	3	7	9	7	2	..	11	10.8	2.7	115	72	187	14	21	..	..	..	1	1	0	..	..															
Maniototo	..	..	2	2	2	2	1	6	6	4	1	..	27	10.1	2.5	57	47	104	4	35	112.7	44.3	68.4	1	5	0	28	98															
Patea	..	..	1	1	3	2	4	5	9	7	..	4	20	10.1	2.0	108	68	176	13	21	152.9	43.7	109.2	2	2	0	..	..															
Wairoa	1	..	1	2	3	2	1	8	13	7	6	..	18	8.3	1.7	109	79	188	6	16	226.1	34.5	171.6	1	8	0	..	..															
Coromandel	1	..	1	2	2	1	1	6	15	4	1	4	24	7.6	1.9	73	33	106	5	26	160.5	29.3	131.2	2	9	0	1,092	3,276																	

(a) Including dispensers. *After deducting estimated cost of out-patients.

TABLE IV.—SHOWING HOSPITAL EXPENDITURE FOR THE YEAR ENDED 31st MARCH, 1915.

Hospitals controlled by Boards.																			Total.	
Average Number of Occupied Beds.	Average Number of Staff receiving Board.	Individual Average Days' Stay of Patients.	Provisions		Surgery and Dispensary.		Domestic and Establishment.		Salaries and Wages.		Total Maintenance.		Administration.		Maintenance and Administration.		Capital Expenditure.	Miscellaneous Expenditure.		
			Total Cost.	Cost per Occupied Bed.	Total Cost.	Cost per Occupied Bed.	Total Cost.	Cost per Occupied Bed.	Total Cost.	Cost per Occupied Bed.	Total Cost.	Cost per Occupied Bed.	Total Cost.	Cost per Occupied Bed.	Total Cost.	Cost per Occupied Bed.				
311.0	168	26	6,775	£	3,491	£	9,153	£	11,640	£	31,060	£	1,545	£	32,605	£	3,388	£	37,536	
284.0	153	26	7,100	25.0	3,251	11.4	8,145	28.7	10,534	37.1	29,030	102.2	869	3.1	29,898	105.3	6,263	235	36,396	
226.0	118	28	4,248	18.8	1,611	7.1	5,165	22.8	8,433	37.3	19,456	86.1	1,598	7.1	21,055	93.2	1,283	68	22,405	
205.0	133	22	5,295	25.8	2,087	10.2	4,905	23.9	8,694	42.4	20,982	102.3	1,071	5.2	22,052	107.5	15,134	2,160	39,346	
118.0	72	38	2,841	24.1	1,923	16.3	2,960	25.1	4,361	36.9	12,086	102.4	305	2.6	12,391	105.0	4,349	18	16,758	
93.0	62	27	3,248	34.9	842	9.0	1,551	16.7	3,504	37.7	9,145	98.3	479	5.1	9,624	103.4	1,750	349	11,723	
78.0	46	30	1,990	25.5	1,010	12.9	1,836	23.5	2,983	38.2	7,819	100.2	571	7.3	8,390	107.5	1,132	..	9,522	
70.0	38	28	1,240	17.7	609	8.7	1,369	19.5	2,846	40.7	6,064	86.6	254	3.6	6,318	90.3	201	..	6,519	
58.0	29	23	1,350	23.3	600	10.3	1,613	27.8	1,858	32.0	5,421	93.4	352	6.1	5,773	99.5	7,896	218	13,887	
54.0	27	28	1,132	20.9	517	9.6	1,015	18.8	1,529	28.3	4,193	77.6	142	2.6	4,334	80.2	1,199	..	5,533	
53.0	36	28	1,491	28.1	933	17.6	1,325	25.0	2,287	43.2	6,037	113.9	319	6.0	6,355	119.9	..	19	6,374	
50.0	48	28	1,132	21.6	583	11.7	1,720	34.4	2,481	49.6	5,917	118.3	614	12.2	6,531	130.6	10,427	289	17,246	
49.0	39	25	1,053	21.4	708	14.4	1,494	30.5	2,340	47.8	5,595	114.2	217	4.4	5,812	118.6	412	..	6,223	
49.0	28	34	1,150	23.5	397	8.1	953	19.4	1,915	39.1	4,416	90.1	171	3.5	4,587	93.6	1,547	232	6,365	
38.0	20	33	1,018	26.8	362	9.5	850	22.4	1,576	41.5	3,805	100.2	271	7.1	4,076	107.3	110	2	4,188	
35.0	18	22	869	25.1	388	11.0	769	21.9	1,798	51.4	3,824	109.3	278	7.9	4,102	117.2	711	35	4,848	
28.0	16	52	637	22.7	181	6.5	746	26.6	1,038	37.1	2,602	92.9	85	3.0	2,687	95.9	478	..	3,166	
26.0	19	32	782	30.1	183	7.0	803	30.9	1,158	44.5	2,925	112.5	113	4.3	3,039	116.8	328	113	3,479	
26.0	22	24	762	29.3	382	14.7	1,070	41.1	1,412	54.3	3,626	139.4	84	3.2	3,710	142.6	256	..	3,966	
24.0	17	28	750	31.2	293	12.2	792	33.0	1,250	52.1	3,085	128.5	112	4.7	3,197	133.2	11,000	..	14,197	
22.0	17	23	791	35.9	432	19.6	759	34.5	1,136	51.6	3,117	141.7	182	8.2	3,299	149.9	1,409	18	4,726	
21.0	14	25	563	26.8	298	14.2	1,158	55.1	1,270	60.5	3,289	156.6	291	13.8	3,580	170.4	1,025	..	4,605	
21.0	14	28	641	30.5	125	5.9	496	23.6	1,016	48.4	2,278	108.5	125	5.9	2,403	114.4	55	2	2,460	
19.3	15	31	566	29.3	382	19.8	655	33.9	1,474	76.4	3,077	159.4	267	13.8	3,344	173.2	33	170	3,547	
19.2	12	23	496	25.8	272	14.2	1,023	53.3	1,112	57.9	2,904	151.2	304	15.8	3,208	167.1	1,197	26	4,430	
16.2	7	47	232	14.3	84	5.2	295	18.2	496	30.6	1,107	68.3	49	3.0	1,156	71.3	105	..	1,261	
15.3	8	27	373	24.4	113	7.4	353	23.1	764	49.9	1,603	104.8	88	5.7	1,691	110.5	48	..	1,739	
14.4	9	22	432	30.0	74	5.1	503	34.9	951	66.0	1,960	136.1	162	11.2	2,121	147.3	652	..	3,215	
11.9	10	20	417	35.0	117	9.8	493	41.5	1,032	86.7	2,059	173.0	82	6.9	2,141	180.9	434	401	2,977	
11.6	8	23	442	38.1	86	7.4	295	25.4	1,016	87.6	1,840	158.5	136	11.7	1,976	170.3	543	3	2,522	
11.0	9	23	462	42.0	175	15.9	394	35.8	678	61.6	1,709	155.3	99	9.0	1,808	164.3	13	23	1,844	
10.4	7	21	330	31.7	47	4.5	461	44.3	697	67.0	1,535	147.6	139	13.3	1,674	160.9	1,155	41	2,871	
10.8	6	21	233	21.6	119	11.0	246	22.7	608	56.3	1,206	111.6	90	8.3	1,296	119.9	..	..	1,296
10.1	5	35	199	19.7	45	4.4	226	22.4	629	62.3	1,099	108.8	45	4.4	1,143	113.2	..	..	1,155
10.1	8	21	258	25.5	208	20.6	250	24.7	778	77.0	1,494	147.9	115	11.3	1,608	152.9	..	178	1,787	
8.3	8	16	310	37.4	249	29.9	355	42.8	858	103.3	1,772	213.5	105	12.6	1,877	226.1	538	48	2,463	
7.6	6	26	219	28.7	131	17.2	241	31.7	685	90.2	1,276	167.8	108	14.2	1,383	182.0	147	39	1,570	
6.6	5	17	322	48.7	49	7.4	131	19.8	481	72.8	983	148.8	52	7.8	1,034	156.6	12	..	1,046	
6.1	8	18	163	26.8	30	5.0	240	39.3	698	114.3	1,131	185.4	54	8.9	1,185	194.3	224	..	1,409	
6.0	6	21	145	24.3	39	6.4	155	25.9	544	90.7	883	147.3	41	6.8	925	154.1	..	..	1,039
5.7	3	43	156	27.4	26	4.5	198	34.8	379	66.4	759	133.1	74	13.0	833	146.1	26	..	860	
4.8	3	24	120	24.9	56	11.6	221	46.0	183	38.1	579	120.6	26	5.3	605	125.9	..	..	605
4.4	3	27	167	38.0	30	6.8	298	67.7	501	113.8	996	226.4	90	20.4	1,086	246.8	37	..	1,123	

Tuapeka ..	4-4	4	10	190	43-1	25	5-8	182	41-4	382	86-8	779	177-0	71	16-2	850	193-2	..	10	860
Bay of Islands ..	4-4	5	17	227	51-6	89	20-2	263	59-7	641	145-7	1,220	277-2	87	19-7	1,306	296-9	..	..	2,366
Waiau ..	4-1	6	25	230	56-1	43	10-4	390	95-2	744	181-4	1,407	343-1	85	20-8	1,492	363-9	1,060	53	1,859
Dunstan ..	3-6	4	23	177	49-3	77	21-2	217	60-1	463	128-3	933	259-0	69	19-1	1,002	278-1	..	..	1,002
Cromwell ..	3-3	5	19	78	23-7	35	10-5	170	51-5	439	132-9	721	218-6	44	13-2	765	231-8	..	..	765
Tauranga ..	3-3	4	17	166	30-3	26	7-8	77	23-2	226	68-5	495	149-8	37	11-2	532	161-0	601	..	1,132
Denniston ..	2-4	3	23	206	85-9	72	30-0	112	46-8	466	194-3	837	357-0	39	16-4	896	373-4	299	1	1,196
Opotiki ..	2-1	2	15	89	42-6	1	0-6	78	37-0	170	81-1	339	161-3	50	23-6	388	184-9	752	..	1,140
Kaikoura ..	1-6	3	21	77	30-3	6	3-5	105	62-1	220	81-1	383	225-1	19	11-3	402	236-4	..	..	402
Havelock ..	1-4	2	10	118	84-1	112	10-2	106	66-3	162	101-5	362	226-1	28	17-2	389	243-3	..	..	448
Otira ..	1-4	2	10	118	84-1	112	79-8	147	105-0	620	442-7	996	711-6	59	41-9	1,055	753-5	..	..	1,055
Akaroa ..	1-0	2	12	50	49-9	8	7-6	66	66-4	150	150-3	274	274-2	14	13-8	288	288-0	..	..	288
Lytelton Casualty Ward ..	..	2	..	43	..	6	..	69	..	157	..	275	..	14	..	289	..	..	..	289
Port Chalmers ..	..	1	2	16	..	2	..	48	..	79	..	144	..	15	..	160	..	12	..	172
Kaitangata ..	..	1	5	52	..	13	..	36	..	97	..	198	..	22	..	220	..	3	..	223
Waitu Nurses' Home ..	..	..	..	25	..	44	..	15	..	104	..	188	..	21	..	210	..	1,129	..	1,338
<i>Hospitals which are also People's Homes—</i>																				
Gray River ..	64-0	25	43	1,236	19-3	355	5-5	1,530	23-9	2,151	33-6	3,272	82-3	217	3-4	5,488	85-7	212	3	5,702
Westland ..	36-0	15	82	973	27-0	270	7-5	926	25-7	1,007	28-0	3,176	88-2	174	4-8	3,350	93-0	378	194	3,922
Inangahua ..	30-0	9	59	804	26-8	176	5-9	568	18-9	939	31-3	2,488	82-9	198	6-6	2,686	89-5	21	..	2,707
Kumara ..	23-0	9	90	617	26-8	83	3-6	518	22-5	674	29-3	1,892	82-3	39	1-7	1,931	84-0	..	..	1,931
Totara ..	11-0	3	100	260	23-6	106	9-6	133	12-1	570	51-8	1,069	97-2	36	3-3	1,106	100-5	..	..	1,106
Totals and averages ..	2,346	1,408	28	58,588	25-0	25,100	10-7	63,440	27-0	102,081	43-5	249,210	106-2	13,507	5-7	262,717	111-9	80,470	6,944	350,131
<i>SPECIAL HOSPITALS.</i>																				
<i>Infectious-disease Hospitals—</i>																				
Christchurch ..	23-0	6	37	376	16-3	37	1-6	802	34-9	564	24-5	1,779	77-3	90	3-9	1,869	81-2	2,284	..	4,153
Dunedin ..	11-0	2	47	177	16-1	28	2-5	165	14-9	275	25-0	644	58-5	53	4-8	698	63-4	..	..	698
Timaru ..	6-1	5	26	174	28-6	11	1-8	233	38-2	134	22-0	553	90-6	43	7-1	596	97-7	41	..	638
Invercargill ..	1-1	3	30	83	75-5	8	7-4	271	246-4	178	161-4	540	490-6	45	40-6	584	531-2	..	..	584
Totals and averages ..	41-0	16	39	810	19-7	83	2-0	1,471	35-9	1,151	28-1	3,516	85-7	232	5-7	3,748	91-4	2,325	..	6,073
<i>Consumptive Sanatoria—</i>																				
Christchurch ..	51-0	19	172	1,969	38-6	140	2-7	1,540	30-2	1,666	32-6	5,314	104-2	271	5-3	5,585	109-6	905	..	6,490
Palmerston South ..	41-0	13	116	1,177	28-7	54	1-3	1,274	31-1	1,073	26-1	3,578	87-2	300	7-3	3,878	94-5	1,057	5	4,940
Otahi ..	26-0	9	29	948	36-5	52	2-0	731	28-1	941	36-2	2,673	102-8	229	8-8	2,902	111-6	72	11	2,984
Totals and averages ..	118-0	41	130	4,095	34-7	246	2-1	3,545	30-0	3,680	31-2	111,565	98-0	800	6-8	12,365	104-8	2,034	16	14,415
<i>Hospital for Chronic Consumptives—</i>																				
Coronation, Christchurch ..	33	16	148	1,145	34-7	141	4-3	722	21-9	1,061	32-1	3,069	93-0	156	4-7	3,225	97-7	3,405	..	6,630
<i>Maternity Home—</i>																				
Dunedin Medical School ..	8	8	18	218	27-3	55	6-9	350	43-8	310	38-8	933	116-6	57	7-2	990	123-8	9	8	1,007
Grand totals, Board's institutions	2,546	1,489	..	64,855	..	25,625	..	69,529	..	108,283	..	268,293	..	14,751	..	283,044	..	88,244	6,967	378,256
<i>SEPARATE INSTITUTIONS.</i>																				
Oamaru ..	18	13	26	368	20-4	184	10-2	490	27-2	843	46-9	1,886	104-7	131	7-3	2,017	112-0	15	2	2,033
Mercury Bay ..	5	6	21	208	41-6	125	25-1	60	12-0	703	140-8	1,097	219-5	74	14-9	1,171	234-4	..	..	1,172
Totals and averages ..	23	..	..	576	25-0	310	13-5	550	23-9	1,547	67-3	2,983	129-7	205	8-9	3,188	138-6	15	2	3,205

TABLE V.—STATISTICS OF GOVERNMENT HOSPITALS FOR THE YEAR ENDED 31ST MARCH 1915.

	Staff.										Number of Beds.					Average Number of Occupied Beds per Diem.	Average Number of Occupied Beds per Diem for each of the Nursing Staff.	Number of Patients under Treatment during Year.		Deaths.	Individual Average Days' Stay.	Average Cost of Maintenance and Administration per Occupied Bed after deducting Patients' Payment.	Weekly Maintenance Charge.	Out-patients.	
	Medical.		Nursing.		Domestic.		Average Number of Staff per Diem receiving Board.	For Males.	For Females.	Children's Cots.	Isolation.	Total.													
	Honorary.	Resident.	Non-resident.	Trained Nurses.	Probationers.	Cooks, Wardmaids, Housemaids, and Landladies.							Wardsmen, Porters, and Gardeners.												
														Supendary.											
<i>Maternity Homes—</i>	1	3	15	5	1	23	..	30	..	..	30	11.9	0.7	..	222	4	19	108.1	£1 to £1 10s.	95	..		
St. Helens, Wellington	1	3	12	4	2	19	..	14	..	..	14	8.8	0.6	..	210	1	15	79.6	"	244	..		
Auckland	1	3	11	3	1	17	..	18	..	..	18	9.2	0.7	..	224	1	14	89.1	"	84	..		
Christchurch	1	2	10	3	1	15	..	16	..	..	16	8.3	0.5	..	191	..	16	128.2	"	82	..		
Dunedin	4	11	48	15	5	74	..	78	..	..	78	38.2	0.6	..	847	6	17	104.3	..	505	..		
Totals	70	50.0	7.1	128	62	190	10	59.8	£1 to £3 3s.	..	..
<i>Consumptive Sanatorium—</i>	1	1	..	2	5	..	2	19	48	22	..	..	70	..	..	..	..	..	..	..	..	..	..
Cambridge		

* Casual.

TABLE VI.—SHOWING EXPENDITURE OF HOSPITALS CONTROLLED BY GOVERNMENT FOR THE YEAR ENDED 31ST MARCH, 1915.

Government Institutions.	Average Number of Patients per Diem.	Average Number of Staff per Diem receiving Board.	Individual Average Days' Stay.	Provisions.		Surgery and Dispensary.		Domestic and Establishment.		Salaries and Wages.		Total Maintenance.		Administration.		Maintenance and Administration.		Capital Expenditure.	Other Expenditure.	Total.
				Total Cost.	Cost per Occupied Bed.	Total Cost.	Cost per Occupied Bed.	Total Cost.	Cost per Occupied Bed.	Total Cost.	Cost per Occupied Bed.	Total Cost.	Cost per Occupied Bed.	Total Cost.						
<i>Maternity Homes—</i>																				
St. Helens, Wellington	11.9	23	19	769	£ 64.6	£ 108	£ 9.1	£ 371	£ 31.2	£ 476	£ 65.2	£ 2,024	£ 170.1	£ 75	£ 6.3	£ 2,002	£ 176.4	£ 35	£	2,134
" Auckland	8.8	19	15	493	56.0	88	10.0	269	30.6	1,683	72.2	1,486	168.8	83	9.4	1,569	178.2	19	76	1,663
" Christchurch	9.2	17	14	493	53.6	96	10.4	362	39.3	613	69.9	1,594	173.3	75	8.1	1,669	181.3	...	...	1,669
" Dunedin	8.3	15	16	389	46.9	38	4.5	375	45.1	839	101.1	1,641	197.7	79	9.5	1,720	207.2	13	...	1,733
Totals and averages	38.0	74	16	2,144	56.4	380	8.7	1,377	36.2	2,894	76.2	6,745	177.5	312	8.2	7,057	185.7	67	78	7,202
<i>Sanatorium for Consumptives—</i>																				
Cambridge	50.0	19	46	1,993	39.8	58	1.2	1,749	35.0	1,639	33.4	5,469	109.4	190	3.8	5,659	113.2	172	983	6,767
Totals	...	...	...	4,137	...	388	...	3,126	...	4,563	...	12,214	...	502	..	12,716	...	269	1,014	13,969

TABLE VII.—CHARITABLE INSTITUTIONS: STATISTICAL. YEAR ENDED 31ST MARCH, 1915.

Governing Hospital and Charitable Aid Boards.	Institutions.	Staff.										Number of Inmates during Year.		Deaths.	Individual Average Stay.	Cost of Maintenance and Administration per Occupied Bed.	Weekly Maintenance Fee charged.			
		Medical. Non-resident.		Stipendiary.	Nursing.	Master.	Matron.	Domestic.		Average Number receiving Board per Diem.	Total Number of Beds.	Average Number of Inmates per Diem.	Males.					Females.		
		Honorary.	Cooks, Housemaids.					Porters, Gardeners.												
Auckland	Old People's Homes— Costley Home, Auckland	..	..	1	12	1	1	1*	11	11	27	286	262	322	98	420	75	39-2	3	s. d. 0 15 0
Otago	Otago Benevolent Institution, Dunedin	..	..	1	..	1	1	1*	3	1	6	216	154	147	68	215	..	261	3	0 8 0
Wellington	Ohio Home, Wellington	..	..	1	2	1	1	1	2	3	9	147	129	266	57	323	22	149	25-9	0 15 0
Southland	Lorne Farm, Invercargill	..	..	1	2	1	1	1	10	2	15	149	102	108	45	153	9	224	31-7	0 10 0
North Canterbury	Tuarangi Home, Ashburton	..	..	1	3	1	1	1	4	4	13	107	90	136	..	136	25	240	44-1	..
"	Memorial Home, Woolston	..	..	1	5	..	1	1	7	3	16	99	82	6	98	104	12	288	47-4	..
Hawke's Bay	Old People's Home, Park Island	..	..	1	..	1	1	1	2	8	12	108	79	154	13	167	..	172	37-1	0 8 3
Waitaki..	Victoria Home, Oamaru	..	..	1	..	..	..	1	2	1	4	48	35	61	17	78	7	166	26-7	0 8 9
Taranaki	Old People's Home, New Plymouth	..	..	1	..	..	..	1*	3	3	5	57	35	50	18	68	14	189	47-2	0 12 0
Nelson	Alexandra Home, Nelson	..	..	..	..	1	1	1	4	..	6	56	33	44	11	55	7	219	36-6	0 10 0
Wanganui	Jubilee Home, Aramoho	..	..	1	..	1	1	1	3	..	5	38	30	51	5	56	7	199	46-5	0 15 0
Whangarei	Cottage Home, Whangarei	..	..	1	..	1	1	1	1	1	4	31	29	44	1	45	8	254	37-3	0 15 0
South Canterbury	Old Men's Home, Timaru	..	..	1	..	1	1	1	3	..	4	45	28	62	8	70	8	144	32-2	0 8 6
Buller	Old People's Home, Westport	..	..	1	..	1	1	1	2	..	4	30	28	38	2	40	3	260	25-4	0 15 0
Thames	District Home, Taruru	..	..	1	..	1	1	1	3	3	7	38	24	32	5	37	4	240	48-2	0 10 0
Waikato	Old Men's Home, Hamilton	..	..	3	..	1	1	1	1	..	3	21	17	48	..	48	2	129	46-5	0 10 0
Cook	Old People's Home, Gisborne..	..	..	1	..	1	..	1	1	..	3	26	16	32	2	34	2	170	46-5	..
Wairarapa	Renall-Solway Home, Masterton	..	..	1	..	..	..	1	..	..	1	15	10	26	..	26	..	148	44-2	..
Totals and averages		..	..	19	24	14	17	62	40	144	1,517	1,183	1,627	448	2,075	205	203	35-9	..	..
North Canterbury	Children's Home— Waltham Orphanage	..	..	1	..	..	1	..	3	3	29	18	13	16	29	..	235	37-8	..	..
	Female Refuge— Linwood Refuge Home	..	..	1	1	..	1*	..	2	4	37	29	..	66	66	2	160	42-5	..	..
	Casual Ward— Armagh Street Depot, Christchurch	..	..	1	..	1	1	..	..	2	16	1	40	..	40	..	9	172-6	..	..
	Convalescent Home— Alexandra Convalescent Home, Auckland	..	..	1	1	1	1	2	1	4	13	7	..	147	147	..	20	73-0	1	1 0

* Registered nurse.

TABLE VIII.—SHOWING EXPENDITURE OF CHARITABLE INSTITUTIONS UNDER THE CONTROL OF HOSPITAL AND CHARITABLE AID BOARDS FOR THE YEAR ENDED 31ST MARCH, 1915.

Governing Hospital and Charitable Aid Board.	Institutions.	Average Number of Inmates per Diem.	Provisions.		Surgery and Dispensary.		Domestic and Establishment.		Salaries and Wages.	
			Total Cost.	Cost per Occupied Bed.	Total Cost.	Cost per Occupied Bed.	Total Cost.	Cost per Occupied Bed.	Total Cost.	Cost per Occupied Bed.
	Old People's Homes—	£	£	£	£	£	£	£	£	£
Auckland ..	Costley Home, Auckland ..	262.0	4,076	15.6	347	1.3	3,688	14.1	1,944	7.4
Otago ..	Otago Benevolent Institution, Dunedin ..	154.0	1,312	8.5	44	0.3	1,537	10.0	448	2.9
Wellington ..	Ohio Home, Wellington ..	129.0	1,529	11.8	43	0.3	815	6.3	744	5.8
Southland ..	Lorne Farm, Invercargill ..	102.0	1,242	12.2	36	0.5	1,074	10.5	753	7.4
North Canterbury	Tuarangi Home, Ashburton ..	90.0	1,436	15.9	163	1.8	1,261	14.0	919	10.2
"	Memorial Home, Woolston ..	82.0	1,138	13.9	137	1.7	1,427	17.4	996	12.1
Hawke's Bay ..	Old People's Home, Park Island ..	79.0	1,171	14.8	42	0.5	806	10.2	752	9.5
Waitaki ..	Victoria Home, Oamaru ..	35.0	388	11.1	5	0.1	228	6.5	244	7.0
Taranaki ..	Old People's Home, New Plymouth ..	35.0	769	22.0	43	1.2	292	8.3	355	10.1
Nelson ..	Alexandra Home, Nelson ..	33.0	598	18.1	..	..	175	5.3	309	9.3
Wanganui ..	Jubilee Home, Aramoho ..	30.0	488	16.3	7	0.2	408	13.6	396	13.2
Whangarei ..	Cottage Home, Whangarei ..	29.0	367	12.7	21	0.7	256	8.8	358	12.3
South Canterbury	Old Men's Home, Timaru ..	28.0	387	13.8	..	..	204	7.3	225	8.0
Buller ..	Old People's Home, Westport ..	28.0	359	12.8	3	0.1	139	4.9	212	7.6
Thames ..	District Home, Taruru ..	24.0	509	21.2	14	0.6	198	8.2	361	15.0
Waikato ..	Old Men's Home, Hamilton ..	17.0	437	25.7	..	..	135	7.9	188	11.1
Cook ..	Old People's Home, Gisborne ..	16.0	305	19.1	..	..	274	17.1	156	9.7
Wairarapa ..	Renall-Solway Home, Masterton ..	10.6	177	16.7	..	..	175	16.5	84	7.9
	Totals ..	118.3	16,691	14.2	926	0.8	13,091	11.1	9,444	8.0
Nth. Canterbury	Children's Home—									
	Waltham Orphanage ..	18.7	194	10.4	2	0.1	240	12.8	237	12.7
	Female Refuge—									
	Linwood Refuge Home ..	29.0	521	17.9	8	0.3	279	9.6	367	12.6
Auckland	Casual Ward—									
	Armagh Street Depot, Christchurch ..	1.0	64	64.4	1	1.5	46	45.5	53	52.9
	Convalescent Home—									
	Alexandra Home, Auckland ..	7.9	193	24.4	2	0.2	216	27.4	143	18.1
	Totals ..	..	973	..	13	..	781	..	800	..

Governing Hospital and Charitable Aid Board.	Institutions.	Total Maintenance.		Administration.		Maintenance and Administration.		Capital Expenditure.	Miscellaneous Expenditure.	Total.
		Total Cost.	Cost per Occupied Bed.	Total Cost.	Cost per Occupied Bed.	Total Cost.	Cost per Occupied Bed.			
	Old People's Homes—	£	£	£	£	£	£	£	£	£
Auckland ..	Costley Home, Auckland ..	10,055	38.4	216	0.8	10,272	39.2	1,105	..	11,376
Otago ..	Otago Benevolent Institution, Dunedin ..	3,341	21.7	293	1.9	3,635	23.6	66	67	3,767
Wellington ..	Ohio Home, Wellington ..	3,131	24.2	218	1.7	3,349	25.9	..	65	3,414
Southland ..	Lorne Farm, Invercargill ..	3,125	30.6	112	1.1	3,237	31.7	1,091	..	4,328
North Canterbury	Tuarangi Home, Ashburton ..	3,779	41.1	193	2.1	3,972	44.1	488	..	4,460
"	Memorial Home, Woolston ..	3,698	45.1	189	2.3	3,887	47.4	..	..	3,887
Hawke's Bay ..	Old People's Home, Park Island ..	2,772	35.1	157	2.0	2,929	37.1	224	5	3,157
Waitaki ..	Victoria Home, Oamaru ..	865	24.7	69	2.0	934	26.7	28	..	962
Taranaki ..	Old People's Home, New Plymouth ..	1,459	41.6	195	5.6	1,654	47.2	..	255	1,910
Nelson ..	Alexandra Home, Nelson ..	1,082	32.7	127	3.8	1,208	36.6	62	8	1,278
Wanganui ..	Jubilee Home, Aramoho ..	1,299	43.3	95	3.2	1,394	46.5	..	..	1,394
Whangarei ..	Cottage Home, Whangarei ..	1,002	34.6	79	2.7	1,082	37.3	14	3	1,098
South Canterbury	Old Men's Home, Timaru ..	816	29.1	87	3.1	902	32.2	34	..	937
Buller ..	Old People's Home, Westport ..	713	25.4	25	0.9	738	26.3	268	..	1,005
Thames ..	District Home, Taruru ..	1,083	45.1	74	3.1	1,156	48.2	143	35	1,335
Waikato ..	Old Men's Home, Hamilton ..	761	44.7	30	1.8	791	46.5	..	..	791
Cook ..	Old People's Home, Gisborne ..	735	45.9	10	0.6	744	46.5	157	31	932
Wairarapa ..	Renall-Solway Home, Masterton ..	436	41.1	32	3.1	469	44.2	..	..	469
	Totals ..	40,152	34.0	2,201	1.9	42,353	35.9	3,679	469	46,501
Nth. Canterbury	Children's Homes—									
	Waltham Orphanage ..	673	36.0	34	1.8	707	37.8	1,282	..	1,989
	Female Refuge—									
	Linwood Refuge Home ..	1,175	40.4	60	2.1	1,235	43.5	..	..	1,235
Auckland	Casual Ward—									
	Armagh Street Depot, Christchurch ..	164	164.3	8	8.3	173	172.6	..	..	173
	Convalescent Home—									
	Alexandra Home, Auckland ..	554	70.1	23	2.9	576	73.0	16	..	593
	Totals ..	2,566	..	125	..	2,691	..	1,298	..	3,989

TABLE IX. — SHOWING ESTIMATED EXPENDITURE OF HOSPITAL AND CHARITABLE AID BOARDS FOR 1915-16, AND THE AMOUNT OF SUCH EXPENDITURE TO BE RAISED BY LEVIES ON LOCAL AUTHORITIES AND BY GOVERNMENT SUBSIDY.

Hospital and Charitable Aid Board.	Estimated Population 31st March, 1915.	Rateable Capital Value.	Net Amount per Head of the Population required for Expenditure other than Capital Expenditure.	Expenditure other than Capital Expenditure.						Capital Expenditure.				Approximate Rate per Pound on Rateable Capital Value, 1914-15.	
				Estimated Expenditure.	Estimated Receipts.	Net Estimated Expenditure.	Amount to be levied on Local Authorities.		Amount to be claimed as Subsidy.	Rate of Subsidy in Accordance with Fourth Schedule of Act.	Estimated Expenditure.	Estimated Receipts.	Net Estimated Expenditure.		Amount to be levied on Local Authorities and on which Subsidy is to be claimed at £1 for £1.
							£	s. d.							
Bay of Islands	19,139	2,010,049	4 0	5,730 0 0	1,904 19 6	3,825 0 6	1,768 16 0	2,056 4 6	1 3 3	650 0 0	..	650 0 0	325 0 0	d.	
Whangarei	12,091	2,530,788	5 7½	6,534 0 0	3,135 18 3	3,398 1 9	1,667 15 5	1,730 6 4	1 0 9	3,186 0 0	2,498 14 8	687 5 4	343 12 8	1	
Kaipara	10,892	2,333,393	4 10½	3,912 0 0	1,246 2 2	2,665 17 10	1,300 8 8	1,365 9 2	1 1 0	2,200 0 0	1,765 17 10	434 2 2	217 1 1	1	
Auckland	158,191	41,734,887	6 7½	79,890 14 0	27,387 13 8	52,503 0 4	26,753 2 7	25,749 17 9	0 19 3	..	..	..	..	1½
Coromandel	3,493	363,969	4 0½	1,827 8 1	1,124 11 10	702 16 3	325 0 4	377 16 3	1 3 3	103 0 0	53 0 0	50 0 0	25 0 0	1½	
Thames	16,489	2,192,935	5 10½	8,233 9 8	3,378 0 0	4,855 9 8	2,271 11 5	2,583 18 3	1 2 9	9,619 0 8	5,024 18 10	4,594 1 10	2,297 0 11	1	
Waikato	14,620	3,794,799	2 11	4,700 0 0	1,200 0 0	3,500 0 0	1,739 2 7	1,760 17 5	1 0 3	1,000 0 0	..	1,000 0 0	500 0 0	1½	
Bay of Plenty	54,540	17,740,165	3 7½	22,375 0 0	12,486 0 0	9,889 0 0	5,038 12 8	4,850 0 8	0 19 3	4,500 0 0	..	4,500 0 0	2,250 0 0	1½	
Tairāwhiti	6,769	1,907,919	7 0½	3,092 11 6	812 0 0	2,280 11 6	1,192 9 1	1,088 2 5	0 18 3	8,000 0 0	..	8,000 0 0	4,000 0 0	1½	
Waipapa	4,862	2,495,268	8 0½	2,800 0 0	800 0 0	2,000 0 0	1,240 6 3	759 13 9	0 12 3	..	..	..	..	1½
Cook	22,324	10,133,222	8 1½	13,089 0 0	3,516 0 0	9,573 0 0	5,936 14 11	3,636 5 1	0 12 3	..	..	..	..	1½
Waikato	5,955	3,150,103	9 8½	3,546 9 2	654 15 1	2,891 14 1	1,793 6 2	1,098 7 11	0 12 3	9,444 17 8	220 0 0	9,224 17 8	4,612 8 10	1½	
Hawke's Bay	30,847	12,176,842	6 3½	17,750 0 0	8,057 19 3	9,692 0 9	5,203 15 6	4,488 5 3	0 17 3	2,600 0 0	..	2,600 0 0	1,300 0 0	1½	
Waipawa	21,671	11,256,051	4 10½	8,018 0 0	2,723 0 0	5,295 0 0	2,962 4 10	2,332 15 2	0 15 9	15,630 0 0	..	15,630 0 0	7,815 0 0	1	
Taranaki	27,101	7,412,983	5 5½	13,350 0 0	5,983 6 8	7,366 13 4	3,706 10 0	3,660 3 4	0 19 9	505 0 0	127 17 0	377 3 0	188 11 6	1½	
Stratford	11,173	3,017,249	3 4½	2,950 0 0	1,052 9 4	1,897 10 8	942 17 6	954 13 2	2 1 0	2,000 0 0	..	2,000 0 0	1,000 0 0	1½	
Hawera	17,208	6,938,700	3 4½	5,280 12 6	2,377 0 0	2,903 12 6	1,558 19 11	1,344 12 7	0 17 3	..	..	..	..	1½
Patea	5,401	3,034,356	5 1½	2,055 0 0	676 12 6	1,378 7 6	771 2 3	607 5 3	0 15 9	1,493 0 0	..	1,493 0 0	746 10 0	1½	
Wanganui	44,339	15,343,651	5 9	16,234 12 2	3,560 0 0	12,674 12 2	6,541 14 8	6,132 17 6	0 18 9	4,697 19 3	3,965 6 0	732 13 3	366 6 8	1½	
Palmerston North	36,460	14,264,074	3 6½	9,500 13 3	3,030 13 9	6,469 19 6	3,382 19 10	3,086 19 8	0 18 3	6,016 0 0	5,100 0 0	916 0 0	458 0 0	1½	
Wellington	104,836	31,207,989	8 5	58,346 0 0	14,200 0 0	44,146 0 0	24,356 8 3	19,789 11 9	0 16 3	1,090 0 0	88 0 0	1,002 0 0	501 0 0	1½	
Wairarapa	29,804	15,786,315	5 6½	11,535 0 0	3,339 0 0	8,196 0 0	4,650 2 6	3,545 17 6	0 15 3	1,000 0 0	..	1,000 0 0	500 0 0	1½	
Wairau	12,034	5,166,657	6 3½	4,509 5 0	715 0 0	3,794 5 0	2,152 15 6	1,641 9 6	0 15 3	..	..	..	..	1½
Picton	3,884	1,329,663	8 3½	2,600 0 0	1,000 0 0	1,600 0 0	907 16 0	692 4 0	0 15 3	..	..	..	..	1½
Nelson	26,214	4,772,857	4 7½	8,792 10 0	2,650 0 0	6,142 10 0	2,925 0 0	3,217 10 0	1 2 0	..	..	..	..	1½
Buller	13,373	1,647,056	5 4½	5,276 8 1	1,676 8 1	3,600 0 0	1,684 4 3	1,915 15 9	1 2 9	800 0 0	..	800 0 0	400 0 0	1	
Inangahua	5,263	380,907	5 1½	3,540 18 11	2,197 18 11	1,343 0 0	610 9 2	732 10 10	1 4 0	300 0 0	..	300 0 0	150 0 0	1½	
Grey	13,927	1,331,349	9 2	7,960 0 0	1,580 0 0	6,380 0 0	3,170 3 7	3,209 16 5	0 19 3	..	..	..	..	1½
Westland	7,432	829,646	16 0½	10,740 0 0	4,774 0 0	5,966 0 0	3,040 0 0	2,926 0 0	0 19 3	..	..	..	..	1½
North Canterbury	139,277	43,104,538	5 1½	58,700 0 0	17,040 0 0	41,660 0 0	21,783 0 0	19,877 0 0	0 18 3	3,850 0 0	21 0 0	3,829 0 0	1,914 10 0	1½	
Ashburton	16,181	9,127,674	4 4½	12,966 0 0	1,571 19 1	3,540 0 0	1,966 13 7	1,573 6 5	0 16 0	1,000 0 0	..	1,000 0 0	500 0 0	1½	
South Canterbury	39,630	15,977,108	5 5½	15,111 19 1	2,164 0 0	10,802 0 0	5,878 12 9	4,923 7 3	0 16 9	1,544 0 0	..	1,544 0 0	772 0 0	1½	
Wairaki	16,711	4,649,452	1 6	2,830 17 1	1,582 17 1	1,248 0 0	620 2 6	627 17 6	1 0 3	..	..	..	..	1½
Maniototo	3,250	911,816	6 0½	1,971 1 2	987 11 5	983 9 9	501 2 9	482 7 0	0 19 3	..	..	..	..	1½
Vincent	5,360	1,002,204	5 1½	1,922 0 0	342 0 0	1,580 0 0	756 17 9	823 2 3	1 1 9	8,000 0 0	..	8,000 0 0	4,000 0 0	1½	
Otago	114,500	21,878,960	5 2½	49,634 18 6	19,634 18 6	30,000 0 0	14,371 5 2	15,628 14 10	1 1 9	3,234 18 1	734 18 1	2,500 0 0	1,250 0 0	1½	
Southland	56,538	14,936,268	3 9½	17,566 1 2	6,930 15 4	10,635 5 10	5,284 12 4	5,350 13 6	1 0 3	150 0 0	..	150 0 0	75 0 0	1½	
Wallace and Fjord	12,078	3,561,907	4 7½	4,030 0 0	1,225 0 0	2,805 0 0	1,402 10 0	1,402 10 0	1 0 0	..	..	..	..	1½
Total	1,149,142	331,826,439	5 9½	502,712 9 4	170,347 13 1	332,364 16 3	173,243 5 8	159,121 10 7	0 18 4½	92,603 15 8	19,599 12 5	73,014 3 3	36,507 1 8	..	

TABLE X.—HOSPITAL AND CHARITABLE AID BOARDS.

Hospital and Charitable Aid Boards.	Chairman.	Secretary.	Location of Board's Office.	Usual Date of Meeting.	Institutions controlled.				Charitable Institutions.
					Hospitals.			Matron.	
					Name.	Medical Superintendent and Stipendiary Medical Staff.			
Bay of Islands	W. Stewart	H. C. Blundell	Kawakawa	Fourth week, Jan., April, July, Oct.	Bay of Islands	H. D. Eccles, M.R.C.S., L.R.C.P.	A. S. Hawken	..	..
Kaipara	J. Stallworthy	E. Fenton	Dargaville	Quarterly; fourth Thursday in month	Rawene	S. M. Smith, M.B.	N. L. Bennett	..	..
Whangarei	N. McKenzie	C. McKinnon	Whangarei	Second Monday in month	Mangonui	P. W. Menzies, L.R.C.P., L.R.C.S.(Eng.)	E. M. Clark	..	..
Auckland	M. J. Coyle	H. N. Garland	Auckland	Third Tuesday in month	Northern Wairoa	J. R. Closs, M.B., Ch.B.; W. H. Horton, M.B.	M. G. Atkinson	..	..
Waikato	J. P. Bailey	W. I. Couradi	Hamilton	Every fourth Thursday from 22nd Oct., 1914	Waikato	J. L. Frazer-Hurst, M.D.	D. E. Giffney	..	Whangarei Old People's Home.
Thames	W. J. McCormick	R. R. Lloyd	Thames	First Wednesday in month	Taumarunui	C. E. Maguire, M.D.; A. McG. Grant, M.B., Bach. Surg.; L. A. Spedding, M.B., Ch.B.; F. Macky, M.B., Bach. Surg.; A. S. Addison, M.B., Bach. Surg.; J. V. Pearse, M.B., B.S.; J. McGhie, M.B., Ch.B.	J. M. Orr	..	Costley Old People's Home; Alexandra Convalescent Home.
Waihi	D. Donaldson	F. Bishop	Waihi	Last Friday in month	Thames	H. Douglas, M.B., C.M.; S. Macky, M.B., Bach. Surg.	E. M. Rothwell	..	Waikato Old Men's Home.
Coromandel Bay of Plenty	S. James. A. Peebles	R. Simmonds H. O. Garaway	Coromandel Whakatane	Third Monday in month	Thames	W. C. McKnight, M.B., C.M., F.R.C.S. (Edin.)	A. B. Smith	..	District Home, Tauru.
Cook	H. Kenway	H. M. Porter	Gisborne	Third Friday in month	Waihi	D. B. Walshe, M.B., Ch.B.	M. Wilson	..	..
Waipapu Wairoa	K. S. Williams Rev. W. J. Simkin	A. L. Temple W. Taylor	Waipapu Wairoa	Fourth Monday in month. Saturday following second Friday in each month	Coromandel	J. M. Hyde, M.B., Ch.B.; T. C. Fraser, M.C., Ch.B.	A. Taylor	..	..
Hawke's Bay	W. Shrimpton	J. Scheele	Napier	Second Monday in month	Opotiki	J. Craig, L.R.C.S., L.R.C.P.	M. Anderson	..	..
Waipawa	G. J. E. Bickford	G. B. Ashley	Waipukurau	Second Thursday in month	Cook	F. Kahlenberg, F.R.C.S., L.R.C.P., (Lond.)	E. F. Godfray	..	Old People's Home, Gisborne.
Taranaki	F. C. J. Bellringer	C. M. Lepper	Taranaki	Third Wednesday in month	Waipapu	C. S. Davis, M.R.C.S., L.R.C.P.	A. B. Allan	..	..
Stratford	J. McAlister	T. H. Penin	Stratford	Second Thursday in month	Wairoa	J. Miller, L.R.C.P., L.R.C.S.	M. Grace	..	..
					Napier	T. Gilray, F.R.C.S. (Edin.); E. Faris, M.B., Ch.B.; I. Blaubaum, M.B., Ch.B.	R. Macdonald	..	Old People's Home, Park Island.
					Waipawa	J. L. Reed, M.B., C.M. (Edin.); T. Macallan, M.B. (Aberdeen); W. H. Dawson, M.B., D.P.H., M.R.C.S. (Edin.)	M. E. Carston Miss G. Hooper	..	..
					New Plymouth	E. A. Walker, M.D., C.M.; D. S. Wylie, F.R.C.S.; G. Home, M.D., Mast. Surg.; H. B. Leatham, M.R.C.S., L.R.C.P.	E. Browne	..	Old People's Home New Plymouth.
					Stratford	D. Steven, M.B., Ch.B.	M. O'Brien	..	..

Hawera ..	G. W. Taylor ..	C. E. Parrington ..	Hawera ..	Every third Monday ..	..	..	W. M. Thomson, M.B., Ch.B.	G. Broad ..	..
Patea ..	H. O. Clarke ..	E. C. Horner ..	Patea ..	First Monday in month ..	..	..	W. T. Simmons, M.B., Ch.B.	L. Scolon ..	..
Wanganui ..	L. H. Bessle ..	R. N. Finlayson ..	Wanganui ..	Third Wednesday in month ..	..	..	H. Hutson, M.D., F.R.C.S.	C. McKenny ..	Jubilee Home, Aramohio.
Palmerston North ..	Sir J. G. Wilson ..	W. Stubbs ..	Palmerston North ..	Second Thursday in month ..	..	..	E. C. Barnett, M.R.C.S., L.R.C.P.	E. A. Southall ..	Awapuni Old People's Home.
Wellington ..	Rev. W. A. Evans ..	J. Coyle ..	Wellington ..	Third Thursday in month ..	..	..	A. A. Martin, M.D., F.R.C.S. (Eng.); P. T. Putnam, M.D., Ch.B.; C. W. Peach, M.B., C.M.	N. K. Payne ..	Ohio Home.
Wairarapa ..	E. G. Eton ..	H. F. Green ..	Masterton ..	Second Wednesday, alternate months ..	..	..	H. Hardwick-Smith, F.R.C.S. (Eng.); D. F. Meyers, M.B., Ch.B.; H. B. Ewan, M.B., Ch.B.; J. A. Marshall, M.B., Ch.B.; S. S. Haslett, M.B., Ch.B.	E. M. Sealey ..	..
Wairau ..	J. J. Corry ..	A. J. MacLaine ..	Blenheim ..	First Monday in month ..	..	..	W. H. Huthwaite, M.R.C.S., L.R.C.P.	E. M. Sealey ..	Renall-Solway Home.
Picton ..	S. Fell ..	J. Blizard ..	Picton ..	First Thursday in month ..	..	..	A. Hosking, M.B., C.M.	I. M. Wilkinson ..	..
Nelson ..	H. Baigent ..	S. Blomfield ..	Picton ..	First Wednesday in month ..	..	..	W. Bey, M.B., C.M.	M. Bagley ..	..
Westland ..	A. Clifton ..	T. Kennedy ..	Hokitika ..	Second Tuesday in month ..	..	..	H. T. Dawson, M.B., C.M.	E. M. Davis ..	..
Buller ..	J. H. Greenwood ..	A. Taylor ..	Westport ..	Second Tuesday, alternate months ..	..	..	J. F. Bennett, M.B., F.R.C.S.	W. S. Fulton ..	..
Inangahua ..	E. J. Scantlebury ..	C. Nevin ..	Reefton ..	Fourth Thursday in month ..	..	..	S. F. Beard, M.R.C.S. (Eng.)	O. Peake ..	..
Grey ..	M. Hannan ..	M. Phillips ..	Reefton ..	Third Thursday in month ..	..	..	S. W. Hill, M.R.C.S., L.R.C.P. (Edin.)	A. A. Hamann ..	..
North Canterbury ..	F. Horrell ..	W. S. Wharton ..	Christchurch ..	Fourth Wednesday in month ..	..	..	H. E. A. Washbourn, M.B., Ch.B.	J. S. Murray ..	Alexandra Home.
Ashburton ..	H. Friedlander ..	A. Clarke ..	Ashburton ..	First Monday in month ..	..	..	G. Phillips, M.R.C.S. (Eng.), L.R.C.P. (Lond.)	K. Isdell ..	..
South Canterbury ..	F. R. Gillingham ..	H. S. Russell ..	Timaru ..	Third Tuesday in month ..	..	..	J. A. Doctor, M.B., Ch.B.	A. C. Phillips ..	..
Waitaki ..	H. A. Dovey ..	W. Gibb ..	Oamaru ..	First Tuesday in month ..	..	..	W. Cairns, M.B., Mast.Surg.	I. E. Floyd ..	Old People's Home, Westport.
							R. E. Monson, M.B., Ch.B.; P. L. Foote, F.R.C.S. (Eng.)	E. M. Dunsford ..	..
							T. G. Short, M.B., Ch.B.	L. E. Smith ..	..
							W. A. Conlon, M.B.	J. Barry ..	..
							C. G. Morice, F.R.C.S. (Ed.)	S. Kitto ..	..
							F. L. Scott, L.R.C.P., L.R.C.S. (Eng.); D. Sinclair, M.B., Ch.B.; G. N. McDiarmid, M.B., Ch.B.; W. S. Wallis, M.B., Ch.B.	M. Thurston ..	Memorial Home, Waltham Orphanage; Linwood Refuge; Armagh St. Depot; Tuarangi Home, Ashburton.
							C. S. Cantrell, M.B., C.M. (Edin.)	N. M. Jensen ..	..
							A. C. Thompson, M.B., F.R.C.S. (Edin.)	F. Ivey ..	..
							J. A. Newell, M.B., Ch.B.	E. M. Gooding ..	..
							J. F. Duncan, F.R.C.S. (Edin.)	A. Veitch ..	..
							G. J. Blackmore, M.D., C.M.	K. Benjamin ..	..
							H. Hunter, M.B., Ch.B.; C. E. R. Rendle	S. E. Morley ..	..
							B. H. Gilmour, M.B., Ch.B.	J. Todd ..	Old Men's Home, Timaru.
							H. C. Barclay, F.R.C.S. (Edin.)	M. Mander ..	..
							B. H. Gilmour, M.B., Ch.B.	..	Victoria Home, Oamaru.

