

1946
NEW ZEALAND

DEPARTMENT OF HEALTH

ANNUAL REPORT OF THE DIRECTOR-GENERAL OF HEALTH

Presented in pursuance of Section 100 of the Hospitals and Charitable Institutions Act, 1926

HON. A. H. NORDMEYER, MINISTER OF HEALTH

REPORT

The DIRECTOR-GENERAL OF HEALTH to the Hon. the MINISTER OF HEALTH,
Wellington.

I HAVE the honour to lay before you the annual report of the Department for the year 1945-46.

VITAL STATISTICS

Population.—The mean population of the Dominion for 1945 was 1,691,520 (Europeans 1,593,513, Maoris 98,007).

Births.—The total births were 41,651, representing a birth-rate of 24.62 per 1,000 of mean population.

The number of European births was 37,007, with a rate of 23.22. This figure compares favourably with the rate of 21.59 in 1944. The number of Maori births was 4,644, which represents the high rate of 47.38.

Deaths.—In 1945, 17,686 deaths were registered, giving a crude death-rate of 10.46 per 1,000 of mean population. There were 16,051 deaths of Europeans, with a rate of 10.07, and 1,635 deaths of Maoris, with a rate of 16.68.

Infant Mortality.—The infant-mortality rate was 34.79 per 1,000 live births. There was the usual marked difference between the European and the Maori sections of the community—the relative rates being 27.99 for Europeans and 88.93 for Maoris.

The European rate compares favourably with that of 1944 (30·12), and, indeed, represents a new low record for infant mortality in the European section of our population.

Still-births.—The rate for Maoris is not available. That for Europeans was 22·84 per 1,000 of total births which again is a record low rate for the Dominion.

Maternal Mortality.—Here again the Maori figures are not available.

For Europeans the maternal mortality rate, including deaths from septic abortion, was 2·24 per 1,000 live births, as compared with 2·71 in 1944. After excluding deaths from septic abortion, the rate was 1·95 (2·14 in 1944).

Summary of Vital Statistics :—

	European.	Maori.	Combined.
Population, mean	1,593,513	98,007	1,691,520
Birth-rate per 1,000 population	23·22	47·38	24·62
Death-rate per 1,000 population	10·07	16·68	10·46
Infant-mortality rate per 1,000 live births	27·99	88·93	34·79
Death-rate, tuberculosis, all forms, per 10,000 population	3·78	37·02	5·77

This table shows at a glance the main differences between the Europeans and the Maoris in respect of vital statistics.

INFECTIOUS AND OTHER DISEASES

Scarlet Fever.—Scarlet fever, with 5,081 cases (5,033 European, 48 Maori), shows a considerable decrease from the high incidence of 1944.

Diphtheria.—There were 1,075 cases (996 European, 79 Maori) of diphtheria in 1945, as against 713 cases (693 European, 20 Maori) in 1944. In view of the extreme prevalence of the disease in Europe, and the possibility of virulent strains of the causative organism being brought to New Zealand, the position has been watched closely. Unfortunately, owing to shortage of Medical Officers, the amount of immunization carried out in recent years has been limited, but endeavours are being made to do as much as possible. The policy of having diphtheria immunization done by District Nurses has been given an extensive trial in North Auckland, and has proved very satisfactory. It will be extended to other districts as soon as possible.

Poliomyelitis.—Only a few sporadic cases were notified during the year ended 31st December, but early in 1946 there was a marked increase in the number of cases occurring in Otago. Restrictions were imposed on all gatherings of children and on children travelling from Otago and Southland to the rest of the Dominion. The schools also remained closed until the end of February. After the middle of February the incidence declined sharply, and since then cases have been sporadic, and have occurred throughout the Dominion.

Food Poisoning.—Most of the cases of food poisoning were reported from one outbreak affecting the nursing staff of the Hamilton Public Hospital. The infection was not severe, and most of the nurses returned to duty within a few days.

Beriberi.—The reported cases of beriberi occurred in prisoners of war from Japan, who were treated in hospitals in the Dominion while in transit to their final destinations.

Puerperal Sepsis.—There were 75 notifications of sepsis following childbirth, with 4 deaths, a death-rate of 0·11 per 1,000 live births. Sepsis following abortion was notified in 100 cases, with 12 deaths, a death-rate of 0·29 per 1,000 live births. These figures are for Europeans only, as reliable figures for Maoris are not available.

Tuberculosis.—The next table sets out the death-rate from tuberculosis for 1940-1945.

Death-rates per 10,000 Population
(Europeans only)

Year.	Respiratory Tuberculosis.	Non-respiratory Tuberculosis.	Tuberculosis (all Forms).
1940	3·24	0·64	3·88
1941	3·19	0·69	3·88
1942	3·18	0·75	3·93
1943	3·09	0·63	3·72
1944	3·12	0·69	3·81
1945	3·12	0·66	3·78

Veneral Disease.—The following tables summarize the work of the venereal-disease clinics in the four main centres. Figures are given for the last pre-war years as well as for subsequent years. The reduction in the incidence of syphilis since 1941 has been maintained, and the figures now approximate the pre-war level:—

Number of Persons seen for the First Time at each Venereal-disease Clinic and found to be suffering from Syphilis

Year.	Auckland.		Wellington.		Christchurch.		Dunedin.		Total.		Grand Totals.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1939	59	43	18	25	19	11	12	5	168	84	192
1940	63	37	77	58	12	8	22	8	174	111	285
1941	102	57	96	63	29	17	33	6	260	144	403
1942	70	78	53	71	18	11	20	6	161	166	327
1943	48	95	20	41	17	14	29	3	114	153	267
1944	21	48	14	26	14	10	27	4	76	88	164
1945	61	34	11	20	15	8	27	6	114	68	182

Number of Persons seen for the First Time at each Venereal-disease Clinic and found to be suffering from Gonorrhoea

Year.	Auckland.		Wellington.		Christchurch.		Dunedin.		Total.		Grand Totals.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1939	399	141	333	53	328	88	91	90	1,151	372	1,523
1940	474	118	310	53	286	79	78	89	1,148	339	1,487
1941	410	183	373	42	271	72	81	79	1,135	376	1,511
1942	312	286	236	63	181	69	75	73	804	491	1,295
1943	265	441	138	89	122	92	51	15	576	637	1,213
1944	215	470	140	59	139	86	50	22	544	637	1,181
1945	389	413	178	54	149	66	46	9	762	542	1,304

Notifications of Disease.—Tables showing the notifications of infectious and other notifiable diseases are included in the section dealing with Public Hygiene.

THE PRINCIPAL CAUSES OF DEATH

(Europeans only)

The following table gives the main causes of death during the year, the actual number of deaths therefrom, and the death-rates per 10,000 of mean population for each of the last five years :—

Cause.	1945.		1944 : Rate.	1943 : Rate.	1942 : Rate.	1941 : Rate.
	Number.	Rate.				
Heart-disease (all forms)	5,638	35·37	33·50	33·68	36·41	31·55
Cancer	2,212	13·88	14·02	13·85	13·13	13·18
Violence	785	4·93	5·38	6·06	5·76	5·64
Pneumonia	255	1·60	1·32	1·41	1·52	1·48
Pneumonia (secondary to influenza, whooping-cough, and measles)	32	0·20	0·31	0·17	0·81	0·38
Bronchitis	179	1·12	1·14	1·40	1·36	0·94
Broncho-pneumonia	249	1·56	1·82	1·67	2·11	1·98
Tuberculosis (all forms)	603	3·78	3·81	3·72	3·94	3·88
Kidney, or Bright's disease	416	2·61	2·80	2·83	3·19	3·66
Apoplexy or cerebral hæmorrhage	1,640	10·29	9·28	9·79	9·90	8·95*
Diseases of the arteries	239	1·50	1·21	1·21	1·22	1·14*
Senility	459	2·88	2·94	3·17	3·02	3·13
Diabetes	319	2·00	2·10	2·16	2·28	2·22
Hernia and intestinal obstruction	125	0·78	0·74	0·65	0·74	0·73
Diseases and accidents of childbirth (puerperal mortality)	83	0·52	0·58	0·44	0·55	0·76
Appendicitis	59	0·37	0·50	0·47	0·44	0·55
Diarrhœa and enteritis	125	0·78	0·64	0·58	0·50	0·54
Epilepsy	45	0·28	0·30	0·46	0·53	0·43
Common infectious diseases—						
Influenza (all forms, including pneumonia)	53	0·31	0·40	0·42	1·61	0·49
Diphtheria	42	0·26	0·19	0·21	0·16	0·11
Whooping-cough	8	0·05	0·29	0·11	0·03	0·44
Scarlet fever	13	0·08	0·17	0·01	0·01	0·01
Typhoid and paratyphoid	3	0·02	0·02	0·02	0·05	0·05
Measles	10	0·06	..	0·05	0·20	0·03

* Owing to an alteration in the international agreement as to the allocation of deaths to various causes, the figures for these two conditions are not separately comparable with the figures for years before 1940.

REPORTS OF DIVISIONAL DIRECTORS

DIVISION OF PUBLIC HYGIENE

QUARANTINE

At the end of the war the various emergency regulations governing medical inspection of overseas ships were revoked, and the procedure in force before the war has now been resumed. Ships are again sending wireless information concerning the state of health of those on board, and, if free from disease, the ship is berthed before being boarded by the Port Health Officer.

During the year the New Zealand Government ratified its adherence to the International Sanitary Convention 1944 and the International Sanitary Convention for Aerial Navigation 1944. These Conventions, which are the work of the Health Division of UNRRA amend the corresponding Conventions of 1926 and 1933 and are of limited duration only.

DANGEROUS DRUGS AND POISONS

The Dangerous Drugs Regulations have been amended to include pethidine as a dangerous drug.

The Poisons (General) Regulations were amended, with particular reference to prescription poisons. In addition, the new insecticide DDT was made a First Schedule poison, but by a later amendment the control of DDT was relaxed so as to permit its sale subject to the necessary requirements as to the method of packing and labelling.

CEMETERIES ACT

Several municipalities have interested themselves in the establishment of crematoria. During the year crematoria at Hastings and Wanganui were built and are now in operation.

FOOD AND DRUGS

Milk-supplies.—With the coming into force of the Milk Act, 1945, and the consequent setting-up of Milk Authorities throughout the Dominion, there has been a further change in Government policy with respect to the supervision of milk-supplies. Under the new arrangement the Department of Agriculture will assume responsibility for the supervision of all milk-treating establishments, and the Department of Health is now responsible only for the sampling of milk as it is finally sold to the public. Each Medical Officer of Health or his deputy has been appointed to represent the Minister on each Milk Authority in his district. Regulations were enacted for the better control of milk-pasteurizing plants, and the high-temperature short-time method of pasteurization is now an approved method of pasteurization.

Nitrite Poisoning.—Owing to several cases of accidental poisoning with sodium nitrite, used by butchers for the curing of meat, it has been found necessary to enact regulations providing for the special labelling of all meat-pickling preparations containing nitrites.

Penicillin.—Regulations have been gazetted controlling the quality of penicillin and restricting its use to *bona fide* preparations containing a stated quantity of the substance. It is now an offence to sell any penicillin preparation that contains less penicillin than the quantity stated on the label. This is designed to prevent its commercial exploitation by manufacturers of patent medicines and toilet preparations.

SALE OF FOOD AND DRUGS

The next table sets out, by health districts, the number of samples of milk, food, and drugs taken and dealt with during the year.

Samples of Foods taken and dealt with during the Year ended 31st December, 1945

District.	Milk.				
	Number of Samples.	Number of Vendors.	Samples not complying.	Warnings issued.	Prosecutions recommended.
North Auckland	140	38	3	1	1
Central Auckland	4,116	1,816	264	127	5
South Auckland	1,664	1,566	80	50	29
Thames-Tauranga	92	57	5	..	..
Taranaki	261	168	16	11	7
East Cape	325	245	31	26	4
Wellington - Hawke's Bay	1,629	431	25	6	12
Central Wellington	2,034	1,226	16	9	2
Nelson-Marlborough	128	55	3	..	..
Canterbury	5,093	1,367	807	186	7
West Coast	207	168	13	8	1
Otago	1,750	667	253	97	2
Southland	372	186	47	25	..
	17,811	7,990	1,563	546	70

District.	Other Foods and Drugs.				
	Number of Samples.	Number of Vendors.	Samples not complying.	Warnings issued.	Prosecutions recommended.
North Auckland	111	79	2	1	1
Central Auckland	365	175	143	12	11
South Auckland	90	80	14	5	..
Thames-Tauranga	20	8	15	..	..
Taranaki	7	6	4	1	1
East Cape	68	68	12	10	..
Wellington - Hawke's Bay	273	195	15	6	..
Central-Wellington	179	141	22	6	2
Nelson-Marlborough	14	8	1	..	..
Canterbury	442	225	100	45	..
West Coast	65	38	8	2	1
Otago	373	238	14	1	..
Southland	137	42	8	6	..
	2,144	1,303	358	95	16

NOTIFICATION OF DISEASE

The following tables give details of the cases of notifiable diseases reported in 1945 :—

Table A.—Notifiable Diseases in New Zealand for Year ended 31st December, 1945, showing Distribution by Months

Months.	Scarlet Fever.	Diphtheria.	Enteric Fever.		Tuberculosis.		(Cerebral Spinal Fever.	Polymyelitis.	Influenza (Pneumonic, &c.).	Krysiplas.	Puerperal Fever.		Relapsing.	Tetanus.	Hydrals.	Trachoma.	Ophthalmia Neonatorum.	Food Poisoning.	Biliary Dysentery.	Amoebic Dysentery.	Typhoid Fever.	Chronic Lead Poisoning.	Malaria.	Actinomycosis.	Lethargic Encephalitis.	Beriberi.	Totals.
			(a) Typhoid.	(b) Paratyphoid.	(a) Pulmonary.	(b) Other Forms.					Ordinary.	Following Abortion.															
January	387	97	..	..	108	15	9	..	..	18	18	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	681
February	298	94	..	..	132	24	17	..	..	17	7	1	4	1	..	..	..	..	..	..	..	..	..	..	..	..	618
March	598	94	..	..	184	30	28	..	..	28	1	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	980
April	673	90	..	..	221	18	31	..	..	31	1	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	879
May	692	140	..	..	255	33	4	..	..	4	4	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	972
June	592	120	..	..	177	21	8	..	..	8	3	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	908
July	540	186	..	..	117	30	14	..	..	14	3	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	877
August	401	92	..	..	233	47	11	..	..	11	3	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	940
September	357	47	..	..	183	31	8	..	..	8	1	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	847
October	246	62	..	..	181	40	1	..	..	1	1	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	822
November	191	56	..	..	179	38	16	..	..	16	10	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	822
December	124	62	..	..	113	22	20	..	..	20	1	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	681
Totals—	5 033	996	23	81	222	329	98	14	..	248	75	100	46	12	41	10	5	..	..	..	..	..	..	..	..	..	9 325
1945	1944	693	24	111	801	211	135	45	..	310	73	157	44	18	28	6	6	..	..	..	..	..	..	..	..	..	111 519
1943	1942	830	60	121	790	221	434	178	..	321	149	149	44	13	43	22	10	..	..	..	..	..	..	..	..	..	111 519
1942	1941	457	542	56	101	418	239	30	34	264	83	135	39	16	65	7	44	..	..	..	..	..	..	..	..	..	5 880
1941	383	383	47	91	197	241	163	4	6	374	101	123	73	17	42	6	19	..	..	..	..	..	..	..	..	..	4 372

* The cases of beriberi were among repatriated prisoners of war from Japan who were on transit through New Zealand.

Table B.—Notifiable Diseases by Health Districts for Year ended 31st December, 1945

Name of Disease.	North Auckland.	Central Auckland.	South Auckland.	Thames-Tauranga.	Taranaki.	East Cape.	Wellington - Hawke's Bay.	Central Wellington.	Nelson-Marlborough.	Canterbury.	West Coast.	Otago.	Southland.	Totals.
Scarlet fever ..	20	638	643	207	235	250	893	737	37	649	83	240	401	5,033
Diphtheria ..	49	204	223	38	42	58	130	93	83	42	6	11	17	996
Enteric fever—														
(a) Typhoid ..	1	3	1	3	1	4	2	3	1	4	..	..	..	23
(b) Paratyphoid ..	..	..	..	1	5	..	1	..	..	1	..	..	..	8
Tuberculosis—														
(a) Pulmonary ..	23	369	73	25	54	29	167	412	61	248	37	145	79	1,722
(b) Other forms ..	..	64	..	5	8	2	16	83	14	57	1	66	8	329
Cerebro-spinal fever ..	4	22	6	5	7	1	3	23	..	18	1	5	3	98
Acute poliomyelitis ..	..	1	..	..	3	..	..	2	..	2	..	6	..	14
Influenza (pneumonic, &c.) ..	..	..	1	..	..	..	..	..	..	2	..	1	1	6
Erysipelas ..	4	59	18	3	17	6	34	42	10	31	3	11	10	248
Puerperal fever—														
Ordinary ..	1	12	..	4	2	3	7	4	7	28	..	3	4	75
Following abortion ..	..	36	..	..	1	..	4	17	..	42	..	..	..	100
Eclampsia. ..	..	11	1	..	3	..	4	7	2	12	..	4	2	46
Tetanus ..	1	2	..	1	1	2	3	..	..	1	..	..	1	12
Hydatids ..	4	..	..	..	2	1	9	7	..	15	3	..	..	41
Trachoma ..	1	3	3	..	1	2	..	..	..	..	..	..	..	10
Ophthalmia neonatorum ..	..	3	1	..	..	..	..	..	1	..	..	..	..	5
Food poisoning ..	..	4	90	..	..	..	3	1	4	..	..	7	..	111
Bacillary dysentery ..	5	53	3	4	15	38	22	4	7	..	..	..	..	151
Amoebic dysentery ..	..	..	3	..	..	1	6	7	4	..	..	..	..	21
Undulant fever ..	..	5	..	..	..	1	6	1	1	11	..	..	..	25
Chronic lead poisoning ..	..	..	..	..	..	..	..	1	1	2	..	..	..	3
Malaria ..	1	49	16	2	1	..	16	47	4	30	1	6	13	187
Berberi ..	..	..	..	..	..	..	..	53	..	..	..	..	..	53
Lethargic encephalitis ..	..	..	1	..	1	..	..	..	..	1	..	..	..	5
Actinomycosis ..	1	..	..	..	..	..	1	..	1	..	..	..	..	3
	115	1,543	1,083	298	399	402	1,328	1,544	287	1,196	135	506	539	9,325

Table C.—Notifiable Diseases in New Zealand for Year ended 31st December, 1945, showing Distribution by Age and Sex

Name of Disease.	Under 1 Year.		1-5 Years.		5-10 Years.		10-15 Years.		15-20 Years.		20-25 Years.		25-30 Years.		30-35 Years.		35-40 Years.		40-45 Years.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Scarlet fever ..	23	16	578	547	887	1,446	381	573	1,222	244	35	152	15	76	21	81	50	12	23	29
Diphtheria ..	22	19	111	106	170	143	81	71	30	46	16	43	20	29	10	17	13	5	8	8
Enteric fever—																				
(a) Typhoid ..	1	..	..	..	..	2	2	..	1	1	..	1	2	1	2	..	1	..	..	1
(b) Paratyphoid ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tuberculosis—																				
(a) Pulmonary ..	1	3	11	8	15	9	21	20	65	91	143	150	183	135	185	75	52	65	42	8
(b) Other forms ..	4	1	20	17	16	15	8	14	12	16	30	30	20	11	23	14	9	8	8	1
Cerebro-spinal fever ..	13	11	18	12	6	4	6	2	3	1	..	3	1	1	1	..	3	..	4	1
Acute poliomyelitis ..	..	1	3	2	1	1	1	2	..	..	..	1	..	..	..	..	..	..	..	..
Influenza (pneumonic, &c.) ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Erysipelas ..	3	1	1	5	2	3	4	3	2	2	4	5	5	9	4	11	7	14	8	16
Puerperal fever—																				
Ordinary ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Following abortion ..	..	..	..	..	..	..	..	..	..	3	..	19	..	24	..	12	..	12	..	3
Eclampsia ..	..	..	..	..	..	..	..	..	..	4	..	24	..	33	..	19	..	13	..	5
Tetanus ..	..	..	..	..	..	..	..	..	..	3	..	19	..	6	..	9	..	6	..	3
Hydatids ..	..	..	..	1	4	3	1	..	2	..	..	..	..	..	..	..	..	..	1	..
Trachoma ..	..	..	..	1	..	..	..	..	4	..	..	..	..	..	3	2	1	2	2	1
Ophthalmia neonatorum ..	1	4	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	1
Food poisoning ..	..	..	..	..	..	..	3	..	1	23	5	56	2	2	8	2	1	1	1	1
Bacillary dysentery ..	..	7	20	14	11	5	6	2	2	3	11	6	7	7	3	6	6	1	1	1
Amoebic dysentery ..	4	..	..	..	..	..	..	..	..	6	3	3	7	1	1	1	1	2	2	3
Undulant fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Chronic lead poisoning ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Malaria ..	..	..	..	..	..	..	..	..	..	4	..	..	..	..	..	..	..	..	..	..
Berberi ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Lethargic encephalitis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Actinomycosis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	72	63	771	715	1,063	1,335	517	693	252	445	274	516	346	328	270	255	165	178	140	125

Table C.—Notifiable Diseases in New Zealand for Year ended 31st December, 1945, showing Distribution by Age and Sex—continued

Name of Disease.	45-50 Years.		50-55 Years.		55-60 Years.		60-65 Years.		65-70 Years.		70-75 Years.		75-80 Years.		80 and over.		Totals.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Scarlet fever	10	10	5	12	8	8	2	8	1	1	2	3	..	..	..	..	..	..	..
Diphtheria	2	3	5	1	2	1	3	1	..	..	..	1	..	..	..	..	..	..	..
Enteric fever— (a) Typhoid	1	2	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
(b) Paratyphoid .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tuberculosis— (a) Pulmonary	75	31	62	21	56	17	44	10	10	17	6	6	9	5	1	2	1,037	685	..
(b) Other forms	8	5	6	6	6	2	1	4	..	4	..	..	..	..	1	3	170	159	..
Cerebro-spinal fever	1	1	..	..	1	..	1	..	..	..	..	..	..	..	..	..	62	36	..
Acute poliomyelitis .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	8	..
Influenza (pneumonic, &c.) .. .. .	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	2	..
Erysipelas	7	21	8	13	7	14	3	13	6	6	..	..	4	5	2	3	95	153	..
Puerperal fever— Ordinary .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	75	100
Following abortion .. .. .	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	100	46
Eclampsia .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tetanus .. .. .	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	10	2
Hydatids	2	..	1	1	2	..	2	..	..	..	1	..	1	..	..	..	24	17	..
Trachoma .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	3	..
Ophthalmia neonatorum .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..
Food poisoning .. .. .	..	..	1	1	1	4	3	4	1	1	2	..	2	1	..	1	1	24	87
Bacillary dysentery .. .. .	..	2	1	2	2	..	..	..	..	..	..	..	..	..	..	1	72	79	..
Amoebic dysentery .. .. .	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	17	4	..
Undulant fever	4	..	3	1	..	..	..	..	..	..	..	..	..	..	..	..	18	7	..
Chronic lead poisoning .. .. .	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	3	..
Malaria .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	180	7
Beriberi	2	1	..	..	..	..	4	..	..	..	..	..	..	..	..	..	..	53	4
Lethargic encephalitis .. .. .	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	4
Actinomycosis .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	114	79	94	55	90	79	60	34	31	19	17	12	4	9	4,359	4,966			

DIVISION OF HOSPITALS

HOSPITAL BEDS

At 31st March, 1944, there were 16,613 hospital beds, public and private, in the Dominion, which gave 10.2 beds per thousand of population based on the estimated mean population under the old census. At 31st March, 1945, there were 16,976 beds, which gives 10 per thousand of population based on preliminary 1945 census figures.

Many Hospital Boards have a considerable deficiency in the number of beds required to treat the public adequately. The North Canterbury, Otago, and Southland Hospital Boards, for example, have in hand plans for the addition of over one thousand beds in new buildings. The Auckland Hospital Board has opened between three hundred and four hundred beds at Cornwall Hospital, and will shortly open three hundred beds at Middlemore.

A feature of the year has been the closing of a number of private maternity hospitals because of shortage of domestic and nursing staff, and because, as elderly licensees give up the private maternity hospitals that they have conducted for many years, younger nurses are unwilling to undertake the burden of taking over or establishing maternity hospitals. Hospital Boards have, in many cases, had to purchase or lease the private maternity hospitals until such time as permanent maternity accommodation can be built.

A serious shortage of domestic staff has been almost universal. Some hospitals have had little difficulty in maintaining an adequate nursing staff, while others, especially those in country districts or the infirmary type of hospital, have been unable to maintain adequate nursing staffs. This has resulted, in some cases, in the closure of sections of the hospital or in the refusal to admit non-urgent patients, and, in a few cases, in inadequate care being given to patients.

ARCHITECTURAL

Many overseas authorities have expressed the opinion that hospital architecture is one of the most specialized types of architecture. The following quotation is from a recent American publication :—

We have repeatedly pointed out that the designing of a hospital is unlike any other design problem, and that successful experience in planning factories or schools does not ensure success in planning a hospital. A hospital is the most complicated type of building that is planned with any frequency.

The Department has had great difficulty in attempting to exercise adequate supervision of the plans of Hospital Boards, as it has had only one Architect for some years. It appears desirable that the architectural staff should be considerably strengthened in order that the Department should itself undertake the provision of sketch plans for all hospital building. This would enable a greater measure of standardization than is possible at present.

ANÆSTHETIC DEATHS

It is usual to review the deaths that have occurred under anæsthesia each five years. The following table is therefore appended :—

Return of Deaths under Anaesthetics, 1941-45

Total deaths under anæsthetic for year ending—						
31st December, 1941	..	..	..	..	..	28
31st December, 1942	..	..	..	..	..	23
31st December, 1943	..	..	..	..	..	25
31st December, 1944	..	..	..	..	..	35
31st December, 1945	..	..	..	..	..	31
						<hr/>
Total deaths for five years	..	..	..	..	..	142

Nature of Anaesthetic.	1941.	1942.	1943.	1944.	1945.	Total.
Chloroform .. .. .	..	1	2	..	3	6
Chloroform and ether	3	5	6	2	6	22
Ether	3	3	4	7	2	19
Ethyl chloride and ether	11	7	5	8	4	35
Gas and oxygen	5	2	2	4	1	14
Gas and oxygen with ether .. .. .	..	1	..	1	1	3
Cyclopropane	1	..	1	1	3	6
Pentothal sodium .. .. .	..	..	2	6	9	17
Avertin with gas and oxygen	1	..	..	..	..	1
Cocaine hydrochloride .. .. .	..	1	..	..	..	1
Pecicaine .. .. .	..	1	..	..	..	1
Percaïne	3	1	2	3	..	9
Evipan .. .. .	..	..	..	2	..	2
Novocaine .. .. .	..	..	..	..	1	1
Nature of anaesthetic not stated	1	1	1	1	1	5
Total	28	23	25	35	31	142

Age-groups

Age.	1941.	1942.	1943.	1944.	1945.	Total.
0- 5	6	7	5	5	4	27
6-10	2	1	1	..	2	6
11-20	1	3	2	3	2	11
21-30	2	3	5	4	7	21
31-40	1	2	4	2	2	11
41-50	1	3	4	6	4	18
51-60	5	2	2	10	5	24
61-70	1	..	1	3	4	9
Over 70	7	1	1	2	..	11
Age not stated	2	1	..	..	1	4
Total	28	23	25	35	31	142

Location of Deaths under Anaesthetics

Place.	Total Deaths under Anaesthetics, 1941-45.	Place.	Total Deaths under Anaesthetics, 1941-45.
Dental surgeries	6	Public hospitals— <i>continued</i>	
Doctors' surgeries	1	Taumarunui	1
Private hospitals	21	Timaru	1
Private house	2	Grey River	1
Maternity hospitals	1	Raetihi	2
Public hospitals—		Waihi	1
Auckland	17	Tauranga	1
Wellington	16	Burwood, Christchurch	1
Christchurch	12	Rotorua	1
Dunedin	6	Gisborne	1
Hamilton	7	Westport	1
Palmerston North	6	Lower Hutt	1
Wanganui	5	Waipukurau	1
New Plymouth	3	Masterton	1
Southland	2	Patea	1
Waipukurau	2	Kaikoura	1
Hastings	2	Whakatane	1
Hawera	2	Taihape	1
Northern Wairoa	2	Blenheim	1
Green Lane, Auckland	2	Military Camp, Waiouru	1
Ashburton	2	Sick-quarters, H.M.S. "Philomel"	1
Napier	2		
Buller, Westport	1		
			142

DIVISION OF SCHOOL HYGIENE

Medical inspection of children continued throughout the year to the extent possible with the limited medical personnel available. The Department was unable to recruit additional medical officers, and operated at approximately half the authorized strength. Much work was accomplished nevertheless.

The Medical State of Primary-school Children, 1945
(European and Maoris)

	European.		Maori.	
	Number.	Percentage.	Number.	Percentage.
Number of children examined	70,387	..	5,207	..
Number of children found to have defects	28,158	40·00	2,403	46·14
Number of children with defects other than dental ..	22,422	31·85	1,697	32·59
Children showing evidence of—				
Subnormal nutrition	6,682	9·49	414	7·94
Skin-diseases	1,425	2·02	541	10·38
Heart—				
Organic disease	282	0·40	13	0·24
Functional disease	544	0·77	12	0·23
Respiratory disease	388	0·55	34	0·65
Posture—				
Slight impairment	19,370	27·51	875	16·80
Gross defect	2,154	3·05	40	0·76
Deformities of trunk and chest	846	1·20	25	0·48
Mouth—				
Defect of jaw or palate	3,284	4·66	73	1·40
Dental caries	6,513	9·25	969	18·60
Extractions of permanent teeth	790	1·12	71	1·36
Fillings	54,677	77·68	2,498	47·98
Perfect sets of teeth	2,107	2·99	335	6·43
Gums: Gingivitis or pyorrhœa	135	0·19	65	1·24
Nose and throat—				
Nasal obstruction	2,890	4·10	83	1·59
Enlarged tonsils	9,639	13·69	514	9·87
Enlarged glands	4,515	6·41	166	3·18
Goitre—				
Incipient	6,545	9·29	223	4·28
Small	1,207	1·71	17	0·32
Medium or large	64	0·09	2	0·03
Total amount of goitre	7,816	11·09	242	4·63
Eye—				
External eye-disease	445	0·63	21	0·40
Squints	280	0·39	10	..
Defective vision—				
Uncorrected	1,390	1·97	93	1·78
Corrected	1,020	1·44	12	0·23
Ear—				
Otorrhœa	59	0·08	49	0·94
Defective hearing	204	0·28	52	0·99
Defective speech	274	0·38	10	0·19
Mental—				
Retardate	221	0·31	6	0·11
Feeble-mindedness	56	0·07	..	..
Epilepsy	8	0·01	..	..
Other nervous defects	100	0·14	4	0·07
Digestive system defects	65	0·09	8	0·15
Phimosi	50	0·07	4	0·07
Undescended testicles	133	0·18	14	0·26
Hernia	112	0·15	7	0·13
Number of parents present at the medical examination	18,741	26·62	642	12·32
Number of children notified as defective	19,117	..	1,943	..

Points worthy of notice in the above findings: The level of nutritional defect remains high, practically the same as last year's high figure—viz., 9·49 per cent. in 1945, 9·53 per cent. in 1944 in Europeans. The Maori figures have deteriorated a little, 7·94 per cent. in 1945, 6·33 per cent. in 1944.

Poor posture shows a definite increase in both Europeans and Maoris in its minor grades, though the level of gross defect is much the same. 19·47 per cent. of slight European impairments in 1944 became 27·51 per cent. in 1945, the corresponding figures for gross defect demanding remedial treatment being 3·05 per cent. in 1945 and 2·53 per cent. in 1944. In Maoris the 10·26 per cent. of 1944 became 16·80 per cent. slight impairments last year, but gross defects were 0·88 per cent. in 1944, reduced to 0·76 per cent. in the last year. This preponderance of poor posture in our schools is probably another indicator of unbalanced dietaries in the homes, also evidence of parental carelessness in ensuring that children obtain sufficient rest and sleep. Too many of our young children in towns are allowed out at nights when they should be in bed asleep.

The Maori children continue to show up unfavourably as compared with Europeans in skin-diseases, dental caries, and pyorrhœa, but seem, as always before, to have superiority in posture, in perfect sets of teeth, in rounded normal jaws, and show less deformed trunks and chests, less adenoids and tonsils or enlarged glands, and less goitre.

HEALTH CAMPS FOR PRIMARY-SCHOOL CHILDREN

The scheme begun last year of keeping certain health camps open all the year round to take only tuberculous contacts was tried out, but did not prove successful. The idea has therefore been abandoned, and health camps will continue to admit tuberculous contacts with other children, provided they are shown by physical and x-ray examination to be free from tuberculous disease.

Health camps functioned all the year round, some permanently, and some in the summer only, for children selected by the school medical and nursing staff.

THE MEDICAL STATE OF PRE-SCHOOL CHILDREN, 1945

There has been an improvement in pre-school child nutrition, which was subnormal in 10·34 per cent. in 1944 and in 8·86 per cent. in 1945. There is also less dental caries, 9·90 per cent. in 1944 falling to 7·48 per cent. in 1945. These are the only significant changes in the figures from the previous year. It is disappointing to find 10·3 per cent. of mothers voluntarily admitting their children get insufficient sleep, and a further 7·4 per cent. not bothering to put toddlers down for a daytime rest.

Pre-school Medical Inspection Summary

Number of children seen .. .. .	..	..	..	..	..	..	..	7,357
Number of defects found—						Number.		Percentage.
Anæmia .. .. .	..	..	..	..	..	298		4·05
Uncleanliness .. .. .	..	..	..	..	..	24		0·32
Subnormal nutrition .. .. .	..	..	..	..	..	652		8·86
Protuberant abdomen .. .. .	..	..	..	..	..	320		4·34
Posture defective .. .. .	..	..	..	..	..	192		2·60
Deformities—								
Chest .. .. .	..	..	..	..	..	155		
Legs .. .. .	..	..	..	..	..	324		
Feet .. .. .	..	..	..	..	..	665		
						—	1,144	15·54
Skin-diseases .. .. .	..	..	..	..	..	316		4·29
Heart: organic defects .. .. .	..	..	..	..	..	74		1·00
Lungs .. .. .	..	..	..	..	..	82		1·11
Dental—								
Gums and soft tissues .. .. .	..	..	..	..	..	32		0·43
Dental caries .. .. .	..	..	..	..	..	551		7·48
Nose and throat—								
Adenoids .. .. .	..	..	..	..	..	321		4·36
Tonsils .. .. .	..	..	..	..	..	994		13·51

Pre-school Medical Inspection Summary—continued

Number of defects found— <i>continued</i>							Number.	Percentage.
Enlarged glands	..	..	..	..	..	..	386	5.24
Goitre	..	..	..	..	..	..	80	1.08
Eyes—								
External eye disease	..	..	..	..	..	..	106	1.44
Defective vision	..	..	..	..	..	..	52	0.70
Ears—								
Otorrhœa	..	..	..	..	..	..	16	0.21
Deafness	..	..	..	..	..	..	34	0.46
Phimosis	..	..	..	..	..	..	28	0.38
Undescended testicles	..	..	..	..	..	..	96	1.30
Hernia	..	..	..	..	..	..	30	0.40
Habit abnormalities—								
Bad food habits	..	..	..	..	..	..	778	10.57
Other bad habits	..	..	..	..	..	..	497	6.75
Bowel-action abnormality	..	..	..	..	..	..	100	1.35
Eneuresis	..	..	..	..	..	..	474	6.44
Insufficient daytime rest	..	..	..	..	..	..	546	7.42
Insufficient sleep	..	..	..	..	..	..	760	10.33
Preventive immunizations—								
Whooping-cough—Complete course of vaccine: Number of children	..	..	..	..	..	..	..	990
Diphtheria—Complete courses, either three doses of formol toxoid, or two of alum precipitated toxoid: Number of children—								
Pre-school ages	..	..	..	..	..	..	9,445	} 18,213
Primary school	..	..	..	..	..	..	8,768	

DIVISION OF NURSING

LEGISLATION

The Nurses and Midwives Act and Amendments were consolidated in 1944, and provisions were included in the new Act for the training, examination, and registration of male nurses and for the awarding of post-certificates for special courses approved by the Nurses and Midwives Board. Under this legislation the certificate awarded by the Royal New Zealand Society for the Protection of Women and Children (Plunket Society) will, from April, 1946, be recognized as a State certificate.

HOSPITAL SERVICE

The following table shows that, although the occupied bed rate of hospitals used as training schools is still increasing, there is for 1946 a decrease of some 250 in nursing staff. This is largely due to the large number of marriages which took place during the year with the return of servicemen, and to the lifting of the man-power restrictions.

The table shows a total of 4,627 nurses for approximately 8,600 occupied beds. If the staff was on the basis of 1 nurse to 1.5 occupied beds as recommended, it is estimated the requirements would be a total of 6,450 nurses. However, the reduction in the numbers of registered nurses should be only a temporary phase. A certain number of nurses who have been attached to the Services will return to practise, and the number of nurses registering each year has been steadily increasing, from 450 in 1940 to 665 in 1945. At present the position in some of the country hospitals, particularly those where the amenities are not good, or where little improvement has been made to equipment, is most difficult owing to staff shortages. The Hospital Boards controlling these hospitals will have to improve conditions if staff is to be retained.

NURSES IN TRAINING SCHOOLS

—	1940.	1941.	1942.	1943.	1944.	1945.	1946.
Number of occupied beds in training schools	5,331.8	6,040.0	6,285.7	6,808.5	7,603.2	8,493.0	8,550.05
Number of registered nurses	908	922	984	1,172	1,366	1,500	1,347
Number of pupil nurses	2,219	1,575	2,798	2,974	3,124	3,390	3,280

RECRUITING CAMPAIGN

For the past three years the Department has been spending £1,000 a year on pamphlets, newspaper advertisements and articles, broadcasts, and film material in campaigns for the recruitment of nurses. In spite of this, the number of applicants of the right type is not sufficient to meet the demand, which has meant that many unsuitable girls have been accepted. This is reflected again in the wastage which takes place during training, as from returns it would appear that at least 25 to 30 per cent. of those who commence training do not finish. A study will be made to endeavour to obtain information which can be used to reduce this wastage of human energy, time, and money. The position in regard to the supply of domestic staff has considerably deteriorated, particularly with the lifting of the Man-power Regulations.

NURSING EDUCATION

The Nursing Education Committee of the New Zealand Registered Nurses' Association, of which the nursing officers of the Nursing Division are members, conducted two inquiries during the year through the Department. These inquiries were made by means of questionnaires, the subjects being: (1) the incidence of septic fingers, and (2) teaching in the wards by the ward sisters.

The results of these studies were compiled and circulated to the Matrons of all hospitals. Essay competitions were judged for the general, maternity, and midwifery training schools, the winning hospitals being Masterton, Waikato, and St. Helens (Wellington).

THE CIVIL NURSING RESERVE

After serving a most useful function for a period of nearly three years, the Civil Nursing Reserve has dwindled considerably. During this time some 50 registered nurses and 500 voluntary aides have served in the Reserve. Practically every hospital Board in the Dominion has received some assistance.

SALARY SCALE

During the year the officers of the Department were called into consultation by the Hospital Boards' Association and the New Zealand Registered Nurses' Association regarding the introduction of a new salary scale for nurses. Later the new scale was approved by the Stabilization Commission with retrospective effect from 1st April, 1945.

OBSTETRICAL NURSING SERVICE

The increasing number of private maternity hospitals reverting to public-hospital control has brought about a marked change in obstetrical nursing service of the country. This development is steadily increasing, and the Hospital Boards concerned have had to cope with many difficulties.

PUBLIC-HEALTH NURSING

There has been a fairly rapid expansion of the district bedside care being given by Hospital Boards as a result of the introduction of the district nursing benefit. The service has been greatly appreciated because of the very small number of nurses engaged in private nursing. A number of Boards instituting this service for the first time arranged for the nurses to attend the month's introductory course for district nurses in Wellington, and this has been a definite advantage.

There has been a further expansion of the Department's district staff as several new districts have been created, and in a few instances where Boards have been unable to appoint nurses to isolated areas the Department has taken over the area, the nurse so

employed being responsible for the entire programme in that area. The advantage of this system for isolated areas has been that with a large staff it is possible to change these nurses fairly frequently.

There has also been an extension of the amalgamation of the Plunket Society and the Department's nursing staffs in some areas. In Otago the Plunket Society with four of its nurses doing departmental duties, is responsible for the entire public-health nursing duties, while the Department's nurses at Lake Tekapo, Otira, Porangahau, Mokau, and Great Barrier Island will undertake the duties usually carried out by the Plunket nurses.

POST-GRADUATE SCHOOL

The work of the school is steadily expanding. Forty-two nurses took the course in 1945, and fifty have enrolled for 1946, and there are many inquiries for 1947. This year the syllabus was reviewed and certain subjects made compulsory examination subjects. The Director of the Division of Nursing is of the opinion that the content of some of the subjects requires further consideration with a view to courses in clinical supervision being added to the curriculum, and the introduction of such specialties as orthopædics, tuberculosis, and obstetrics.

ISLAND NURSING SERVICE

The Director, Division of Nursing, visited Fiji, Samoa, Rarotonga, and Aitutuki. A conference was subsequently held in Suva, attended by the Chief Medical Officers of the various administrations, at which the Island Nursing Service was fully discussed, and decisions arrived at as to its future development.

OCCUPATIONAL THERAPY

Meetings of the Selection Committee, consisting of Dr. Buchanan, Miss Inman, and the Director, Division of Nursing, were held. A large number of candidates were interviewed, and two classes of six were selected for training as occupational therapists.

DIVISION OF TUBERCULOSIS

The activities of the Division during the year have been directed in the main towards the keeping of the Tuberculosis Register in a more accurate manner, with the result that the prevalence of the disease in its many forms is better understood by all workers.

The returns for the year 1945, as obtained from the notifications by general practitioners, hospital clinics, and Department's case-finding scheme, disclose the known position as at 31st December, 1945, as under:—

1. *Stated Morbidity of Tuberculosis, Maori and European, in New Zealand as at 31st December, 1945, compared with years 1944 and 1943:—*

	Pulmonary.			Non-pulmonary.			Total, 1945.
	1943.	1944.	1945.	1943.	1944.	1945.	
North Island	4,698	5,038	6,116	386	507	546	6,662
South Island	1,398	1,722	2,005	181	259	360	2,415
Totals for New Zealand ..	6,096	6,760	8,171	567	766	906	9,077*

* Total Maori morbidity for 1945 in the above total = 2,387.

The increase in morbidity during the last three years is more likely to be due to intensified case finding and better notification rather than an increase in prevalence.

2. *New Cases notified as Tuberculous to the Medical Officer of Health during 1945* are scheduled and compared with cases notified in years 1943 and 1944:—

—	Europeans.									Maoris.		
	Pulmonary.			Non-pulmonary.			Totals.			Pulmonary.	Non-Pulmonary.	1945 Total, Maoris.
	1943.	1944.	1945.	1943.	1944.	1945.	1943.	1944.	1945.			
North Island ..	1,292	1,027	1,152	131	140	183	1,423	1,167	1,335	442	64	506
South Island ..	507	474	570	90	71	146	597	545	716	8	7	15
Total for New Zealand	1,799	1,501	1,722	221	211	329	3,020	1,712	2,051	450	71	521

Total new cases, both races, notified: 1943, 2,603; 1944, 2,254; 1945, 2,572. Some of these cases have been found to be non-tuberculous and consequently deregistered.

3. Incidence Rates, all Forms:—

	Rates per 1,000 Population.	
	1945.	1944.
The known incidence for Europeans—		
North Island	4·17	3·47
South Island	4·20	3·47
The known incidence for Maoris—		
North Island	24·13	23·24
South Island	27·35	25·48
The known incidence for combined races—		
North Island	5·84	4·98
South Island	4·35	3·59
The known incidence in New Zealand for Europeans—		
Both Islands	4·19	
The known incidence in New Zealand for Maoris—		
Both Islands	24·24	
The known incidence in New Zealand for combined races	5·35	

Rate of "Activity": Out of a total of 9,077 cases on the register at 31st December, 1945, 2,321* were returned as being in the "active" state, "infectious" or "potentially infectious" 25·57 per cent.

The European incidence is 11·13 times the annual deaths. Figure for 1944, 9·7. The Maori incidence is 6·4 times the annual deaths. Figure for 1944, 5·7. The combined race incidence is 9·3 times the annual deaths. Figure for 1944, 8·0. The incidence of the combined races is approaching the figure 10 that is usually accepted as the ratio of cases to deaths in other countries. The New Zealand European incidence is higher than this figure.

4. *The 1945 Mortality Returns for Tuberculosis*, as supplied by the Government Statistician, are scheduled as follows:—

—	Pulmonary Forms.						Other Forms.						Total Deaths, 1945.	
	European.		Maori.		Totals, Pulmonary.	European.		Maori.		Totals, other Forms.	M.	F.		
	M.	F.	M.	F.		M.	F.	M.	F.					
North Island	203	110	128	150	591	28	35	47	33	143	376	358		
South Island	111	73	7	7	198	23	20	1	..	44	227	15		
Total, New Zealand ..	314	183	135	157	789	51	55	48	33	187	603	373		

* As 2,614 other cases have yet to be classified this is a low figure.

Deaths from tuberculosis, pulmonary forms, 1945 and 1944 :—

	1945.	1944.
Europeans	497	485
Maoris	292	285
	<hr/>	<hr/>
	789	770

Deaths from tuberculosis, non-pulmonary (other forms), 1945 and 1944 :—

	1945.	1944.
Europeans	106	106
Maoris	81	87
	<hr/>	<hr/>
	187	193

Death-rates, all Forms

	Total Deaths.	Crude Death-rates per 10,000.		
		1945.	1944.	1943.
North Island	734	6.43	6.81	..
South Island	242	4.36	4.31	..
Both Islands—				
Europeans	603	3.78	3.81	3.72
Maoris	373	37.02	37.40	36.6
Both races	976	5.77	5.96	5.62

It is of interest to note that—

- (1) European male deaths from all forms (365) exceed the female deaths (238) :
- (2) Maori female deaths from all forms (190) exceed the Maori male deaths (183) :
- (3) The crude death-rate of the combined races (5.77) is slightly lower than for last year (5.96) :
- (4) The total number of deaths in 1945 exceeds the deaths for 1944 by 13 :
- (5) The European death-rate is slightly reduced and the Maori death rate is slightly increased over the 1944 rate.

Further Register details (31st December, 1945) show a New Zealand incidence as follows :—

(1) Sex incidence—		1945.	1944.	
Males, both races .. .. .	.. .. .	4,951	4,230	
Females, both races .. .. .	.. .. .	4,136	3,501	
(2) Disposition of notified cases—		1945.	1944.	1943.
Supervised in hospitals .. .. .	.. .. .	1,116	1,114	954
Supervised in sanatoria .. .. .	.. .. .	706	661	577
		<hr/>	<hr/>	<hr/>
Total in institutions .. .. .	.. .. .	1,822	1,775	1,531
Supervised in own homes .. .. .	.. .. .	6,535	5,308	4,707
Supervised in hutments (Maoris) .. .. .	.. .. .	181	182	106
Supervised in boardinghouses, or nomadic	.. .. .	539	466	428
		<hr/>	<hr/>	<hr/>
Totals .. .. .	.. .. .	9,077	7,731	6,772

5. *Progress of Notified Cases :—*

(a) Returned as disease “deteriorating” or “stationary”	1945.	1944.
	1,068	1,445
(b) Number returned as disease “improving”	1,253	1,321
	<hr/>	<hr/>
Total (a) and (b) regarded as “active”	2,321	2,766

5. *Progress of Notified Cases*—continued

(c) Number returned as disease “quiescent” or “arrested”	1945.	1944.
	3,654	2,374
(d) Number returned as disease “apparently cured” (252 have been deregistered)	488	381
Total (c) and (d) regarded as “inactive”	4,142	2,755
(e) Number of cases whose accurate classification has yet to be determined	2,614*	2,201

6. “*Infectious*” or *Bacteriological Status of Notified Cases at 31st December, 1945* :—

	1945.	1944.
(a) With discharge <i>Tubercle bacilli</i> positive	1,045	708
(b) With discharge <i>Tubercle bacilli</i> negative	1,504	1,323
(c) With no discharge or sputum available	3,099	} 4,729
(d) Cases not investigated	3,429†	

7. *Service Personnel returned at 31st March, 1946, from World War II, with tuberculosis and receiving pensions (as submitted by the Medical Officer in Charge of Treatment, Pensions Department)* :—

	Overseas Service.	New Zealand Service.	Total.
Tuberculosis, all forms	593	346	939‡

HOSPITAL AND SANATORIUM ACCOMMODATION

Activities of the Division have also been directed towards the provision of adequate institutional accommodation for tuberculous patients. As a result—

- (1) Hospital Boards in the Western Area, North Island, are searching for a site where a modern sanatorium to accommodate 120 patients can be built :
- (2) The Auckland and South Auckland Hospital Boards have agreed to combine to erect a sanatorium of 150 beds at Hamilton :
- (3) The Auckland Hospital Board has submitted to the Department sketch-plans of a 276 bed Chest Hospital to be built at Green Lane :
- (4) The Waikato Hospital Board has purchased a site of 102 acres at Hillcrest, Hamilton, where a new sanatorium will be built, and also a chest hospital of 200 beds for the Waikato Hospital District :
- (5) The Western Districts Sanatorium Committee is finalizing plans for the improvement of the Otaki Sanatorium :
- (6) It is regretted that a fire at the Waipiata Sanatorium last year destroyed 8 beds. Plans to replace these with other improvements are being prepared :
- (7) The Wellington Hospital Board is planning to improve the facilities at Ewart and Victoria Wards and contemplates building sanatorium accommodation for 120 patients.

HOSPITAL NURSING STAFF

The incidence of minimal tuberculosis in nurses in hospitals has been carefully watched during the year, and representations have been made to all Hospital Boards during the year to reduce to an absolute minimum the disease in nurses by improving facilities and nursing technique. The general shortage of female nursing staff in tuberculosis institutions is acute, and in many instances the shortage has had to be remedied by the employment of male nurses.

* This figure is too high, and efforts will be intensified to have these cases classified during the year.

† This figure is too high, and efforts will be intensified to have these cases investigated during the year.

‡ This is very much lower than what was quoted at end of World War I.

The augmentation of the departmental district nursing staff by 41 specially trained district nurses to a total of 205 nurses will allow better control of "tuberculous households" and should further improve "case-finding."

All departmental staff have been most conscientious in taking part in the tuberculosis control programme.

The North Auckland Hospital Boards have agreed to appoint a whole-time Tuberculosis Officer to be based at Whangarei.

All tuberculosis areas will then have adequate specialized medical officers to supervise diagnosis, treatment, and after care, with the exception of the eastern districts, North Island, who should have one Assistant Tuberculosis Officer.

Dr. C. E. Lyth, after twenty-five years' faithful service to the Otago Hospital Board, has resigned. Dr. Brian Thomson, of England, will take up his appointment in July, 1946.

TUBERCULOSIS RESEARCH

Improved control and new methods in diagnosis and treatment as have been reported from overseas have been diligently followed, and all new methods have been or are being investigated with a view to their introduction into New Zealand.

PLANS FOR THE FUTURE CONTROL OF DISEASE

The plans for the future control of tuberculosis in New Zealand envisage :—

- (1) A further intensification of "case-finding" by better notification, tuberculin testing, and x-ray surveys.
- (2) Better identification of "active" cases so that necessary measures of control can be instituted.
- (3) Further improvement and extension of tuberculosis accommodation in hospitals and sanatoria. This accommodation is regarded as a very necessary factor in the preventive control programme :
- (4) The improvement of housing conditions of European and Maori patients who are able to live in their own homes :
- (5) The further education of the general public in tuberculosis control per the medium of tuberculosis associations, as well as by the publicity afforded by the Department.

Further details and full statistical tables are available in the comprehensive report prepared for submission to the next Tuberculosis Officers' Conference in October, 1946.

DIVISION OF HEALTH BENEFITS

COST OF BENEFITS

The attached table gives a statement of the expenditure on the various classes of benefits since their inception. The table also indicates the nature of the various benefits and the dates of their coming into operation.

The following comments are made with respect to each of the five classes of benefits :—

Subdivision I : Maternity Benefits.—The actual increase in expenditure, shown in the total since 1940, is due mainly to an increase in the birth-rate. The birth-rate was relatively high in 1941-42 and also during the past year, when there were 3,400 more European births than in the previous year.

Subdivision II : Medical Benefits.—The important item in this subdivision is that of "General Medical Services" or, in other words, the fee-for-service system of remuneration of medical practitioners. As mentioned in last year's report, costs have risen steadily following the commencement of this benefit in 1942. Since last year 100

additional practitioners have commenced or recommenced practice, and this is reflected in the increased expenditure during the past year of £130,122. The problem remains of stabilizing expenditure in a fee-for-service system, as also of ensuring quality and quantity of service in all parts of New Zealand, but it is hoped that measures now under consideration to ensure co-operation with the medical profession will lead to the desired result.

Special Areas.—Expenditure in this class of benefit is for the provision of medical practitioners in various isolated parts of New Zealand not able to obtain them under ordinary conditions. All of the special areas are functioning very satisfactorily, except that in some difficulty has been experienced in securing continuity of medical service, but it is anticipated that permanent appointments can soon be made for all these areas. It is pleasing to record that, despite the salaried nature of these appointments, the services provided have been satisfactory.

Subdivision III: Hospital Benefits.—In this subdivision, particularly that of in-patient treatment in public hospitals, the increase of expenditure since the inception of the benefit has been marked. The increase has been due not only to an actual increase in the number of patients, but also to the 50 per cent. increase in maintenance fees which became operative in 1943.

Subdivision IV: Pharmaceutical Benefits.—The total expenditure in this subdivision for the past year was £1,133,366, which is almost as great as that for medical practitioner services over the same period. The drugs dispensed by chemists were responsible for the greater part of this sum, the increase during the past year having been £148,852. Most of the increases have been due to costly prescribing by doctors. This is exemplified by the number of prescriptions costing £1 or more, which were very rare in the days before social security, but now amount to 1 per cent. of all prescriptions or 7 per cent. of the total cost of all prescriptions. Remedies for this situation now under consideration will, it is hoped, secure stabilization or even reduction in the cost of drugs.

Subdivision V: Supplementary Benefits.—The total indicates the benefits now in operation, as also those which will come into operation during the ensuing year. It is hoped that satisfactory arrangements can soon be made so that specialist services can be made available to all.

Social Security Fund Medical Benefits : Statement showing Expenditure since Commencement of Benefits

	1939-40 (10½ Months)	1940-41.	1941-42.	1942-43.	1943-44.	1944-45.	1945-46.
<i>Subdivision I : Maternity Benefits (commenced 15th May, 1939)</i>							
Public-hospital fees	£ 74,780	£ 106,834	£ 113,276	£ 110,217	£ 114,930	£ 133,946	£ 160,870
Private-hospital fees	139,602	216,086	227,315	207,575	209,841	210,675	222,669
Medical practitioners' fees	45,938	161,638	176,973	158,208	162,227	158,409	201,633
Medical practitioners' mileage-fees	1,031	5,663	6,215	5,089	5,044	5,647	4,572
Obstetric nurses' fees	16,022	21,101	18,940	15,089	12,027	11,117	10,465
St. Helens Hospital fees	6,440	7,653	7,151	9,046	9,870	10,940	Contribution now abolished.
	283,813	518,975	549,870	505,224	513,939	530,734	600,209
<i>Subdivision II : Medical Benefits. (Capitation Scheme introduced 1st March, 1941; General Medical Services Scheme introduced 1st November, 1941)</i>							
Capitation fees .. .. .	..	..	114,608	71,149	55,610	42,400	38,084
Capitation and general medical services mileage .. .. .	..	..	21,166	64,039	60,392	59,442	68,965
General medical services .. .. .	..	..	69,898	831,397	1,026,073	1,161,326	1,291,448
Special arrangements under section 82 .. .. .	..	..	..	49,468	37,256	23,855	27,495
Purchase of sites and erection of residences for Medical Officers appointed under section 82 .. .. .	..	..	..	..	..	..	..
Remuneration, allowances, and expenses of medical practitioners in areas other than those covered by section 82 .. .. .	..	..	..	..	..	..	1,317
	..	..	205,672	1,016,053	1,179,331	1,287,023	1,427,309

Subdivision III : Hospital Benefits (commenced 1st July, 1939) ; Out-patient Benefits (commenced 1st March, 1941)

Treatment in approved institutions includes Ashburn Hall, Knox Home, Auckland, and Karitane Hospitals, payments to latter being introduced in 1940, but dated back to 1st November, 1939

Treatment in public hospitals	514,254	893,251	953,794	1,020,319	1,564,315	1,689,233	1,767,874
Out-patient treatment	..	..	47,162	70,720	73,137	83,412	98,972
Treatment in private hospitals	82,980	141,737	146,953	191,647	238,772	259,489	264,865
Treatment in approved institutions	..	..	28,155	38,819	43,908	56,504	41,749
(Contribution to Consolidated Fund for—							
Mental Hospitals	166,000	171,000	181,451	181,869	182,830	187,942	} Contribution now abolished.
Queen Mary Hospital	6,835	10,060	11,705	22,872	28,691	28,032	
Rotorua Sanatorium	2,707	4,712	4,985	4,563	6,425	6,425	
Rotorua Soldiers' Hospital	..	..	..	10,150	20,561	19,663	
	774,235	1,258,633	1,374,205	1,540,959	2,158,146	2,330,700		2,173,460

Subdivision IV : Pharmaceutical Benefits (commenced 5th May, 1941), (11 months)

Drugs supplied by—	..	..	..	..	..	..	..
Chemists	..	..	261,845	530,695	716,080	933,490	1,082,342
Medical practitioners	..	..	1,527	5,891	6,092	6,231	6,030
Institutions	..	..	16,326	26,661	40,026	40,516	44,994
	..	..	279,698	563,247	762,198	980,237	1,133,366

Subdivision V : Supplementary Benefits

Radiological services (commenced 11th August, 1941)	..	..	..	..	..	..	..
Laboratory services (commenced 1st April, 1946)	..	..	27,962	88,588	109,426	128,842	132,806
Massage services (commenced 1st September, 1942)	..	..	..	8,836	27,331	32,152	35,569
Specialist services (neuro surgery)	..	..	..	..	1,066	1,324	2,260
District nursing services (commenced 1st September, 1944)	..	..	..	..	..	7,717	58,880
Dental services	..	..	..	..	..	..	.. 456
Domestic assistance (commenced 20th December, 1944)	..	..	..	..	..	..	..
	..	..	27,962	97,424	137,823	170,035	229,971
Grand totals	1,058,048	1,777,608	2,437,407	3,722,907	4,751,437	5,298,729	5,564,315
Recoveries*	1,350	923	1,819	1,728	24,757	64,015	27,751†
Net Totals	1,056,698	1,776,685	2,435,588	3,721,179	4,726,680	5,234,714	5,536,564

* These are mainly in respect of Hospital Benefits. † Prior to 1st April, 1945, these recoveries were treated as credits in reduction of expenditure. For 1945-46 they are included in Miscellaneous Receipts, Social Security, Fund. This should be taken into account when comparing published figures relating to Social Security Fund Expenditure.

DIVISION OF DENTAL HYGIENE

SCHOOL DENTAL SERVICE

The School Dental Service now operates at 447 centres, as against 428 at the end of the previous year. As at the 31st March, 1946, the staff numbered 641, including 183 student dental nurses. The field staff of school dental nurses remains approximately the same as at the date of the previous annual report—viz., 390, as against 389 twelve months previously. Resignations of married nurses on the return of their husbands from war service overseas have continued during the year, with the result that the staffing problem has become acute. Consideration has been given to the question of adopting expedients to bridge the period until the increased output from the Training School becomes effective. As recorded in the last annual report, the entry of student dental nurses has been increased to one hundred per year.

The number of children under regular treatment is 210,920, an increase of 19,580 during the year. This includes 24,364 children of pre-school age.

The number of schools now receiving treatment is 2,348, as compared with 2,321 at the end of the previous year.

The total number of operations for the year was 1,572,156. This number included 871,450 reparative fillings in both permanent and deciduous teeth and 194,667 preventive fillings, a total of 1,066,117 fillings. In contrast with this figure, which represents approximately the number of teeth preserved for useful service, the number of teeth removed as unsavable (or in some cases to relieve overcrowding) was 68,656, a ratio of 6.3 extractions to every 100 fillings.

The Dental Health Education Officer, to whose appointment reference was made in the last annual report, has continued to develop this important phase of the work of the Dental Division. The appointment of a school dental nurse experienced in this work to assist the Dental Health Education Officer has been authorized and will take effect shortly. The field staff of the School Dental Service has continued to show commendable enthusiasm for health education work throughout the year, as is shown by the fact that their activities under this heading number a total of 8,279.

The *School Dental Service Gazette*, which is edited by the Dental Health Education Officer, continues to fulfil a most useful function in keeping the widely dispersed staff in close touch with the activities of the Service as a whole, and as a medium for the dissemination of information and instructions.

PROPOSED DENTAL SERVICE FOR ADOLESCENTS

The further development of State dental services to the adolescent section of the community has continued to receive close attention during the year, with a view to the inauguration of such a service in the near future. An attempt to recruit dental surgeons to the Department for this work proved disappointing, but the possibility of doing this will be further explored.

ADMINISTRATION

During the year Mr. A. D. Brice, B.D.S., Assistant Director (Training) and Principal of the Dominion Training School for Dental Nurses, resigned in order to enter private practice. This necessitated a number of staff transfers and promotions. Increasing difficulty is being experienced in securing and retaining the services of suitably qualified and experienced dental officers.

DENTAL BURSARIES

Additional University bursaries were granted to dental students at the beginning of 1946 to the number of 23. Of the bursaries granted in previous years, 45 were renewed for 1946 and 9 were suspended temporarily. The total number of bursaries held (including those temporarily suspended) is 76.

THE NATIONAL DENTAL COMMITTEE

The National Dental Committee continued to function throughout the year in connection with the control of dental man-power, the release of dental personnel for service with the Armed Forces, and associated problems. With the cessation of hostilities and the return of most of the dental personnel from the Forces, man-power control of dentists was discontinued as from the 31st March, 1946, and the National Dental Committee ceased to function as from that date. The Department of Health, as the convening authority, takes this opportunity of acknowledging the ready co-operation of the representatives of the New Zealand Dental Association and of the Armed Forces Dental Services (and at a later stage of the dental technicians' organization), who, as members of this Committee, devoted much time to its deliberations over a period of some six years.

REHABILITATION OF DENTISTS

The Dental Advisory Committee on Rehabilitation has continued its work in collaboration with the Rehabilitation Board. Numerous cases affecting the rehabilitating of ex-service personnel in dentistry have been referred by the Board for the Committee's recommendation. The Department is indebted to those members of the dental profession who voluntarily give their time to the work of this Committee.

DENTAL TREATMENT OF RETURNED SERVICEMEN

The Department's organization for providing dental treatment for returned personnel of the Armed Forces has continued to operate smoothly and satisfactorily throughout the past year. The work imposes a considerable strain upon the already busy private dental practitioners who undertake the boarding and the treatment, but, nevertheless, the response is good, and there is general satisfaction with the treatment that is given. A particularly heavy burden falls upon those private dental practitioners who act as dental supervisors in the various districts, and during the year under review it was found possible to arrange for these dentists to be granted financial remuneration for their services.

GENERAL

INDUSTRIAL HYGIENE

The visit of Dr. J. M. Davidson, from the Ministry of Labour and National Service, London, and the publication of his review of industrial hygiene in New Zealand, stimulated interest in this important sphere of public-health work. Largely as the result of his visit, it is hoped shortly to establish the Division of Industrial Hygiene within the Department.

NUTRITION

Dr. Muriel Bell and the Nutrition Committee of the Medical Research Council have given continuous attention and research to matters relating to the nutrition of our people.

MILK-IN-SCHOOLS SCHEME

The total number of pupils participating in the milk-in-schools scheme was 235,941 made up as follows :—

Pasteurized bottled milk	..	..	..	..	Pupils. 222,678
Malted milk	..	..	..	..	8,234
Cocoa-making	..	..	..	..	5,029
					<hr/>
					235,941

APPLE-IN-SCHOOLS SCHEME

Apples free of cost were supplied to pupils attending all types of school for four weeks during the apple season. A total of 44,481 cases of apples were supplied.

HEALTH CAMPS

The number of children requiring health-camp treatment has increased to such an extent that most camps have long waiting-lists for admission.

Despite staffing difficulties, health camps have continued to operate successfully, and the opening of a further permanent camp at Maunu, Whangarei, has done much to meet the need of North Auckland, especially of the Maori population. The construction of a large permanent camp near Auckland has also been put in hand, but some considerable time will probably elapse before the project can be completed.

Three records have this year been established in the sale of Health Stamps—firstly, all available stamps were sold; secondly, the campaign lasted only four months instead of the usual five months; and thirdly, sales, approximately £75,000, were £13,000 in excess of last year's record.

HEALTH EDUCATION

For this purpose a sum of £26,000 was allocated and expended on similar services as given in the previous report. There was an increased demand for advice and information, including requests from overseas and from research workers. By permission of the Controller, H.M. Stationery Office, London, copies were printed of the Medical Research Council, London, War Memoranda "The Prevention of Hospital Infection of Wounds" and "The Control of Cross Infection in Hospitals." These were distributed to hospitals in conjunction with a departmental pamphlet, "Suggested Nursing Technique for Tuberculosis and other Infectious Diseases in Hospitals." The pamphlets, "The General Principles of Maternity Nursing" and "The Technique of Isolation" were revised, printed, and widely distributed. To meet demands for information as to scope and nature of the Department's work and for educational staff purposes, a pamphlet giving an outline of head administration in New Zealand was printed. Many additions were made to the Head and District Office libraries. Co-operation has been maintained with University and departmental libraries and assistance rendered to research workers and accredited persons. The 16 mm. sound-film library now contains over one hundred and thirty films, which have been extensively used by departmental officers for lectures to various groups.

BOARDS ASSOCIATED WITH THE DEPARTMENT

The Board of Health, the Medical and Dental Councils, the Medical Research Council, the Nurses and Midwives Registration Board, the Opticians Board, the Masseurs Registration Board, the Medical Advertisements Board, the Plumbers Board, the King George V Memorial Fund Board, and the Dominion Advisory Board of the New Zealand Federation of Health Camps continued their work during the year.

MEDICAL RESEARCH COUNCIL

The following statement sets out the names of the members of the Medical Research Council established in 1937 and of the Committees set up under the Council, and gives some information about the researches carried out by the Committees:—

Medical Research Council.—Muriel E. Bell, M.D., Member of Board of Health; N. L. Edson, M.B., Ch.B., representing Travis Bequest trustees; Sir James Elliott, Kt., M.D., Member of Board of Health; E. J. Fawcett, M.A., Director-General of Agriculture; Professor C. E. Hercus, O.B.E., D.S.O., M.D., Dean of the Faculty of Medicine, University of Otago; P. P. Lynch, M.D., representative of the New Zealand Branch of the British Medical Association; E. Marsden, C.M.G., C.B.E., M.C., F.R.S., D.Sc., Secretary of the Department of Scientific and Industrial Research; Sir Donald

McGavin, Kt., C.M.G., D.S.O., M.D., F.R.C.S., Member of Board of Health ; Professor F. H. Smirk, M.D., M.R.C.P., representing Royal Australasian College of Physicians ; The Director-General of Health, Member of Board of Health, Chairman (*ex officio*).

Nutrition Research Committee.—Professor John Malcolm (Chairman), Professor C. E. Hercus, Professor Elizabeth Gregory, Sir Theodore Rigg, Dr. Muriel Bell.

“Summary of Final Report on the Incidence of Rickets in New Zealand Children” (Malcolm).

“The Present State of the Science of Nutrition, with Particular Reference to the Special Problems of the Empire, including the Nutritional Status of the Indigenous Peoples of the Colonies.” Paper by Dr. Muriel Bell to the Royal Empire Conference, London, 1946.

“Hypervitaminosis A : Induced by New Zealand Fish Liver Oils” (Moore).

“Serum Phosphatase Levels in Hypervitaminosis A” (Weeber and Moore).

“Vitamin D Estimations, 1945–46” (Weeber).

“Further Interim Report on a Rickets Survey” (Weeber and Deem).

“Note on the Keeping-power of the Buffer Substrate Solution used in the Determination of Serum Phosphates by the King-Armstrong Method” (Weeber).

“Vitamin C Determination in Rose-hip Syrup and Rose-hip Jelly Crystals” (Weeber).

“Interim Report on the Estimation of Fluorine” (Harrison).

“Estimation of Riboflavin” (Clemow).

“Thiamine Determination of New Zealand Fish” (Macfarlane).

Thyroid Research Committee.—Professor C. E. Hercus (Chairman), Professor J. Malcolm, Dr. N. L. Edson, Dr. J. A. D. Iverach.

Continuation of study of the goitrogenic activity of derivatives of thiourea and related compounds.

Hydatid Research Committee.—Sir Louis Barnett (Chairman), Dr. C. S. M. Hopkirk, Dr. T. R. Ritchie.

“Testing ‘Caprokol’ Hydrobromide as an Anthelmintic for Hydatid Worms in Dogs” (Batham).

“Testing Arecoline Hydrobromide as an Anthelmintic for Hydatid Worms in Dogs” (Batham).

Tuberculosis Research Committee.—Dr. T. W. J. Johnson (Chairman), Dr. Chisholm McDowell, Dr. W. Gilmour, Dr. H. B. Turbott, Dr. C. A. Taylor.

Tuberculosis Research at Auckland Hospital (Gilmour).

Clinical Medicine Research Committee.—Professor F. H. Smirk (Chairman), Dr. M. McGeorge, Dr. N. L. Edson.

Publications—

“Renal Function and Prognosis in Benign Hypertension” (Murray McGeorge) *Quarterly Journal of Medicine*, 5th July, 1945.

“Effect of the Initial Level of the Blood-pressure upon the Response of the Human Subject to Blood-pressure raising Reflexes” (Bruce Martin and Smirk). *Journal of Physiology*, 1945, Vol. 103, No. 4.

“Spread of Infective Hepatitis” (R. Kirk). *The Lancet*, Jan. 20, 1945.

“Control of Gastric Hyperacidity by Radium” (Murray McGeorge). Proceedings Royal Australasian College of Physicians in Christchurch, February, 1945.

“Ventricular Rhythm” (Smirk). Proceedings of a meeting of the Royal Australasian College of Physicians in Christchurch, February, 1945.

Publications in Press—

“Ulcerative Colitis” (Iverach)	} Proceedings of a meeting of the Royal Australasian College of Physicians in Wellington, February, 1946.
“Infective Hepatitis” (R. Kirk)	
“Some New Pressor Drugs” (Smirk)	

Virus and Immunology Research Committee.—Dr. N. L. Edson (Chairman), Professor E. F. D’Ath, Professor J. C. Eccles, Professor C. E. Hereus, Dr. J. O. Mercer.

Committee not yet in active work.

Neurophysiology and Neuropathology Research Committee.—Professor J. C. Eccles (Chairman), Professor F. H. Smirk, Professor W. E. Adams, Dr. M. A. Falconer.

A clinical team investigated all cases of sciatica admitted to the Dunedin Hospital, and, in addition, has held a weekly out-patient session for the purpose of seeing new cases and of the following-up of old cases.

Dental Research Committee.—Professor J. P. Walsh (Chairman), Mr. J. Ll. Saunders, Dr. R. E. T. Hewart, Mr. H. S. Wilkinson.

Committee not yet in active work.

Obstetric Research Committee.—Professor J. B. Dawson (Chairman), Dr. F. C. Bennett, Dr. Sylvia Chapman, Dr. T. R. Plunkett, Dr. T. F. Corkill, Dr. G. J. S. Fisher (*ex officio*), (President of the Obstetrical Society).

“Progress Report on Pelvimetry Research” (Allen).

Enterobius Vermicularis: Report by Professor L. R. Richardson.

STAFF

I regret to record the death of Dr. R. B. Robb, who held the position of School Medical Officer, Auckland, for five years.

Dr. Thos. J. Hughes retired after thirty-two years’ service. Since 1920 Dr. Hughes filled with distinction the responsible position of Medical Officer of Health, Auckland.

Mr. F. J. Fenton, Inspecting House Manager, and Mr. G. Laurenson, Architect, retired after long and valuable service in their respective spheres.

Dr. Doris Gordon was appointed Director of Maternal and Infant Welfare, a position that has been vacant since the retirement of Dr. T. L. Paget in 1944. Dr. Gordon is well known for activities in the cause of infant and maternal welfare.

In conclusion, I desire to express my thanks to the members of the staff for their loyal support during the past years.

M. H. WATT,
Director-General of Health.

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