

Annual report on the health and medical services of the state of Queensland.

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1945.
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QUEENSLAND.

ANNUAL REPORT
ON THE
HEALTH AND MEDICAL SERVICES
OF THE
STATE OF QUEENSLAND
FOR THE
YEAR 1944-45.

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ANNUAL REPORT OF THE DIRECTOR-GENERAL OF HEALTH AND MEDICAL SERVICES, 1944-45.

The Honourable the Minister for Health and Home Affairs.

SIR,—I have the honour to submit for the Minister's information my annual report of the activities of the Health and Medical Services Branch of the Department of Health and Home Affairs (Q.) during the fiscal year ended 30th June, 1945.

The officers in immediate control of the services of the Department are the following:—

Central Office of the Department of Health (Sir Raphael Cilento, Kt., M.D., B.S. (Adel.), D.T.M. & H. (Eng.), F.R. San. I. (Lond.), Director-General of Health and Medical Services—presently on special leave, and engaged in duties for the United Nations Relief and Rehabilitation Administration).

Section of Public Health Supervision (John Coffey, F.R.C.S. (Edin.), L.R.C.P., D.P.H., L.M. (Rot.), F.R.San. I. (Lond.), Deputy-Director-General of Health and Medical Services; Abraham Fryberg, M.B., B.S., D.P.H., D.T.M., Health Officer; W. McNeil, Chief Sanitary Inspector; C. M. Cato, Chief Inspector of Food and Drugs; M. V. O'Neill, A.T.N.A., Nurse Inspector (seconded to Manpower Directorate); T. O'Shea, M.R.San.I. (Lond.), Clerical and Statistical Branches; Mrs. V. Wills, Welfare Officer.

Section of Microbiology and Pathology (E. H. Derrick, M.D. (Melb.), Director; D. W. Johnson, M.B., B.S., Bacteriologist-in-charge, Mobile Unit; H. E. Brown, Bacteriologist).

Section of Maternal and Child Welfare (Thomas Henry Reeve Mathewson, M.B., Ch.B. (Edin.), Director; Doris Bardsley, A.T.N.A., Superintendent).

Section of School Health Services (Leslie St. Vincent Welch, M.R.C.S. (Eng.), L.R.C.P. (Lond.), Chief Medical Officer; E. W. Haenke, L.D.Q., Chief Inspector, School Dental Services).

Section of Industrial Hygiene (Eric James Reye, M.B., B.S. (Qld.), Medical Officer).

Section of Entic Diseases (Geoffrey Hayes, M.B., Ch.M. (Syd.), Medical Officer in Charge; Beatrice Warner, M.B., B.S. (Melb.), Medical Officer (Female); Lorna M. Archibald, M.B., B.S. (Qld.), Medical Officer).

Section of Mental Hygiene (B. F. R. Stafford, M.B., B.S. (Melb.), Director of Mental Hygiene and Medical Superintendent, Brisbane Mental Hospital; J. E. F. McDonald, M.B., B.S. (Melb.), Medical Superintendent, Toowoomba Mental Hospital; W. P. H. Parker, L.R.C.P. & S. (Irel.), Medical Superintendent, Ipswich Mental Hospital).

Government Chemical Laboratory (L. A. Meston, F.I.C.A., Government Analyst and Chief Inspector of Explosives; S. B. Watkins, M.Sc., A.A.C.I., Deputy Government Analyst).

The following vital statistical information was prepared by the Government Statistician, who reports that in supplying Table 4 thereof—figures relating to expectation of life at certain specified ages—he considers that this information provides a more useful comparison than crude death rates, the

levels of which are affected by differences in the age and sex constitution of the population. Dates shown are the most recent available for each country.

The estimated population of Queensland as at 1st January, 1945, was 1,071,767, and of Brisbane 384,370.

TABLE I
CRUDE BIRTH RATE (PER 1,000 POPULATION).

	1939.	1940.	1941.	1942.	1943.	1944.
Commonwealth of Australia ..	17.6	18.0	18.9	19.1	20.6	21.0
Queensland ..	20.1	19.9	20.7	20.4	22.1	23.0
New South Wales ..	17.5	17.8	18.5	18.7	20.2	20.8
Victoria ..	16.2	16.8	17.8	18.3	19.7	19.7
South Australia ..	16.1	16.7	18.2	18.5	21.4	21.4
Western Australia ..	19.4	19.4	21.3	20.7	21.8	22.4
Tasmania ..	21.0	20.8	21.7	22.0	23.1	21.2
New Zealand ..	18.7	21.2	22.8	21.7	19.7	21.6
England and Wales ..	14.9	14.6	14.2	15.8	16.5	18.0
Scotland ..	17.4	17.1	17.9	18.1	*	*
Eire ..	19.1	19.1	19.0	22.3	21.8	*
North Ireland ..	19.5	19.6	20.8	22.8	24.6	*
Canada ..	20.3	21.4	22.3	23.4	*	*

* Not available.

TABLE II
(CRUDE DEATH RATE (PER 1,000 POPULATION).

	1939.	1940.	1941.	1942.	1943.	1944.
Commonwealth of Australia ..	9.9	9.7	10.0	10.5	10.3	9.5
Queensland ..	9.4	9.0	9.2	9.3	10.1	8.8
New South Wales ..	9.8	9.4	9.8	10.4	10.2	9.3
Victoria ..	10.7	10.7	10.6	11.2	10.8	10.3
South Australia ..	9.6	9.5	10.4	11.0	10.5	9.6
Western Australia ..	9.3	9.5	10.1	10.6	9.6	9.2
Tasmania ..	10.2	9.9	10.7	10.1	10.4	10.2
New Zealand ..	9.2	9.2	9.8	10.6	10.0	9.9
England and Wales ..	12.1	14.3	12.9	11.6	12.1	11.9
Scotland ..	12.9	14.9	14.5	13.0	*	*
Eire ..	14.2	14.2	14.6	14.0	14.8	*
North Ireland ..	13.5	14.6	15.2	13.3	13.6	*
Canada ..	9.6	9.7	10.0	9.7	*	*

† Not available.

TABLE III
INFANT MORTALITY RATE (DEATHS UNDER 1 YEAR PER 1,000 BIRTHS).

	1939.	1940.	1941.	1942.	1943.	1944.
Commonwealth of Australia ..	38.2	38.4	39.7	39.5	36.3	31.3
Queensland ..	35.5	35.3	39.1	34.8	37.8	31.3
New South Wales ..	41.0	39.0	43.8	40.2	36.2	30.7
Victoria ..	35.6	39.4	36.2	41.7	35.8	33.0
South Australia ..	34.9	35.5	32.5	39.7	36.7	28.8
Western Australia ..	40.8	44.2	35.3	36.9	32.6	32.7
Tasmania ..	40.6	35.2	49.0	42.4	40.6	38.3
New Zealand ..	31.1	30.2	29.8	28.7	31.4	*
England and Wales ..	50.0	55.0	58.0	49.0	*	*
Scotland ..	68.5	78.3	82.7	69.3	*	*
Eire ..	66.0	66.0	73.0	*	*	*
North Ireland ..	70.0	86.0	77.0	76.0	*	*
Canada ..	61.0	56.0	60.0	*	*	*

* Not available.

TABLE IV.
EXPECTATION OF LIFE AT VARIOUS AGES IN YEARS (AVERAGE OF MALE AND FEMALE EXPECTATIONS)

Country.	Period on which Data Calculated.	Expectation of Life, in Years, at Age							
		0	1	10	20	30	40	50	60
Commonwealth of Australia ..	1932-34	65.3	67.1	59.5	50.2	41.3	32.6	24.2	16.7
Queensland ..	1932-34	64.9	66.8	59.3	50.0	41.3	32.7	24.4	16.9
New Zealand ..	1934-38	67.0	68.2	60.3	51.0	42.0	33.0	24.6	16.8
England and Wales ..	1937	62.3	65.1	57.9	48.8	40.0	31.2	22.8	15.4
Scotland ..	1930-32	57.8	61.9	56.1	47.2	38.5	30.3	22.3	15.0
North Ire and ..	1925-27	55.8	59.7	54.1	45.4	37.4	29.5	21.9	15.2
Canada ..	1930-32	59.8	64.8	58.2	49.2	40.8	32.3	24.0	16.4

TABLE V.

COMMUNICABLE DISEASES (EXCLUSIVE OF VENEREAL DISEASES), 1ST JULY, 1944 TO 30TH JUNE, 1945.
(METROPOLITAN AREA) POPULATION—31ST DECEMBER, 1944—384,370.

Diseases.	Months.												Totals.
	1944.						1945.						
	July.	August.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	
Anchylostomiasis	3	..	3	2	..	..	..	..	..	..	1	2	11
Anthrax	..	..	..	..	..	..	..	..	..	..	..	..	..
Bilharziasis	..	..	..	..	..	..	..	..	..	..	..	..	..
Cholera	..	..	..	..	..	..	..	..	..	..	..	..	..
Coastal Fever	..	..	..	..	..	..	..	..	..	..	..	..	..
Diphtheria	15	9	14	6	13	13	11	15	33	12	13	10	164
Dysentery (Amoebic)	..	..	..	..	..	..	..	..	..	..	..	..	..
Dysentery (Bacillary)	7	1	3	2	3	1	..	1	..	..	3	2	24
Encephalitis Lethargica	..	..	..	..	..	..	..	..	..	1	..	..	1
Filariasis	..	..	..	..	..	..	..	..	..	..	..	..	..
Lead Poisoning	1	1	2	1	11	..	..	..	2	..	..	..	18
Leprosy	..	..	2	..	..	..	..	2	..	..	..	..	4
Leptospirosis (Weill's Disease, Parawell's Disease, Seven-day Fever)	..	..	..	..	..	..	..	..	2	..	..	..	2
Malaria	12	15	15	4	9	8	9	3	6	1	8	8	98
Meningitis (Cerebro-spinal)	7	5	3	2	2	..	1	..	..	4	..	2	26
Mossman Fever	..	..	..	..	..	..	..	..	..	..	..	..	..
Plague (Bubonic or Oriental)	..	..	..	..	..	..	..	..	..	..	..	..	..
Polio-myelitis (Acute Anterior)	..	..	..	..	..	..	..	..	1	2	..	1	4
Puerperal Fever	3	..	..	1	..	..	..	..	..	1	..	..	5
Puerperal Pyrexia	7	5	7	4	14	3	6	12	11	7	3	1	80
Relapsing Fever	..	..	..	..	..	..	..	..	..	..	..	..	..
Sarina Fever	..	..	..	..	..	..	..	..	..	..	..	..	..
Scarlet Fever or Scarlatina	36	39	38	25	24	26	28	30	25	19	31	28	349
Smallpox (including Amaas, or Alastrim)	..	..	..	..	..	..	..	..	..	..	..	..	..
Tuberculosis (all forms)	16	47	18	16	22	22	36	18	20	20	14	12	261
Typhoid Fever (including Para- Typhoid Fevers)	..	1	..	..	1	4	..	1	3	1	4	..	15
Typhus Fever (including Rural and Urban Forms and Japanese River Fever)	1	2	2	1	1	2	6	11	14	3	2	3	48
Undulant (Malta) Fever	..	..	..	..	..	..	..	..	..	..	..	..	..
Yellow Fever	..	..	..	..	..	..	..	..	..	..	..	..	..
Tetanus	..	..	..	1	2	2	1	1	4	3	..	1	15
Totals	108	125	107	65	103	81	99	94	126	78	82	70	1,125

TABLE VI.

EXTRA METROPOLITAN AREA, POPULATION—31ST DECEMBER, 1944—687,397.

Diseases.	Months.												Totals.
	1944.						1945.						
	July.	August.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	44-45.
Anchylostomiasis	3	..	..	..	1	..	..	..	1	..	..	..	5
Anthrax	..	..	..	..	..	..	..	..	..	..	..	..	..
Bilharziasis	..	..	..	..	..	..	..	..	..	..	..	..	..
Cholera	..	..	..	..	..	..	..	..	..	..	..	..	..
Coastal Fever	..	..	..	..	..	..	..	..	..	..	..	..	..
Diphtheria	42	26	15	15	7	15	16	6	26	28	21	29	246
Dysentery (Amoebic)	..	..	..	..	..	..	..	..	..	..	..	..	..
Dysentery (Bacillary)	3	6	1	7	4	..	..	1	2	..	1	..	25
Encephalitis Lethargica	..	..	..	..	1	..	..	..	..	..	..	..	1
Filaria	..	..	..	..	..	..	..	1	..	..	..	..	1
Lead Poisoning	..	1	..	..	..	..	..	1	..	..	..	1	3
Leprosy	1	..	1	..	..	..	..	1	..	..	1	..	4
Leptospirosis (Weill's Disease, Parawell's Disease, Seven-day Fever)	..	1	1	..	..	..	..	..	1	1	..	..	4
Malaria	75	35	47	34	35	33	30	13	34	30	18	25	409
Meningitis (Cerebro-spinal)	2	6	9	6	5	3	4	..	3	3	2	4	47
Mossman Fever	..	..	..	..	..	..	..	..	..	..	..	..	..
Plague (Bubonic or Oriental)	..	..	..	..	..	..	..	..	..	..	..	..	..
Polio-myelitis (Acute Anterior)	..	1	..	..	..	..	..	..	1	1	..	2	6
Puerperal Fever	..	..	4	..	1	..	..	1	..	..	..	1	7
Puerperal Pyrexia	2	..	1	1	..	3	3	1	2	3	1	2	20
Relapsing Fever	..	..	..	..	..	..	..	..	..	..	..	..	..
Sarina Fever	..	..	..	..	..	..	..	..	..	..	..	..	..
Scarlet Fever or Scarlatina	22	31	27	23	33	21	29	22	21	25	44	33	331
Smallpox (including Amaas, or Alastrim)	..	..	..	..	..	..	..	..	..	..	..	..	..
Tuberculosis (all forms)	9	8	9	17	10	15	10	12	11	12	14	10	137
Typhoid Fever (including Paratyphoid Fevers)	1	..	..	..	1	1	..	..	1	2	1	..	7
Typhus Fever (including Rural and Urban Forms and Japanese River Fever)	9	1	..	..	4	5	4	6	8	5	7	7	56
Undulant (Malta) Fever	..	..	..	..	..	..	..	..	..	..	..	..	..
Yellow Fever	..	..	..	4	5	2	3	2	2	2	2	..	22
Tetanus	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals	169	116	115	107	107	98	99	67	112	113	114	114	1,331

TABLE VII.
NOTIFIED INCIDENCE OF COMMUNICABLE DISEASES IN QUEENSLAND (EXCLUSIVE
OF VENEREAL DISEASE) SECTION 29 OF "HEALTH ACTS, 1937-1945"
DURING THE CALENDAR YEAR 1944.

Disease.	Cases Reported on Prescribed Form.		
	Metropolis.	Outside Areas.	Total Whole State.
Anchyllostomiasis	20	5	25
Anthrax	..	..	..
Bilharziasis	..	..	..
Cholera	..	..	..
Coastal Fever	..	..	..
Diphtheria	204	306	510
Dysentery (Amoebic)	1	2	3
Dysentery (Bacillary)	45	58	103
Encephalitis Lethargica	1	1	2
Filariasis	..	1	1
Lead Poisoning	23	1	24
Leprosy	6	7	13
Leptospirosis (including Weil's Disease, Parowell's Disease, Seven-day Fever)	..	7	7
Malaria	104	592	696
Meningitis (Cerebro spinal)	32	73	105
Mossman Fever	..	..	..
Plague (Bubonic or Oriental)	..	..	..
Poliomyelitis (Acute Anterior)	2	5	7
Puerperal Fever	4	7	11
Puerperal Pyrexia	110	15	125
Relapsing Fever	..	..	..
Sarima Fever	..	..	..
Scarlet Fever or Scarletina	311	305	616
Smallpox (including Amaas or Alastrim)	..	..	..
Tetanus	5	11	16
Tuberculosis (all forms)	258	157	415
Typhoid Fever (including Paratyphoid Fevers)	14	27	41
Typhus Fever (including Rural and Urban Forms and Japanese River Fever)	37	60	97
Undulant (Malta) Fever	1	1	2
Yellow Fever	..	..	..
Totals	1,178	1,641	2,819

Bacillary Dysentery.—Notifications of this fly-borne disease showed a sharp drop in Brisbane, when the figures for 1944-45 were 24 as against 75 in the previous similar period; outside the city area they were respectively 25 and 68. Grand totals for 1944-45 and 1943-44 were 49 and 143 respectively.

Tuberculosis.—In 1943-44 the notified incidence was: Brisbane 302, outside areas 168; a total of 470 patients. In the period covered by this report they were 261 (metropolitan), 137 (extra-metropolitan); a total of 398.

Arrangements are being made to provide sanatoria in North Queensland and Brisbane. The Brisbane and South Coast Hospitals Board will control the latter. They have selected an area of ground at Chermiside. There is a sanatorium in Central Queensland.

Typhoid and Paratyphoid Fever.—An outstanding feature of the statistical tables prepared on the notified incidence of disease in the State is the continued low figures under these headings. In 1943-44 they were 46, of which 13 were from the metropolitan area; in 1944-45 only 22 cases were recorded, of which 15 were residents of Brisbane.

Diphtheria.—In the metropolis there was a pleasing drop in the notified incidence of this disease—namely, 164 as against 249 in 1943-44. In the areas outside Brisbane the figures were 246 in 1944-45 and 382 in 1943-44.

Public immunisation campaigns are conducted by all the 11 city and 10 town councils in Queensland as well as 111 of the 121 shires, the only local authorities who do not engage in it being 10 in the extreme northern and western portions of the State, where there are large areas with sparse population. In the great majority of instances immunisation is provided free of cost. The total number of immunisations effected in Queensland for the five-year period 1940-44 were Brisbane 34,672, outside areas 166,206—i.e., 200,878.

Scarlet Fever.—The notified incidence of scarlet fever showed a decrease in the metropolis, the figures being: 1943-44, 566; 1944-45, 349. As in 1942-43 and 1943-44 the country figures remained stationary—namely, 1943-44, 331; 1944-45, 341.

Meningitis, Cerebrospinal.—There was a sharp decline in the notifications received under this heading. Whereas in 1943-44 they were 172 (Brisbane 72—rest of State 100), in the fiscal year under review it will be noted that the figures were:—Brisbane, 26; rest of Queensland, 47—i.e., total 73.

Malaria.—In 1943-44 there were 429 cases notified, many of whom were recurrent attacks amongst service and ex-service men. The figures for 1944-45 were 507, the majority of whom related to service and ex-service men.

Plague, Smallpox, Cholera, and Yellow Fever.—There have continued to be no cases of these diseases reported. In the section of this report reviewing the sanitary activities of the Department, mention is made of the measures taken and improvements suggested to combat the rat, flea, and mosquito menaces, and our interest in public water supplies.

Whooping Cough.—This is not a notifiable disease within the meaning of section 29 of "The Health Acts, 1937 to 1945." The departmental view is that most children suffering from it would not be seen by a medical practitioner and statistics obtained would be of little value, whilst no restriction could be placed on the non-notified sufferers.

The Brisbane City Council and several local authorities outside the metropolitan area have inaugurated immunisation campaigns against whooping cough, making use of Pertussis Bacillus (Phase 1) Vaccine, obtainable from the Commonwealth Health Department, Anzac Square, Brisbane, and Commonwealth Health Laboratories throughout the State.

It is considered that such immunisation will prevent most children developing whooping cough, and that the most suitable period in which to perform it is the second half-year of life.

SECTION OF ENTHETIC DISEASES.

During the year 858 persons were notified as suffering from venereal disease, as compared with 1,234 for the previous year. Of these 533 were females and 325 were males, as compared with 746 and 488, respectively, in the previous year. Of the 858 persons, some 14 had double infections and so really represented 872 actual cases of venereal disease. Of these 659 were gonorrhoeal cases and 204 were syphilitic cases.

The incidence of early (infectious) syphilis was 61 cases, as compared with 67 cases in the previous year.

The following table summarises the notifications received by the Department:—

VENEREAL DISEASE CASES NOTIFIED.
1ST JULY, 1944, TO 30TH JUNE, 1945.

	Metropolitan Area.		Outside Area.		Totals.		
	M.	F.	M.	F.	M.	F.	T.
Gonorrhoea	9	8	9	6	18	14	32
Acute	106	91	51	33	157	124	281
Subacute	4	88	2	22	6	110	116
Chronic	8	167	7	8	15	175	190
Vulvo-vaginitis	..	7	..	6	..	13	13
Gonorrhoeal Ophthalmia	5	4	3	1	8	5	13
Syphilis—					204	441	645
Unspecified	..	3	2	2	2	5	7
Primary	24	5	2	..	26	5	31
Secondary	11	8	6	5	17	13	30
Tertiary	14	8	9	5	23	13	36
Latent	31	29	2	2	33	31	64
Congenital	6	4	3	1	9	5	14
Neuro	4	3	1	..	5	3	8
Soft sore	2	3	..	..	2	3	5
Ulcerative granuloma	..	..	..	1	..	1	2
Veneral warts	3	..	..	..	3	..	3
Double infections—							
Gonorrhoea and primary syphilis	..	3	..	..	..	3	3
Gonorrhoea and latent syphilis	1	8	..	2	1	10	11
Totals	228	439	97	94	325	533	858

Age Incidence.

As will be seen from the following table, the late teens up to 30 are the ages of greatest incidence:—

	Males.	Females.	Total.
Unknown	33	10	43
Under 1 year	5	7	12
2-5	1	9	10
6-10	..	7	7
11-15	5	9	14
16-20	24	120	144
21-25	64	166	230
26-30	49	79	128
31-35	36	45	81
36-40	27	34	61
41-45	23	22	45
46-50	22	16	38
51-55	12	2	14
56-60	16	6	22
61-65	5	..	5
66 and over	3	1	4
	325	553	858

Sources of Infection.—Unfortunately too few of the notifications state the source of infection, so that the respective part played by the professional and amateur prostitute cannot be accurately estimated. The following table is given for what it is worth:—

Inmates of known "houses"	2
Unknown professional prostitutes	11
Amateurs	41
Wives	3
Husbands	10
Parents	5
Mothers	5
Blackgins	6
Occupational (prostitutes)	94
Unknown or unstated	681
	858

Marital Status.—A rather disquieting state of affairs is shown by the following table, in which married patients run a very close second to single patients. No doubt war time conditions account for a good deal of this apparent marital infidelity.

	Males.	Females.	Totals.
Married	111	191	302
Single	186	257	443
Separated	1	39	40
Widowed	5	18	23
Divorced	1	24	25
Unknown	21	4	25
	325	533	858

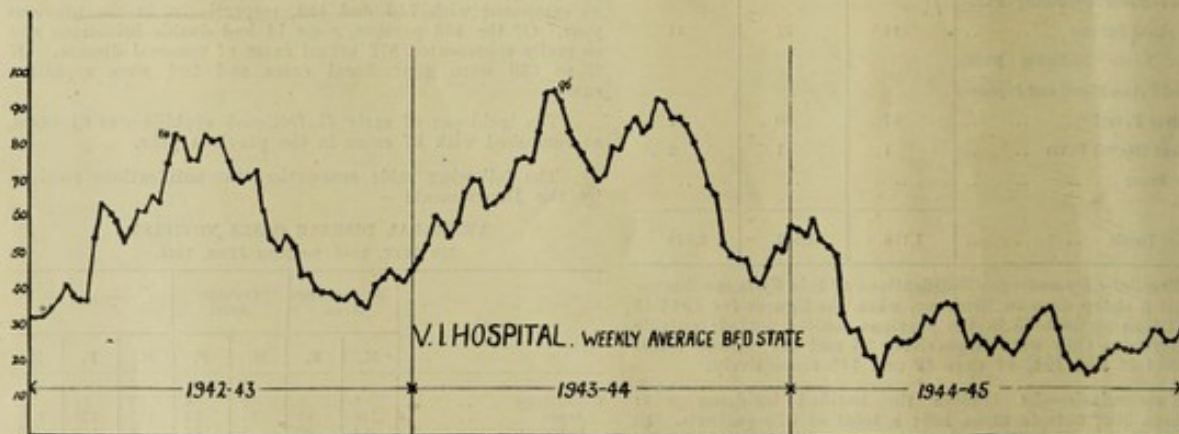
Sources of Notification.—The vast majority of notifications during the year have been received from public hospitals or institutions, as is seen from the following table:—

Private doctors	87
Public Hospitals	340
Clinics	431
	858

Veneral Isolation Hospital.—This institution was considerably enlarged during the war years, but already it is showing a big drop in the number of inmates, the average bed state for the past twelve months being 30.2, as compared with 70.3 for the previous twelve months.

This hospital fulfilled an urgent need during the war years, and at one stage was almost at full capacity. The low average for the past twelve months has been due partly to a fall in admissions, and partly to more rapid cures with penicillin.

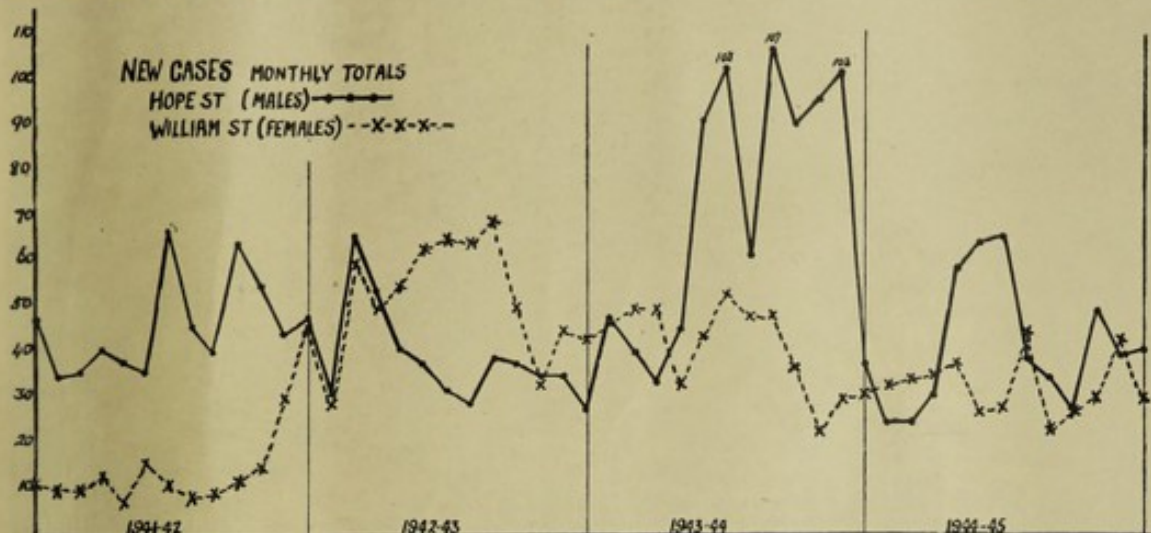
The graph reproduced hereunder gives an idea of the fluctuations in bed state during the last three years:—



Clinics.—The two *ad hoc* clinics—William street for females and Hope street for males—have been kept reasonably busy during the year, and the following table gives a summary of some of the activities of these two clinics:—

	Hope Street (Males).	William Street (Females).
New cases	475	393
Notified cases	170	292
Total visits	10,257	7,073
Arsenic injections	4,318	1,330
Bismuth injections	2,615	668
Penicillin injections	560	679

There are signs that these clinics are returning to their normal peacetime ratios, as shown in the accompanying graph covering the past four years:—



Examination of Prostitutes.—Examination of prostitutes during the year totalled some 2,471. These examinations, which were carried out at the examination rooms in Brisbane resulted in the detention of 172 cases.

Veneral Disease in Aborigines.—During the year visits were made to the three aboriginal settlements at Palm Island, Cherbourg and Woorabinda, and a general venereal disease survey—particularly for gonorrhoea—was carried out. Very little active syphilis was seen in any of the settlements, and the following table shows the percentage of cases found to be suffering from gonorrhoea:—

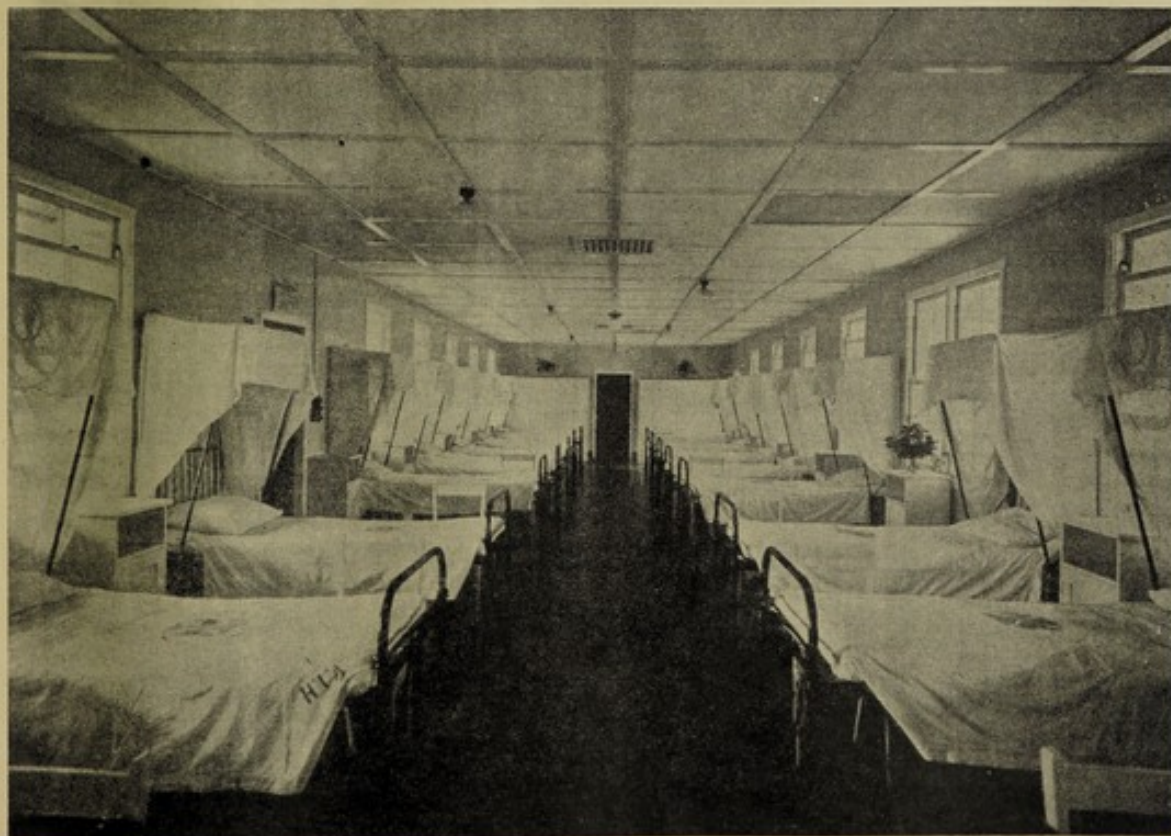
Cherbourg.	Palm Island.	Woorabinda.
Per Cent. 5.1 males 10.6 females	Per Cent. 3.1 males 6.1 females	Per Cent. 2.2 males 0.0 females

All these cases were treated with penicillin, with very satisfactory results.

At Palm Island the advent of penicillin has so changed the picture that it has been possible to close down the isolation settlement at Fantome Island. Venereal disease cases from the various settlements were formerly sent to this island but can now be coped with quite adequately at the various settlements.

At the Cherbourg settlement several cases of ulcerative granuloma were discovered. Such cases had previously been very resistant to treatment, and the new treatment with podophyllin was instituted with very gratifying results. It can be fairly safely claimed that ulcerative granuloma, so far as its cure is concerned, is no longer a problem.

General.—In spite of the difficulties experienced during the war years, the increase in the venereal disease problem has been successfully met by the Department. The following pictures show a typical dormitory and the dining room at the Venereal Isolation Hospital for women, and will give some idea of the accommodation it was possible to provide:—



TYPICAL DORMITORY AT THE VENEREAL ISOLATION HOSPITAL.



DINING ROOM, VENEREAL ISOLATION HOSPITAL.

The general set-up of the treatment rooms was also modernised as far as resources permitted, and the following two pictures show the type of treatment cubicles which have been provided in the male and female sections respectively:—



TREATMENT CUBICLES FOR MALES.



TREATMENT CUBICLES FOR FEMALES.

The Armed Forces and Venereal Disease.—All branches of the armed forces, both Australian and American, have co-operated with the Department in finding sources of infection. Names of civilian contacts have been forwarded to the Department for investigation. From the questionnaires received, it has been possible to form some idea of the amount of venereal disease actually existing in Queensland during the war years. These army cases have either contracted their infection in Queensland or have been in the State and in contact with civilians at some period—perhaps the incubation period—of their infection. The following table summarises and dissects the total venereal disease incidence in Queensland since 1937:—

Year.	Civilian.			Armed Forces.	Grand Totals.
	Males.	Females.	Totals.		
1937-38	899	357	1,256	..	1,256
1938-39	834	313	1,147	..	1,147
1939-40	794	297	1,091	..	1,091
1940-41	916	365	1,281	47	1,328
1941-42	673	220	893	314	1,207
1942-43	448	1,117	1,565	1,536	3,101
1943-44	488	746	1,234	1,484	2,718
1944-45	325	533	858	1,533	2,391
Totals	5,377	3,948	9,325	4,914	14,239

FANTOME ISLAND LOCK HOSPITAL.

	Full Bloods.		Half Castes.		Totals.
	Males.	Females.	Males.	Females.	
In Hospital at 30th June, 1944 ..	37	26	17	12	92
Admitted during year	33	28	36	30	127
Born during year	..	1	2	2	5
Discharged during year	48	38	52	43	181
Died during year	1	5	..	..	6
Remaining at 30th June, 1945 ..	21	12	3	1	37

The institution was visited by Departmental Medical officers and treatment administered and, as a result of reports submitted notes for the guidance of medical officers in the treatment of venereal disease in aboriginal settlements were prepared and distributed.

LEPROSY AMONG WHITE PEOPLE, 1944-45.

PEEL ISLAND.

The conditions at Peel Island have improved during the past twelve months, as some increase in staff allows the grounds to be kept in better order. The new recreation hall is nearing completion; a water supply and treatment system has been installed; additional staff quarters have been erected; and many repairs effected. The erection of a new bathroom and the installation of an electric light system are expected during the next financial year, and additions will also be made to the hospital and to the kitchen.

Under the leadership of one of their members, the patients have formed a band, and also an orchestra, the instruments being supplied by the Salvation Army. Though practice is often interrupted by the sickness of members, and despite some of their physical disabilities, they are proving to be keen and good performers, and recently gave a good account of themselves during a visit of the Salvation Army Band. The two bands also performed under the leadership of the Peel Island conductor, who has composed several pieces for his band. Visits by the clergymen of various denominations are much appreciated by the patients and staff as morale is increased thereby. It gives me great pleasure to record our sincere appreciation of them.

In the provision of occupation and entertainment for patients, their inability to keep to any one thing for any length of time makes it a difficult matter, but music seems to be overcoming this problem, and interest is well maintained.

Over the past nine months, more time has been given to treatment of the patients, the medical officer visiting for two days a week during the past six months. This has been augmented by one period of two weeks, during which more extensive investigation of the patients was carried out, including urine examination, general physical examination, clinical history, and serology. An unsuccessful attempt was made to evaluate the Rubino reaction: the fault in our technique in this regard has not yet been detected. A further examination projected includes more extensive mapping of lesions, haemoglobin estimations, and follow-up of serology.

It was found in two series of serological examinations that quite a percentage returned positive Wassermann and Kline reactions. Those with positive reactions were further tested by the Widal test, and were found to give positives in that also. Whether these positive results are due wholly to leprosy or are due in some cases to concomitant syphilis is extremely difficult to tell, as lesions due to leprosy and syphilis may be similar.

Penicillin has been tried in a small number of cases, with no demonstrable result. This is not unexpected in view of the fact that the organism is of a group not generally susceptible to penicillin. Recent work in America indicates that some hope of a specific may be expected from among the sulphonamides. Experimental work on this is being carried out in several places.

The treatment of ulcers on the feet by means of local treatment covered with plaster casts has produced excellent results, and saves considerable work on the part of the nursing staff. Plaster casts have also been taken of the feet of some patients for the purpose of having special surgical boots made.

Closer supervision of specific treatment has been instituted, and this has been further controlled by explanation to the patients of the basis of the treatment, and the method of carrying it out.

A regular bacteriological examination is done in order that the results may be observed, and conclusions may be drawn within a reasonable period.

Wattlebrae Hospital has been used extensively over the past six months for the purpose of investigating conditions for which facilities do not exist on the Island, and for patients requiring specialised treatment. I would like to record appreciation of the co-operation received from the General Superintendent of the Brisbane Hospital and the nursing staff in the treatment of these patients.

Meetings with the patients have been held on several occasions for the purpose of general discussion, and for their education in hygiene. It is hoped that, when the new recreation hall is completed, further educational activities may be undertaken.

For the past five months Dr. Flora Innes has been looking after the dietetic control of certain of the patients, and is now visiting the Island once a month.

I am glad to note that, since explanation of the disease has been made to the patients, there has been far more co-operation by them in tracing the origin of their own infections, and genealogical tables are now well started, so that tracing of contacts will be made easier, and something of the method of spread of leprosy may be elucidated.

In about two-thirds of the cases at present on the Island, infection can be traced to Queensland.

There are at present 48 patients on the Island and Table I. shows the number of cases there on first admission and those on relapses. On these 48, 35 are males and 13 females.

TABLE I

	First Admissions	Relapsed.	Totals.
Males	24	11	35
Females	8	5	13
Total	32	16	48

Table II. shows the admissions for the past three years, and it will be seen that the total number of patients has increased by 19 over this period.

TABLE II.

	1942-43.			1943-44.			1944-45.			Total for 3 Years.
	M.	F.	T.	M.	F.	T.	M.	F.	T.	
Admitted	6	3	9	11	5	16	8	3	11	36
Discharged	2	..	2	3	1	4	2	2	4	10
Died	1	..	1	3	..	3	2	1	3	7
Increase for Year	3	3	6	5	4	9	4	..	4	19

Note.—Discharged Males 1943-44 includes one absconded.

Table III. shows the classification of patients admitted during the past twelve months.

TABLE III.
CLASSIFICATION OF PATIENTS ADMITTED DURING 1944-45.

	Predominantly Neural		Mixed.		Predominantly Lepromatous.		Total.
	New.	Re-lapsed.	New.	Re-lapsed.	New.	Re-lapsed.	
Males	2	..	1	1	1	3	8
Females	1	..	..	1	..	1	3
Totals	3	..	1	2	1	4	11

Among the new cases was a fairly advanced lepromatous case, being a male aged 14 years.

All cases discharged during the past twelve months were predominantly neural types.

Of the cases at present on the Island, the following prognosis is given:—

- (a) Very good—in 9 cases;
- (b) Good, with some residual disability—in 13 cases;
- (c) Fair—in 16 cases;
- (d) Poor—in 10 cases.

In this last group, the cases are mainly very old, or the disease has been well advanced before treatment has commenced.

In concluding these notes on Peel Island, I would like to express appreciation of the work done by the staff in the face of difficulties due to shortages under war conditions, and on behalf of the patients an appreciation of the various amenities provided. Though a few patients will continue to complain, they are, as a rule, in the minority and do not represent the collective opinion.

LEPROSY IN ABORIGINES.

No opportunity has presented itself through the year of visiting Fantome Island or the more northern mission stations, but at the end of the year a survey was conducted at Cherbourg and Woerabinda Settlements, on which report will be made early in the next financial year. One active case was detected in an aboriginal boy aged 13. Two cases seen in Brisbane during the past six months were found to be positive, one being a boy aged 14 and the other a girl aged 16.

FANTOME ISLAND LEPROSARIUM STATISTICS.

	Males.	Females.	Total.
In Lazaret, 30th June, 1944	40	32	72
Admitted during Year	5	5	10
Discharged during Year	1	..	1
Deaths	7	2	9
Remaining at 30th June, 1945	38	35	73

The one discharged was an infant born and immediately removed.

All the deaths were due to advanced leprosy condition.

During the year the Franciscan Missionaries of Mary took over the Lazaret. The number of sisters engaged is eight, which provides for the distribution of their accepted duties and their personal recreation and religious life.

LABORATORY OF MICRO-BIOLOGY AND PATHOLOGY.

Statistical Summary.

Medical Research.

Culture of *Neisseria gonorrhoeae*.

Survey of aboriginal settlements for venereal disease.

Tuberculosis and milk.

Human infection with the bovine tubercle bacillus.

Typing of *C. diphtheriae*.

Q. Fever.

Leptospirosis.

Other fevers.

Chromoblastomycosis.

Various.

Publications.

STATISTICAL SUMMARY.

No. 1.—EXAMINATION OF MATERIAL FOR INFECTIOUS DISEASES.

		Specimens Received.	Positive.
Diphtheria	Cultures	4,583	623
	Virulence test	102	44
	Direct smears	1	1
Gonorrhoea	Smears	31,803	1,166
	Blood complement deviation	2,302	297
	Cultures	13,939	1,022
Syphilis	Blood (Wassermann test)	4,738	635
	Blood (Wassermann test quantitative)	22	22
	Blood (Kline test)	4,198	483
	Cerebrospinal fluid (Wassermann test)	75	12
	Serum (Treponema pallidum)	63	14
Leprosy	Smears (human)	1,873	437
Tuberculosis	Sputum	373	27
	Sputum (culture for typing)	1	2
	Tissue	2	2
	Pleural fluid	4	2
	Urine	2	2
	Lung smears	3	2
	Mantoux test	6	2
	Patch test	2	2
	Guinea-pig inoculation	9	2
Typhoid and paratyphoid	Blood (agglutination)	147	2
	Blood culture	20	2
	Urine	58	2
	Faeces	76	1
Murine typhus	Blood (agglutination)	157	8
Scrub typhus	Blood (agglutination)	157	2
Undulant fever	Blood (agglutination)	154	1
	Blood culture	1	1
Leptospirosis	Blood (agglutination)	166	5
	Blood (guinea-pig inoculation)	9	2
	Urine (guinea-pig inoculation)	5	2
	Urine (dark-ground examination)	2	2
Q. fever	Blood (agglutination)	185	19
	Blood (guinea-pig inoculation)	10	2
	Urine (guinea-pig inoculation)	4	2
Vincent's angina	Smears	20	2
Streptococcus	Cultures	62	2
Staphylococcus	Cultures	6	2
Ulex molle	Cultures	29	4
Granuloma venereum	Smears	7	2
Tularaemia	Smears	3	2
Infected Mono-	Blood	1	2
cleosis	Blood (heterophile agglutination)	1	2
Psittacosis	Blood (mouse inoculation)	1	2
	Sputum (mouse inoculation)	1	2
Malaria	Blood	309	193
	Spleen smears	3	2
Dysentery amoebic	Faeces	10	2
Trichomonas vaginalis	Pus	52	25
Actinomyces	Pus	2	2
	Smear	1	2
Various fungous infections	Smears	15	4
	Sk'n scrapings	3	2
	Hair	1	2
Filaria	Blood	51	2
Various organisms	Faeces	20	2
	Urine	88	2
	Cerebrospinal fluid	16	2
	Smears	56	2
	Cultures	299	2
	Sputum	10	2
	Pus	21	2
	Pleural fluid	4	2
	Blood cultures	36	2
	Spleen	3	2
	Saliva	1	2
	Tissue	3	2
	Fluid from cyst	1	2
	Antral washout	2	2
	Lung smear	1	2
		66,492	5,046

No. 2.—PATHOLOGICAL EXAMINATION.

		Specimens Received.	Positive.
Blood	Full count	404	..
	Differential count	104	..
	Red cell count	396	..
	White cell count	52	..
	Reticulocyte count	17	..
	Haemoglobin	636	..
	Urea estimation	195	..
	Urea clearance test	1	..
	Basophilia	439	..
	Grouping	7	..
	Sedimentation rate	6	..
	Pouchet test	10	..
	Glucose tolerance test	15	..
	Price Jones curve	1	..
	Van den Berg test	1	..
Urine	Microscopical examination	170	..
	Chemical examination	301	..
	Urea estimation	438	..
	Urea clearance test	2	..
	Specific gravity	8	..
	Glucose tolerance test	15	..
	Porphyrins	4	..

No. 2.—PATHOLOGICAL EXAMINATION—continued.

		Specimens received.	Positive.
Faeces	Intestinal worms	692	103
	Occult blood	4	..
	Bile	1	..
Cerebrospinal fluid	Globulin	44	..
	Cells	44	..
	Glucose	44	..
	Colloidal gold test	53	..
	Elastic fibres	1	..
Sputum	Presence of spermatozoa	1	..
Seminal fluid	Takata-ara test	1	..
Serum	Identification	11	..
Worms	Identification	3	..
Rat	Identification	10	..
Lice	Identification	35	..
Parasites	Identification	1	..
Hair	Section	320	..
Tissue	Section (post-mortem)	206	..
		4,693	103

The ecto-parasites removed from rats by the Brisbane City Council and submitted for identification were classified as follows:—

Xenopsylla cheopis	64
Leptopsylla segnis	31
Ctenocephalides felis	20
	115

No. 3.—FOODS, WATERS, &c.

Water	Bacterial count	225
	Colon bacilli	225
	Organisms	3
Milk	Bacterial count	228
	Colon bacilli	216
	Organisms	4
	Guinea-pig inoculation (M. tuberculosis)	94
Aerated butter milk	Bacterial count	2
	Colon bacilli	2
Powdered milk	Bacterial count	1
	Organisms	1
Cream	Bacterial count	1
	Organisms	1
Bread	Rope	25
Yeast	Rope	2
Flour	Rope	8
Wheatmeal	Rope	2
Cerevite mixture	Rope	1
Salt	Organisms	1
Camp pie	Organisms	1
Bacon	Organisms	1
Tomato sauce	Organisms	1
		1,045

No. 4.—VARIOUS MATERIALS.

Disinfectant	Co-efficient	7
Flock	Pathogenic organisms	12
Paper	Organisms	1
Straw	Lice, mites	3
Methylated spirits	Culture	1
Diphtheria prophylactic	Organisms	1
Bottles	Sterility	4
		29

No. 5.—SPECIAL INVESTIGATION.

Guinea-pig—		
Inoculations	242	
Post-mortems	124	
Mouse—Inoculations	62	
Rat—Inoculations	12	
Rabbit—Inoculations	3	
Wild rats examined for typhus	31	
Animal tissues for section	17	
Animal sera for leptospira agglutination	13	
Pigs kidneys for leptospirae	92	
Inoculation of ticks into guinea-pigs—		
Boophilus australis (batches)	27	
Ixodes holocyclus	1	
	624	

No. 6.—MEDICO-LEGAL.

Post-mortem examinations		361
Clothing	Blood	52
	Spermatozoa	72
Various articles	Blood	15
	Spermatozoa	6
Smears	Gonorrhoea	11
	Spermatozoa	14
	Organisms	2
Hair	Identification	5
Bones	Identification	5
Tissue	Section	7
Skull	Identification	1
Lungs	Examination	2
Intestinal contents	Organisms	2
		555

ATTENDANCES AT COURTS.

Supreme Court	17
Police Court	25
Coroner's Court	11
Other Courts	3
	56

No. 7—VACCINES PREPARED.

A. Typhoid-paratyphoid vaccine—	
1,060 ccs. of T.A.B. vaccine were prepared.	
B. Autogenous vaccines were prepared as follows—	
From sputum	3
From pus	8
From cultures	1
Total	8

No. 8—EXAMINATION OF RODENTS.

Rodents received for examination from Brisbane City Council:—

Classification—	
Rattus norvegicus	20,842
Rattus rattus	2,918
Unclassified	8,757
Mus musculus	111
	32,628

Special examination for plague—	
Rats fully dissected	4,918
Spleen smears examined	4,918
Rat smears from other centres—	
Mackay	1,730
Bundaberg	950
Maryborough	678
Gympie	103
Ipwich	1,175
Sandgate	850
Wynnum	759
Meatworks (Brisbane area)	766
	7,011

No rat was found infected with *Pasteurella pestis*.
Grand total of examinations for year 1944-45 .. 113,200

MATERIAL SUPPLIED.

Two hundred and thirty-four (234) requisitions were supplied during the year to hospitals, private practitioners, and local authorities consisting of 8,892 swabs, 8,192 cultures, 921 Wright's capsules, 24 blood bottles, 1,086 faeces tins, 42 urine bottles, 36 glass slides, and 12 ampoules positive Kline serum.

CULTURE MEDIA PREPARED.

	Number of Tubes.
Serum cultures—	
Loeffler's slopes	10,000
Nutrient broth cultures—	
Tubes for disinfectant examination	1,444
Large tubes	85
Nutrient agar cultures—	
Vaccine slopes	759
Small slopes	327
Sugars—	
Lactose	960
Glucose	252
Inositol	107
Mannite	159
Saccharose	48
Miscellaneous tubes and plates—	
Schuffner's medium for leptospira	752
Sterile distilled water	2,200
McConkey's medium (plates)	150
Endo's medium (plates)	250
Blood agar (plates)	60
Treble lactose	186
Methyl red medium	108
Sodium citrate	100
Indol	144
Voges-Proskauer	150
Gonococcus sugars—	
Glucose	700
Maltose	700
Saccharose	300
Lactose	300
Glucose agar—	
Small	100
Large	50
Maltose agar small	250
Selenite enrichment medium	60
Lactose (20 per cent.)	83
	20,804

	Litres.
Material in bulk—	
Normal saline solution	96
Miscellaneous reagents	121
Miscellaneous stains	35
Isonic formalin	30
Sterile distilled water	41
MBK medium	4
Count agar	13
Kaiserling solution I. and II.	27
Alepol	4
Price's gonococcus medium	70

MEDICAL RESEARCH.

In the last annual report, regretful reference was made to the cessation of research in the laboratory. It is pleasant to record this year that, although no active research has been undertaken, plans are being developed to put medical research on a sound footing.

In October, 1944, Cabinet instructed the Director of the Laboratory to prepare proposals for the extension of medical research, the proposals to include plans for immediate implementation as well as plans to be developed during the post-war period. Certain recommendations were submitted in due course and received the approval of Cabinet.

The summarised recommendations were as follows:—

A. For Immediate Implementation.

Recommendation 1.—A Medical Research Advisory Committee should be appointed immediately. Its personnel will consist of—

- Two medical graduates appointed by the Department of Health, one of whom shall be chairman;
- Two non-medical persons, appointed by the Department of Health;
- Two representatives appointed by the Faculty of Medicine of the Queensland University;
- Two representatives of the professional staff of the Brisbane General Hospital (including Children's and Women's Hospitals);
- One representative of the professional staff of the Mater Hospital.

Its functions will be—

- To plan a Queensland Institute of Medical Research along the general lines suggested below;
- To advise how that plan may be implemented step by step;
- To advise on any other aspect of medical research;
- To fulfil, as the Research Institute comes into being, the further functions mentioned in Recommendation 3 (iii.) below.

Recommendation 2.—Dr. E. H. Derrick should be freed as far as possible from routine duties so that research work which is at present in various stages of completion may be completed for publication.

B. Recommendations for Post-war Research.

Recommendation 3.—A Queensland Institute of Medical Research should be established as soon as circumstances allow. The details of the Institute and the steps by which it will be established will need further consideration by the committee recommended above. As a guide to its planning, the following outline of a fully developed Institute is suggested:—

- The Institute will be attached for general administration to the Department of Health;
- It will be controlled by a Director, who will be chosen after world-wide advertisement. His remuneration will be such as to attract a first-class mind, and one who has had a thorough training and experience in at least one branch of modern medical research. Emphasis might be placed on skill and experience in experimental methods;
- The Director will be assisted by an advisory committee. This committee will be the successor to the committee mentioned in Recommendation 1, and will have the same composition. Its further functions will be to advise on—
 - The appointment of the Director.
 - Other appointments to the professional staff.
 - Such other matters affecting medical research as will be referred to it by the Director or the bodies represented on it.
- The staff will include, in addition to the Director, a permanently appointed nucleus of at least six first-class scientists, each expert in a particular branch. There will also be junior fellows, other full-time or part-time researchers, technicians, secretary, attendants, &c.
- The Institute will co-operate closely with other activities of the Health Department, with the University, and with the General Hospital;
- The Institute will be housed within the General Hospital grounds in a new building which it will share with the Pathology Department of the Hospital;
- The estimated cost is (only a rough estimate can be given at this stage)—
 - £50,000 for the Research Institute's share in the building cost;
 - £10,000 for equipment;
 - An annual cost of £15,000.

The Cabinet thereupon, in April, 1945, appointed a Medical Research Advisory Committee, constituted by—

- E. H. Derrick, M.D., Director Laboratory of Microbiology and Pathology (chairman).
- A. Fryberg, M.B., B.S., D.P.H., D.T.M., State Health Officer (deputy chairman).

- (ii.) H. W. H. Marley, Accountant, Department of Health and Home Affairs.
 A. J. Anderson, Manager, Brisbane and South Coast Hospitals Board.
 (iii.) J. V. J. Duhig, M.B., F.R.A.C.P. (Professor of Physiology, University of Queensland).
 D. H. K. Lee, M.D., M.Sc., D.T.M., F.R.A.C.P. (Professor of Physiology, University of Queensland).

(Representing the Faculty of Medicine and nominated by the Senate of the University of Queensland.)

- (iv.) A. P. Murphy, M.B., Ch.M., F.R.A.C.P., Senior Part-time Physician, Brisbane Hospital.
 S. Julius, M.B., Deputy General Superintendent and Medical Supervisor, Brisbane Hospital.

(Representing the professional staff and nominated by the Brisbane and South Coast Hospitals Board.)

- (v.) G. C. Taylor, M.B., Ch.M., Pathologist, Mater Misericordiae Hospital.

(Representing the professional staff and nominated by the Mater Misericordiae Hospitals.)

The committee met on three occasions, and on 13th July, 1945, submitted its recommendations to the Minister.

CULTURE OF NEISSERIA GONORRHOEA.

Cultural methods in the diagnosis of gonorrhoea, which were begun in the previous years, have continued to prove their usefulness and have been availed of to a much increased extent.

A comparison of the results obtained during 1944-45 by smear and cultural methods is as follows. (The patients were nearly all females and usually four smears and three cultures were made from every patient):—

	Per Cent.
Patients examined by both methods ..	4,492 = 14.3 of all cases
Total positive cases	643
Entirely negative cases	3,849
Positive smears—	
Positive culture	376
Negative culture	24
Total	400 = 61.9 of positives
Positive culture—	
Negative smear	243
Total	619 = 96.2 of positives
Ratio—positive culture : positive smear ..	= 1.55 : 1

Over the two years (6th July, 1943 to 30th June, 1945) the results have been as follows:—

Total cases	6,668
Total positive cases	1,055
Positive smear and positive culture	590
Positive smear and negative culture	42
Negative smear and positive culture	423
Negative smear and negative culture	5,613
Percentage culture positive	15.2
Percentage smear positive	9.4
Percentage culture and smear positive	8.9
Total percentage positive	15.8
Ratio : positive culture : positive smears : 1.62 : 1.	

SURVEY OF ABORIGINAL SETTLEMENTS FOR VENEREAL DISEASE.

During the year Mr. J. P. Morrissey, Bacteriologist of this Laboratory, accompanied Drs. G. S. S. Hayes and B. A. Warner on visits to the aboriginal settlements at Palm Island, Cherbourg, and Woorabinda to perform bacteriological examinations as part of a survey to ascertain the extent of venereal disease, if any, within the settlement.

At Palm Island a total of 1,752 smears were examined for *N. gonorrhoeae*, the smears being taken from 628 adults (360 males and 268 females) and one infant upon Palm Island, also from 49 adults (20 males and 29 females) upon Fantome Island. Results showed that 10 males, 16 females, and the infant were positive. Some of the smears taken at Fantome were positive, but they were from persons being treated for the disease.

Specimens of blood were taken from the adults and submitted to the Kline test. Of the total, 62 gave positive results, 67 gave doubtful results, the remainder being negative.

At Cherbourg a total of 415 adults (195 males and 220 females), providing 855 smears, were examined microscopically for *N. gonorrhoeae*. The results showed that 10 males and 20 females were positive.

At Woorabinda a total of 323 adults (182 males and 141 females) provided 474 smears for examination for *N. gonorrhoeae*. Four males only gave positive smears. Smears from 4 patients were examined for *M. leprae*, 1 male person being positive.

TUBERCULOSIS AND MILK.

Samples of "warm" milk as supplied by dairies in Brisbane were tested by guinea-pig inoculation for tuberculosis. The centrifuged deposit from 60 c.c. of each sample was inoculated subcutaneously into a guinea-pig. In all 94 samples were tested. (These would be herd samples.) One guinea-pig developed tuberculosis and two guinea-pigs brucellosis.

HUMAN INFECTION WITH THE BOVINE TUBERCLE BACILLUS.

A man, a meatworker for many years, developed pulmonary tuberculosis. His sputum contained *Mycobacterium tuberculosis*, and these proved to be of the bovine type. No case of pulmonary tuberculosis in a man due to the bovine bacillus has previously been reported in Australia, though cases have been reported in Europe. In view of the importance of the examination, cultures from this patient were submitted also to Mr. D. Gray and Dr. R. Webster, who confirmed its bovine type.

TYPING OF C. DIPHTHERIAE.

Thirteen strains of *Corynebacterium diphtheriae* were typed using the method of Wilson and Goldsworthy (J. Path. Bact., 1939, V., 48, p. 125). Eight proved to be *gravis*, four *mitis*, and one *intermedius*. Two of the strains, one *gravis* and one *mitis*, were found by guinea-pig inoculation to be avirulent.

Q FEVER.

There were twelve patients diagnosed as Q fever during the year—all by means of the agglutination test. The most interesting were two from North Queensland—the first to be recorded from the Northern division of the State. One was a soldier; the other was an Ingham resident whose work took him into drains and along the river bank. Of the South Queensland cases, one was a dairy farmer from Lawnton; the other nine worked at the Brisbane abattoir.

Repeated tests of a small number of patients suggest that agglutinins for *Rickettsia burneti* usually disappear from the blood serum about six to twelve months after an attack of Q fever. However, one patient, whose illness occurred in October, 1941, still shows agglutination after 45 months.

LEPTOSPIROSIS.

Five cases of leptospirosis were diagnosed during the year. Two patients in Brisbane suffered from classical Weil's disease; one was a fish cleaner, the other a cafe hand. Three patients in the Innisfail district were infected with *Leptospira australis* B; two were cane-cutters and one a labourer.

The stock strain of *L. pomona*, which had been continuously cultured in the laboratory since it was isolated in July, 1936, was unfortunately lost. Its loss has prevented the diagnosis by agglutination of *Pomona*-type infections. In the endeavour to obtain another strain a series of 84 pigs' kidneys was examined microscopically by dark-ground illumination. Active leptospirae were seen in four kidneys, but a culture was not obtained.

OTHER FEVERS.

The sera of six patients suffering from fever agglutinated *Brucella abortus*. Three of these undoubtedly suffered from undulant fever; one was a meat inspector; one a bacteriologist; the occupation of the other was not given. Two others—a housewife in Brisbane and a dairy farmer—probably had undulant fever.

Nine cases of murine typhus were diagnosed by the Weil Felix test.

CHROMOBLASTOMYCOSIS.

A case of this fungus granuloma of the skin was recognised. The patient was a stockman from the Kingaroy district, who had had a small "tumour" on his right forearm for seven years. It was excised and proved on histological examination to be an example of chromoblastomycosis. Numerous brown, fungous cells were present in the granuloma. As this disease has not been recorded in Australia a report was sent to the Medical Journal of Australia in conjunction with Dr. W. J. Saxton, of Kingaroy. Since then information has been received about three other cases, one from Northern Territory and two from Queensland.

VARIOUS.

The media department has had to answer a call for a greatly increased number of plates for the cultivation of gonococci.

The animal department has supplied many white mice to the Australian and American Army laboratory and guinea-pigs to army laboratories and to the University.

PUBLICATIONS.

Morrissey, G. C., and Derrick, E. H.: "A Case of Q Fever in North Queensland," Medical Journal of Australia, in the press.

Saxton, W. J., and Derrick, E. H.: "A Case of Chromoblastomycosis Occurring in Queensland," in the press.

SANITATION.

GENERAL COMMENTS.

The staff at headquarters and district offices remained at the same number as in the previous year. This limited staff carried out all duties assigned to them in the same competent and efficient manner.

No sanitary surveys of country areas were carried out by headquarter's staff during the period under review. Tours of inspection cannot be resumed until the members of the staff at present with the Defence Forces return to duty.

Local authorities and their health inspectors maintained a reasonable standard of sanitation within their areas, despite the handicap of shortages of labour and material, and no incident of any importance demanded special action during the year.

The shortage of galvanised iron and other materials essential for the execution of the health services was much easier than in the previous years. Shipments from the south were more frequent, and it would appear that the critical period in this regard has passed.

In the postwar period, it is anticipated that a rapid advance will be made in public health administration, and practice, in which the practical field work will play a very important part, and increase the work and duties of health inspectors. It is therefore considered that the time is now due for a replanning of the existing health inspectors' areas, many of which are too large for efficient and effective control, into smaller areas so that inspection work will be more regular, and supervision much stricter.

PLAGUE PRECAUTIONS.

The shipping and river frontages on both sides of the Brisbane River from Toowong to Pinkenba were inspected three times during the year. The rubble retaining walls, and earth embankments, form extensive harbourages and rat infestation exists in many parts of the river frontages. The rat proofing of these river banks would form a strong first line of defence against the introduction of plague rats, and should be considered as a post-war work.

The Brisbane City Council maintains a rat gang for poisoning operations, and during the year laid baits on—

River walls and banks	224,900
Wharves	156,610
Total	381,510

Five hundred and seventy-four rats were caught and destroyed on the wharves. The results of poisoning cannot be estimated as the bodies are not found.

Weekly returns of rats caught are received from Townsville, Rockhampton, Ipswich, Cairns, Maryborough, Mackay, and Gympie. Results are shown in the table hereunder.

Rats submitted to the Commonwealth laboratories for examination were:—

Townsville	854
Rockhampton	3,738
Cairns	1,579

Twenty-two leprosy rats were caught at Rockhampton.

Smears are submitted to the Department's laboratory, Brisbane, and the numbers and the centres from which received were, for the year under review, as follows:—

Gympie	103
Mackay	1,730
Bundaberg	950
Ipswich	1,175
Maryborough	678
Wynnum	759
Sandgate	850
Meatworks (Brisbane)	766

Brisbane employs 50 men for rat destruction work within the metropolitan area. Cairns, Townsville, Rockhampton, Bundaberg, Maryborough, Mackay, and Ipswich employ rat catchers in their respective areas.

A study of the table hereunder is interesting and instructive. The figures show that no headway has been made in the reduction of the rat population in these seven cities over a period of seven years. It points to the conclusion that the methods used, i.e., poisoning, trapping, gassing, and hunting, are not adequate in themselves to cope with the problem, and that the enforcement of other methods, such as rat proofing, removal of harbourages, improved refuse removal services, and provision of refuse bins for all premises for the storage of waste food. The main objectives should be—

- (1) To "starve the rat" (then poisoning will be really effective); and
- (2) To "build out the rat" and deprive him of house and home.

POISON EXPERIMENTS.

A small quantity of rat poison known as R.109 (alpha naphthyl thiourea)—A.N.T.U. for short—was received from the Commonwealth Department of Health for experimental purposes. The Director of the Laboratory (Dr. Derrick) carried out laboratory experiments and reported, "All rats that died were *E. norvegicus*. *E. norvegicus* seem more susceptible than *E. rattus*," and, after a second experiment, "*E. rattus* appears to be more resistant than *E. norvegicus*."

The following experiments were carried out under instruction from this Department:—

Place.	Number of Baits.		Carcases Found.			Type of Bait.	Description of Area.
	Laid.	Taken.	R.N.	R.R.	M.M.		
Townsville	3,038	Per Cent. 93	1	1	..	Bacon, sausage, cheese, bread and jam, bread and dripping	Wharves, river walls, business premises
Rockhampton	2,150	100	329	..	..	Bread and syrup, apple, pumpkin	Stores, restaurants, butchers, hotels, residences
Ipswich	4,000	90	..	..	..	Bread and syrup, bacon, meat, vegetables	Business, residential, stores, cafes
Cairns	4,000	65-70	..	1	..	Bread and dripping, cheese	Business, food shops, residential
Maryborough	92	92	..	1	..	Bread and syrup	Industrial, hotels, butchers, residential
Mackay	2,000	100	..	..	..	Bread and syrup	Business area, warehouses
Bundaberg	No return	..	..	..	..	..	..
Gympie	400	50	..	..	1	Bread and syrup, bread and dripping, banana	Business section, produce stores, refuse tip
Toowoomba	2,000	25	1	4	..	Bread and treacle	Grocers, fruit shops, railway goods shed
Gladstone	2,451	81	103	2	..	Bread and syrup, bananas	Food shops, stores, railway goods shed
Charters Towers	450	44	..	..	3	Bread and treacle, bread and dripping, bread and paste	Poultry farms, business premises, and shops
Warwick	180	18	..	1	..	Bread and syrup, salmon	Produce stores
Bowen	572	85	..	11	9	Bread and dripping, vegetable marrows	Residential, wharves, meatworks
Innisfail	80	100	5	2(bandicoots)	..	Bread and syrup	River banks, refuse tip

All results and information gathered were forwarded to the Commonwealth Department of Health, to whom the experiments were conducted.

A number of these cities reported that the *E. rattus* was the predominant rodent.

The Departmental officer at Cairns reported—

"The absence of bodies is not surprising as, with the slow toxic effects of the poison, ample time is allowed for the rat to return to his wonted harbourage to die. Complaints of smells of dead rats in the vicinity of the test areas would seem to indicate some measure of success."

These remarks can be applied to all the test areas.

RAT RETURN.

City.	MONTHLY FIGURES AND TOTALS.												TOTALS—7 YEAR PERIOD.						
	1944.						1945.						Totals.						
	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	1944-45.	1943-44.	1942-43.	1941-42.	1940-41.	1939-40.	1938-39.
Brisbane ..	3,185	3,648	4,002	2,425	5,127	4,008	4,056	4,613	4,422	5,220	4,404	3,846	48,956	37,633	33,860	28,939	34,014	36,917	35,858
Townsville ..	92	81	124	101	70	44	45	47	73	58	52	48	835	1,294	756	905	989	987	771
Rockhampton ..	250	430	391	429	402	311	220	245	302	260	247	211	3,798	4,520	2,251	3,214	3,797	4,265	3,806
Ipawich ..	201	382	270	177	226	177	113	259	184	195	193	229	2,606	2,381	3,297	2,260	3,606	3,548	4,986
Cairns ..	115	107	100	85	125	86	106	123	111	156	89	102	1,305	948	1,228	443	537	527	560
Maryborough ..	199	60	154	196	185	146	138	113	178	88	145	105	1,707	1,412	2,091	1,258	1,812	1,509	1,872
Mackay ..	85	81	69	147	94	117	156	126	49	74	62	20	1,080	976	987	836	691	556	969
Bundaberg ..	92	103	182	98	88	80	70	45	31	85	84	33	991	941	1,103	1,374	1,410	1,197	1,173
Gympie ..	15	9	9	11	7	3	1	4	10	10	13	9	101	176	218	171	141	106	104
Totals ..	4,234	4,901	5,301	3,669	6,324	4,972	4,905	5,675	5,360	6,146	5,289	4,603	61,379	50,281	45,791	39,400	46,997	49,612	50,099

MICE RETURN.

City.	MONTHLY FIGURES AND TOTALS.												TOTALS—7 YEAR PERIOD.						
	1944.						1945.						Totals.						
	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	1944-45.	1943-44.	1942-43.	1941-42.	1940-41.	1939-40.	1938-39.
Brisbane ..	45	62	90	128	130	87	145	140	224	175	278	292	1,796	1,510	2,650	2,629	3,025	1,610	2,290
Townsville ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Rockhampton ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ipawich ..	96	10	13	2	38	59	9	1	23	21	13	22	307	332	535	2,674	5,669	5,841	13,811
Cairns ..	..	57	..	33	50	..	27	23	21	29	30	24	294	201	160	87	101	277	154
Maryborough ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Mackay ..	35	60	87	84	97	51	43	86	36	23	37	35	674	628	964	713	628	674	537
Bundaberg ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Gympie ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals ..	176	189	190	247	315	197	224	250	304	248	338	373	3,071	2,691	4,677	6,167	9,444	8,410	16,832

MOSQUITO PREVENTION AND DESTRUCTION.

To encourage and aid local authorities in carrying out mosquito eradication measures, the Government has offered 50 per cent. subsidy on all approved works. The response has not been as great as was expected.

The following is a list of local authorities granted subsidies since the start of the scheme in February, 1943:—

Local Authority.	Purpose.	Estimated Cost.	
		£	s. d.
Brisbane ..	Additional inspectors—		
	3 inspectors ..	440	0 0
	5 inspectors ..	570	0 0
	3 inspectors ..	850	0 0
	3 inspectors ..	840	0 0
	Drainage works ..	24,870	0 0
	Drainage works ..	9,500	0 0
	Drainage works ..	5,362	0 0
	Drainage and street channelling ..	21,333	0 0
	Drainage works ..	106,100	0 0
	Drainage works ..	600	0 0
	Drainage works ..	760	0 0
	Drainage works ..	1,050	0 0
		172,375	0 0
Townsville ..	Drainage, spraying, oiling ..	..	1,072 19 8
Rockhampton ..	Drainage works ..	6,250	0 0
	Drainage works ..	2,668	0 0
		8,918	0 0
Gympie ..	Drainage works ..	..	2,053 0 0
Ipawich ..	Drainage works ..	..	1,550 0 0
Maryborough ..	Drainage—Patrol men ..	3,306	13 0
	Reclaiming swampy land ..	750	0 0
		4,056	13 0
Bundaberg ..	4 inspectors, spraying, &c. ..	700	0 0
	2 inspectors, spraying, &c. ..	350	0 0
		1,050	0 0
Charters Towers ..	Drainage works ..	..	3,955 0 0
Roma ..	Drainage—Sewerage ..	1,012	0 0
	Spraying ..	150	0 0
		1,162	0 0
Dalby ..	Drainage, spraying ..	120	0 0
	Drainage, spraying ..	1,070	0 0
	Drainage, spraying ..	2,053	0 0
		3,243	0 0
Charleville ..	Drainage works ..	..	4,000 0 0
Aramac Shire ..	Drainage, spraying ..	..	53 19 0
Barcaldine Shire ..	Drainage, spraying ..	..	670 0 0
Blackall Shire ..	Drainage works ..	..	60 5 0
Boonah Shire ..	Drainage—Boonah ..	1,002	10 0
	Drainage—Kalbar ..	575	0 0
		1,577	10 0

Local Authority.	Purpose.	Estimated Cost.	
Hinchinbrook Shire	Spraying, oil ..	..	136 0 0
Jondaryan Shire ..	Patrol man, spraying ..	..	23 0 0
Kingaroy Shire ..	Drainage, spraying ..	47 15 0	
	Drainage works ..	550 0 0	
		597 15 0	
Longreach Shire ..	Spraying, oil, &c. ..	90 15 0	
	Spraying, oil, &c. ..	237 15 0	
	Patrol man ..	60 0 0	
		388 10 0	
Mirani Shire ..	Drainage—Mirani ..	115 16 4	
	Drainage—Mirani ..	552 13 10	
	Drainage—Finch Hatton ..	1,045 0 9	
		1,693 10 11	
Monto Shire ..	Drainage works ..	..	222 8 3
Livingstone Shire	Drainage works ..	..	107 5 0
Woothakata Shire	Drainage works ..	..	215 12 10

The shortage of galvanised iron, mosquito-proof gauze, plumbers and other tradesmen has held up the satisfactory conclusion of campaigns carried out by many local authorities.

The shortage of labour and materials is probably the cause why many more local authorities have not applied for subsidy.

WATER SAMPLES.

Water sampling outfits were despatched, collected, and delivered to the Government Analyst and Director of the Laboratory for examination and analysis as follows:—

Despatched to.	Chemical.	Bacteriological.
Local Authorities ..	52	68
Defence Forces ..	18	113
Others ..	11	44
Totals ..	81	225

The results of the analysis and examination were forwarded to the authorities concerned.

WATER RETICULATION SCHEMES.

The following local authorities were advised to include water supply schemes in their post-war plans:—Ayr, Mount Morgan, Stanthorpe, Beaudesert, Belyando (Clermont), Chinchilla (Chinchilla), Boonah (Boonah), Maroochy (Nambour), Livingstone (Yeppoon and Emu Park), Burrum (Pialba), and Proserpine (Proserpine).

The following replies were received:—

- Ayr.—Application made to Co-ordinator-General.
 Stanthorpe.—Application made to Co-ordinator-General.
 Braudersert.—Scheme £30,000 submitted December, 1943.
 Belyando.—Council giving consideration. Working on a proposed scheme.
 Chinchilla.—Scheme to be laid before Co-ordinator-General.
 Boonah.—Investigations have been made by Department of Local Government.
 Maroochy.—Maroochy and Landsborough Shires have combined. Loan £500, subsidy £250. Surveys and investigations for certain townships, including Nambour.
 Burrum.—Pialba.—Engineers of the Department of Local Government have made a preliminary survey and are preparing a report and estimate.
 Proserpine.—Have submitted a scheme to Co-ordinator-General.
 Gladstone.—The Boyne River water supply scheme for which the council raised a loan of £126,000 is nearing completion.
 Biggenden Shire.—Is having a preliminary survey carried out as a post-war project for the township of Biggenden.

SEWERAGE SCHEMES.

Preliminary work is under way for sewerage, as post-war works, at the following towns:—Redcliffe, Coolangatta, Hughenden; and the following shires: Balonne (for St. George, Dirranbandi and Bollon), Blackall (for Blackall), Longreach (for Longreach), Sarina (for Sarina), Johnstone (for Innisfail), and Ayr (for Ayr).

LOANS.

The following local authorities raised loans for the purposes stated:—

- Cairns, £10,000, Debenture Loan, refuse incinerator.
 Longreach, £700, Treasury Loan, refuse removal wagon.
 Cloncurry, £600, Treasury Loan, refuse removal wagon.
 Ayr, £600, Treasury Loan, nightsoil removal wagon.
 Mount Morgan, £1,000, Treasury Loan, nightsoil removal wagon.
 Aramac, £700, Treasury Loan, nightsoil removal wagon.
 Gladstone, £900, Treasury Loan, nightsoil removal wagon.
 Innisfail, £1,800, Treasury Loan, 3 nightsoil removal wagons.
 Redcliffe, £8,000, Treasury Loan, sewerage survey, plans and estimates.

DRAINAGE.

Kolan Shire is carrying out survey work for a complete scheme for the drainage of the township of Gin Gin.

INSPECTIONS.

The following table shows the number of inspections carried out by the headquarters staff:—

Area.	First Inspections.	Re-inspections.	Official Calls.	Number of Reports.	Number of Towns Visited.
Metropolitan ..	2,179	241	237	1,469	..
Country ..	110	17	27	11	13
Totals ..	2,289	258	314	1,480	13
Grand Total ..	2,861				

The complaints included in the first inspections were:—Air raid shelters (130), drainage (67), barbers and hair-dressing saloons (462), markets (56), refuse tips (284), seaside accommodation (57), common premises (173), swimming pools (28), theatre accommodation (26), warehouse and retail stores' accommodation (30).

The country places visited were:—Caloundra, Dunwich, Milmerran, Southport, Coolangatta, Redcliffe, Mackay, Gatton, Goodna, Woodridge, Kingston, Ipswich, and Sarina.

A sanitary survey was made of Woodridge and Kingston, and a report submitted to the Tingalpa Shire Council recommending the inauguration of a nightsoil removal service.

At Sarina an investigation was carried out regarding the disposal of the effluent from the alcohol factory. A report was submitted for the information of the Council and the management of the factory.

BARBERS' SHOPS.

Four hundred and sixty-two inspections and 88 re-inspections were made. Forty-eight notices for breaches of the Regulations were issued. The hygienic conditions have been maintained at a reasonable standard. The continued shortage of labour and materials proved a handicap in the strict enforcement of the Regulations during the year.

LICENSED PREMISES.

One hundred and ten hotels in the metropolitan area were inspected for any urgent sanitary matters in conjunction with the special inquiry for the Licensing Commission in connection with the supply of meals and accommodation.

Re-inspections were made where required. All reports were submitted to the Licensing Commission for any action necessary.

PUBLIC SANITARY CONVENIENCES.

Regular routine inspections (244) of both ladies' and gentlemen's accommodation within the metropolitan area were carried out during the year. The time is now due for more serious consideration to be given to the question of modern retiring rooms for both ladies and gentlemen. Such accommodation should be architecturally designed and erected. The location should be convenient. The accommodation provided should be the maximum and not the minimum. All fixtures and fittings should be modern, and where sewerage is not available septic tanks should be provided. Provision should be made in the ladies' rooms for mothers and small children. A very important point must not be overlooked, viz., a permanent full-time attendant in charge. Such public accommodation should be under the direct control of the local authority. The leasing of public conveniences is very unsatisfactory as is proved in Brisbane by the very insanitary conditions and neglect that are found on inspection.

SANITARY DEPOTS.

The depots at Darra, Pinkenba, Sandgate, and Wynnum have been inspected at regular intervals. The management and conduct at all depots has been efficient and satisfactory. The disposal of screenings at Pinkenba has been adversely reported on from time to time, and the Brisbane City Council has been requested to remedy the position. Twenty-two inspections were made.

REFUSE TIPS.

All refuse tips within the metropolitan area have been kept under regular supervision. Each depot has been maintained in a fairly satisfactory condition. Good work has been done in reclaiming waste low-lying swampy land, which in time will prove a great asset to the Council as parks and recreation grounds.

The standard practice as laid down for "controlled tipping" has, however, not been fully carried out, due, at the present time, to the undermanning at the tips, and the inadequate supply of suitable covering material. When labour, covering material, and transport are available, the present methods will be greatly improved, and raised to a higher standard.

Two hundred and eighty-four inspections were made.

PICTURE THEATRES.

Thirteen theatres within the metropolitan area were inspected in regard to the precautionary measures taken to control vermin infestation. Reports revealed that seven are treated nightly, three twice per week, two once per week, and one every two weeks. One theatre employs a special man for this purpose and the remainder are done by the theatre staff. Four theatres have private contracts for extra disinfection every two weeks.

SCHOOL SWIMMING POOLS.

The following samples of water from the swimming pools were obtained:—

State School.	Samples	Satisfactory.
Ascot ..	3	2
Buranda ..	1	1
Cannon Hill ..	2	1
Greenslopes ..	1	1
Junction Park ..	3	2
Milton ..	3	2
Wilston ..	2	2
Windsor ..	2	2
Woolswain ..	2	2
Booroodabin ..	3	3

COMPLAINTS.

Eighty written and 32 verbal complaints received by this office were forwarded to the Brisbane City Council for attention.

In regard to Government premises, complaints from local authorities and the School Health Services were:—Schools 75, Police 7, Railways 25, Commonwealth 5, others 2. Notifications were forwarded to the Departments concerned.

SANITARY CONTRACTS.

Draft sanitary contracts were submitted for approval from the following Local Authorities:—

- Belyando Shire for Clermont.
 Burrum Shire for Tinana, Granville, Island Plantation.
 Balonne Shire for Mungindi.
 Boonah Shire for Kalbar.

Charleville Town for Charleville.
 Carpentaria Shire for Normanton.
 Cambooya Shire for Cambooya, Greenmount.
 Calliope Shire for Mount Larcom.
 Coolangatta Town for Coolangatta.
 Crow's Nest Shire for Crow's Nest.
 Duaringa Shire for Bluff.
 Esk Shire for Moore, Linville, Lowood, Coominya, Fernvale, Toogoolawah, Esk.
 Fitzroy Shire for Marmor.
 Jondaryan Shire for Onkey.
 Millmerran Shire for Millmerran.
 Murgon Shire for Murgon.
 Mulgrave Shire for Babinda Nos. 1, 2, and 3 Divisions.
 Murilla Shire for Miles.
 Noosa Shire for Kin Kin, Cooran, Pomona, Cooroy, Tewantin, Noosa, Gympie Terrace.
 Nerang Shire for Nerang, Burleigh Heads, Currumbin, Burleigh.
 Pioneer Shire for North Mackay, Eimeo, Slade Point, Walkerston, Draper, Mount Eton, Calen, Koliyo.
 Pine Shire for Stafford, Strathpine, Lawnton, Petrie, Dayboro.
 Proserpine Shire for Proserpine, Dittmer.
 Wambo Shire for Bell, Kaimkillenbun, Jandowae.
 Waggamba Shire for Yelarbon.
 Warroo Shire for Surat.
 Redcliffe Town for Redcliffe.

PLANS AND SPECIFICATIONS.

Plans for the following were examined and recommendations submitted:—

Regent and Post Office Hotels, Rockhampton.
 Proposed cottage hospital, Millmerran.
 Plans of new sanitary wagons for Longreach, Cloncurry, Ayr, Mount Morgan, Aramac, Gladstone, and Innisfail.

MISCELLANEOUS

An inspection was made at Dunwich in connection with hookworm infestation. Recommendations were made to extend the nightsoil removal service to One-mile, and the removal of dwellings from low-lying sites.

A visit was made to Caloundra in connection with sewage disposal from R.A.A.F. quarters. Recommendations were submitted and carried out satisfactorily.

Inspection of sites at Millmerran for a proposed cottage hospital was made by a senior officer accompanied by Dr. Welch.

An inquiry into the position of the inspection for the Southport-Coolangatta-Nerang area was made, and a report with recommendations submitted.

TOOWOOMBA SUB-OFFICE.

Local Authority Supervision.—

Area.	First Inspection.	Re-inspection.	Official Calls.	Hotels.	Reports.	Towns.
Headquarters ..	658	21	104	25	45	
Country ..	129	..	20	21	12	14
Totals ..	787	21	124	46	57	14
Grand Total ..	978					

The inspections, excluding those made at licensed premises, were made up as follows:—Aged People's Home, 1; bacon factory, 2; bakehouse, 10; barbers, 32; bottle yard, 1; cafes, stores, 450; circus site, 2; cow yard, 1; drainage, 39; flies, 4; foundry, 2; incinerator, 7; laneways, 22; markets, 6; mosquitoes, 33; offal disposal, 2; poultry, 6; premises, 4; public conveniences, 52; rats, 64; refuse tip, 21; saleyards, 5; sanitary depots, 5; sanitary plant, 2; school, 1; sewerage treatment works, 4; swimming pool, 1; theatre, 2; trucking yards, 1; vacant land, 2; water supply, 3.

Country Towns Visited.—In addition to inspections in Toowoomba and the surrounding districts, inspections were made at Ballandean, Clifton, Cottonvale, Dalveen, Drayton, Glen Aplin, Greenmount, Millmerran, Oakey, Pittsworth, Stanthorpe, The Summit, Wallangarra, and Warwick.

The number of miles travelled by rail and road on these inspections outside Toowoomba was 816.

Licensed Premises.—As in the past few years, no general licensing inspections were carried out because of building and other difficulties. Inspections were confined to examination of complaints from the public, and general sanitation. The standard of accommodation at most hotels has fallen considerably, since the regular inspections were discontinued, and a resumption of this activity at the earliest opportunity is indicated. Much repair work, &c., will be necessary at most premises before the pre-war standard of accommodation is

regained, but the implementing of this phase no doubt will depend upon the lifting of building restrictions.

Barbers' Shops.—Inspections were made of barbers' shops in Toowoomba and the country centres visited. The majority of barbers are making a reasonable attempt to comply with the Regulations, while those at fault were instructed in the correct methods, and reinspections were made at a later date.

Nightsoil and Refuse Removal.—The collection and disposal of nightsoil and refuse throughout the area was handled generally in a satisfactory manner, and in accordance with the Regulations. Some laxity in tarring of pans, depth of trenches, &c., was noticed, but these faults were corrected when brought to the notice of the offending parties.

At Wallangarra, it was found that the sanitary depot, due to poor soil and overloading from military establishments in the locality, could not be further operated without danger to the townspeople and Army personnel. Accordingly, a new site, in deep sandy country on an adjoining reserve, was selected, and a recommendation made that future burials be made there. The new area has been fenced and is now in use, giving excellent results.

In Toowoomba, the long-standing dispute between the City Council and the contractor concerning the supply of refuse bins to premises has apparently terminated, as new bins of regulation size are now being distributed free of charge to householders by the contractor. Some 3,000 of these bins have now been supplied, and a big improvement in the condition of city lanes and common yards, and suburban yards should result.

The Toowoomba incinerator appears to be operating efficiently, while the dry rubbish tip in Bridge street has been maintained in excellent condition throughout the year.

A new sanitary depot has been established in the Drayton Shire, but is not yet in use—Drayton services being disposed of at Wetalla by agreement with the Toowoomba City Council. Most of the equipment is now on hand, and burial is expected to commence there shortly.

Sewerage.—Town sewerage systems are in operation at Toowoomba, Warwick and Goondiwindi. Few reticulations or installations have been completed during the year except to essential premises holding priority.

At the Wetalla Treatment Works, Toowoomba, an additional sedimentation tank and two new aeration and filter beds have been constructed during the year with a view to improving the final effluent which discharges into Gowrie Creek.

Mosquitoes.—The usual careful attention has been paid to mosquito eradication in the centres visited. Every opportunity is taken of impressing on local authority inspectors the necessity for constant vigilance in this phase of their duties.

In Toowoomba, through constant attention from the City Council, the closing of numerous offending Army camps, and the filling in of most of the emergency slit trenches, much has been achieved towards restoring the former state of comparative freedom from mosquitoes enjoyed in this city. In the summer recently ended, complaints concerning mosquitoes dropped considerably, and few breeding places were disclosed in the course of routine inspections.

It is worthy of note how the attitude of the people can assist in mosquito eradication. In Toowoomba, and to a lesser degree in the other larger towns, the townspeople have become mosquito-conscious, and will report the presence of even a few mosquitoes in or about their homes, thus facilitating early control of breeding places, whereas in country places little notice is taken of them as a rule, the attitude being that they have always been present, and probably will remain so.

A number of proposals, as post-war works under the mosquito subsidy scheme, were examined and reported upon during the year. A few major works have been passed, but the opportunity to secure permanent works on a very favourable basis has not been taken up as fully by some councils as was anticipated. It would seem that the provision of a few chains of concrete water-channelling should not be regarded as a major post-war work requiring a subsidy, but rather as a yearly appropriation from the budget in accordance with a long range plan, and no real progress will be achieved until this attitude is adopted.

Rats.—A revival of the campaign against rats is in evidence throughout the area, and some good results have been achieved. In Toowoomba, constant baiting with various poisons has been carried out by the City Council over recent months, and city business premises report a marked diminution in the rat population.

Experiments were conducted with two new poisons supplied from the central office during the year. The poison ANTU did not produce any results worthy of comment, but No. 1080 proved very effective with R.R.R., as previously reported. With this poison, several produce stores, previously heavily infested with rats, were rendered free of infestation, and successful routine baiting of other non-food premises on a small scale and under effective supervision, is being continued with the additional small quantity of the poison obtained.

Water Supply.—The water supply system of Toowoomba and Warwick have both been reported on during the year. Both supplies are lacking filtration plant and other essential treatment, and, as a result, do not find favour among the townspeople for drinking purposes—in fact, both are regarded by the majority, as dangerous water only to be used for gardens, &c. Both cities contemplate the early construction of treatment works after the war, but a considerable amount of prejudice will have to be overcome before the water will be accepted as suitable for drinking purposes.

General.—For the past few years, the chief objective has been the maintenance of pre-war conditions, and in most respects this has been achieved during the year under review. The slight easing of the manpower position, and the release of material previously in short supply, have been responsible for some improvements in the standard of sanitation in particular instances. Whilst sanitation generally has been maintained at the usual safe standard, it can be said that some phases of the work have shown encouraging improvement on the previous war years, and similar improvement can be expected in the coming year. Because of pressure of work at the head office of the centre, and other circumstances beyond control, fewer country centres were visited than is usual, but it is expected that, with the improvement in transport facilities now provided, many small places will be inspected in the coming year with a consequent raising of standards nearer to the level of the larger towns.

ROCKHAMPTON SUB-OFFICE.

Local Authority Supervision—

Area.	First Inspections.	Re-inspections.	Official Calls.	Number of Reports Submitted.	Number of Towns Visited.
Headquarters ..	662	82	225	32	..
Country ..	772	..	27	18	24 (59 visits)
Totals ..	1,434	82	252	50	24
Grand Total ..	1,768				

The above inspections included:—Air raid shelters (11), barbers' shops (27), camps (30), drainage (39), dwellings (13), hotels (138), insanitary premises (4), keeping of animals (2), mosquitoes (49), nightsoil depots (12), rats (128), refuse removals (292), refuse tips (24), sanatorium (1), sanitary conveniences (509), sanitary vehicle (for renewal) (1), sewerage (16), shops (29), soil pollution (2), stables (7), and wharves (shipping) (182).

Licensed premises—

Area.	First Inspections.	Re-inspections.	Number of Reports Submitted.	Number of Plans Examined.
Headquarters ..	43	83	15	11
Country ..	10	2	1	1
Totals ..	53	85	16	12
Grand Total ..	138			

Sanitation of the city improved to the extent that additional connections in the new sewerage system were made. Co-operative action by the Licensing Commission, the City Council, and the Department resulted in some progress being made in provision of new sewerage sanitary conveniences at hotels. Others await attention in this regard, lack of manpower in the building line constituting one of the main factors in retarding this work.

Nightsoil removal services operating in the suburbs to which the sewerage system has not been extended were performed efficiently with few complaints arising.

Refuse removal services were again hampered by the shortage of materials required for the manufacture of garbage containers. However, accumulations were removed when their existence was reported.

The new sites for refuse tips on park lands mentioned in last year's reports were abandoned by the Council in favour of the former sites, following complaints by residents in the respective areas. It is considered that the complaints were mostly of aesthetic origin as no serious nuisance was detected at any time at either of the new tipping sites when in use. The reversion was unfortunate as valuable work of filling in low areas was being accomplished, and many more loads could be collected in a given time due to the reduced haulage distances.

Rat destruction work was continued through the year by the gang employed, using dogs, poisoning and trapping.

Poisoning carried out with a new experimental poison gave encouraging results. Up to the time of compiling this report, occupiers of business premises where rats were formerly comparatively numerous claimed that few rats had been in evidence since the use of the experimental poison. Inspections confirmed these claims.

All shipping which berthed at local wharves when the officer was at headquarters were inspected, and breaches of the Regulations designed to prevent rats gaining the shore from vessels were duly reported.

The Government-subsidised mosquito eradication scheme reported in the previous years' report as being in progress was completed. Extensive mosquito breeding grounds were thereby eliminated. Owing, however, to a very dry year, heavy rains must be awaited to determine whether any further details must be undertaken in order to render the scheme fully effective.

Another scheme intended to drain what is known as Jardine's Lagoon, also a heavy mosquito breeding area in years of normal rainfall, is now contemplated. The granting by the Government of 50 per cent. of the cost of these undertakings by way of subsidy expedites public health works which would not otherwise be attempted for years to come.

Fly infestation, except for one or two short periods of moderate prevalence, was very light as is usual in this city area.

In the older suburban areas many earth closet pansteads remain non-flyproof. The inspection staff at present employed by the council is numerically inadequate to perform routine inspection of the whole of the more closely settled sections.

Hotel Licensing.—No general inspection of hotels was done during the year. Plans and specifications for new sanitary conveniences to be connected to the sewerage system were examined and commented on where necessary. Works in progress were supervised. Urgent repairs required were brought under notice. Complaints in regard to vermin infestation were speedily dealt with.

Country Areas.—Distances travelled in visiting country areas totalled 4,936 miles. The Mackay area was again included owing to separate staff for that centre being unavailable.

Provision of a motor vehicle for transport in the latter half of the year facilitated the work over that period. However, visits to many country centres were rendered impracticable by demands in other directions, including the necessity of attending to many prosecutions in regard to foods.

Bundaberg.—The State Health Officer was accompanied on a visit to this town in connection with the Council's application for subsidies for proposed mosquito eradication schemes.

Banana Area.—The Shire Council intimated that recommendations made for improved methods of nightsoil disposal at one township, and covering of refuse tips at three townships, had been carried out.

Calen.—Nuisance caused by hotel drainage was reported on.

Calliope.—Instructions were issued for new ground to be broken for nightsoil disposal, also for improved method in cleansing nightsoil pans.

Gladstone.—Since the new site for disposal of nightsoil was put into operation fly prevalence at the hospital greatly diminished. Pan cleansing continued to be done at the old site pending finding of a suitable water supply on the newly adopted areas. Water has now been found by sinking, so that the new depot should become fully established in the near future.

Following a recommendation made in a report to Head Office the Council was instructed to instal proper garbage containers on all premises which were without them. A commencement has been made but progress is slow, due partly to the difficulty experienced in getting the containers manufactured.

Proposals submitted by the local authority for urgent post-war works, embracing a combined drainage-mosquito eradication scheme, and provision of public sanitary conveniences in the town, were reported on and recommended for approval, including an extension to the former proposal.

Livingstone Area.—The seaside resorts in this area were inspected prior to and during holiday periods. Particular attention was paid to holiday camps which are under the direct control of the local authority. Sanitary conditions again fell short of the desired standard especially during the summer vacation period. The local authority did not commence preparations early enough to put the camping sites in order, effect repairs and alterations to sanitary conveniences, and provide extra staff for the increased cleansing services. Improvements were effected after an urgent report was made to Head Office upon which the council was instructed to take urgent action. Better provision was made for the Easter camping when there were fewer numbers of campers. It is hoped that as soon as suitable plant becomes available, the chief camping ground at Yeppoon, the main seaside resort, will be properly graded and levelled and cleared to enable better controlled camping.

The local authority submitted a proposal to borrow a sum of money to defray the cost of covering in a 6 feet wide storm water drain at Yeppoon. A nuisance emanated from this drain caused by discharge of septic effluents and waste

waters to it. It was recommended that the council consider instead as a more urgent requirement the construction of a 9-inch sewer to take all foul waters, to which further connections of waste waters could with advantage to public health be compelled. This recommendation is before the council at the present time.

Several visits were paid to Ogmoo, a coal mining township in the Livingstone area. Housing conditions were reported on in connection with applications made for permits to build dwellings.

Mackay.—In a report attention was drawn to the number of defective garbage containers on premises in the town, and recommendation made that the local authority be instructed to provide new containers for replacements.

The town refuse tip was found to be in an unsatisfactory state through tipping being done on a too extended face. A recommendation to have this remedied was submitted.

Mt. Morgan.—A request by the local authority for a loan to purchase a new vehicle for the nightsoil collection service was recommended after an investigation of the circumstances.

The nightsoil disposal depot was found to be operated in a satisfactory manner except for some overdosing of nightsoil trenches. Instructions for correction of this fault were given at the time.

Refuse collection in this town is still unsatisfactory.

Townships visited during the year were:—Ambrose, Bajool, Biloela, Bororen, Bundaberg, Calen, Calliope, Emerald, Enn Park, Gladstone, Gracemere, Kabra, Keppel Sands, Mackay, Marmor, Miriam Vale, Mt. Larcom, Mt. Morgan, Ogmoo, Raglan, The Caves, Westwood, Yaamba and Yeppoon. Some of these towns were visited on several occasions.

TOWNSVILLE SUB-OFFICE.

Local Authority Supervision.—

Area.	Number of Inspections.	Number of Re-inspections.	Official Calls.	Number of Reports.	Number of Towns Visited.
Headquarters ..	1,129	68	308	31	..
Country ..	59	3	21	18	8
Totals ..	1,188	71	329	49	8
Licensed premises	4	..	..	4	..
Grand Total ..	1,588	..	..	..	..

Sanitation Generally.—With the opening of the new financial year there are definite signs of the City of Townsville returning to its pre-war state, particularly in regard to population, so that normal conditions may be expected in the near future.

During the year under review there has been an almost continuous exodus of Army personnel from the area, which has assisted in relieving the strain on all sanitation services. With only a portion of the city sewered, the demands made on the nightsoil and garbage removal services grew to such proportions at various times during the past three years that both men and equipment were taxed to the limit. However, all services were maintained as efficiently as circumstances would permit and few serious complaints were received.

As manpower and material become available the City Council continues to connect premises to the sewerage scheme, giving preference to large establishments within the main areas of the city. At the close of the year the number of premises connected totalled 6,316, which figure represents an increase of 1,066 during the previous two years, leaving only approximately 300 premises within the reticulated sewered areas still not connected.

Recently defective earth closets were encountered within the main sewered area of the city and these were promptly referred to the council for immediate action.

As negotiations proceeded for the construction of the new Townsville Hospital, the attention of the City Council was drawn to the necessity of sewerage that portion of North Ward in order to make provision for connecting the new building to the scheme rather than utilise the septic tank method. As the contractor is about to commence the construction of the hospital in July, early action by the council to proceed with the sewerage facilities is anticipated.

Mosquito and Rat Campaign.—Both these branches of health services are short of manpower, with the result that there are no gangs operating. With reference to mosquito control the City Council attends to all street gully-traps, swampy lands, &c., regularly, whilst in the case of rat control the activities are confined to trapping and baiting principally.

Recommendations have been submitted to the Townsville City Council to employ additional labour for rat prevention work, but no action has yet been taken in this regard.

Diseases.—The Townsville area has been free of epidemics during the year and the notifiable disease records reveal that the number of cases reported was well below the figure for the previous year.

The co-operation of officers of the City Council, military authorities, police and other departments has always been of a cordial nature, which has added greatly to the efficient working of this office.

Country.—Towns visited during the year included: Ayr (5), Brandon, Charters Towers (3), Halifax (2), Home Hill, Hughenden (2), Ingham (6), Magnetic Island (2), and Proserpine.

In all instances the visits were on account of some special investigation rather than general inspectorial duties.

Major problems being dealt with by the department at the close of the year were the pollution of the Herbert River as a result of the tin mining operations at Mt. Garnett, and the question of a town water supply and sewerage system for Proserpine.

Total number of miles travelled: Train, 1,528; car, 2,114; total, 3,642.

CAIRNS SUB-OFFICE.

Local Authority Supervision.—

Area.	First Inspections.	Re-inspections.	Official Calls.	Reports.	Towns Visited.
Headquarters ..	652	37	217	61	..
Country ..	708	..	107	119	50
Totals ..	1,360	37	324	180	(113 visits)
Grand Total ..	1,721	..	..	..	..

The above inspections included: Anti-malaria drainage (39), barbers (15), camps (1), chemists (17), drainage (61), fly infestation (1), food factories (129), food premises (77), hospitals (5), incinerators (6), insanitary premises (1), industrial hygiene (3), malaria investigation (5), milk premises (28), mosquito infestation (10), premises generally (6), rat infestation (73), rubbish (37), sanitary conveniences (163), sanitary depots (23), swamps (2), warehouses (15), and water supply (3).

Licensed Premises.—

Area.	First Inspections.	Re-inspections.	Reports.	Plans Examined.
Headquarters ..	63	..	31	..
Country ..	29	..	29	1
Totals ..	92	..	60	1
Grand Total ..	92	..	..	..

During the year, a total of 50 separate towns were visited, embracing a total of 113 separate visits and the travelling of 6,334 miles.

During the year under review, there has been a slight improvement generally, due to a somewhat easier position in regard to materials, supply and manpower. Nevertheless, abnormally trying conditions have had to be faced by the local authorities in this area, and it is worthy of commendation that the main health services have continued to function along reasonably satisfactory lines, without any major breakdowns.

Cairns City.—The most noteworthy feature of sanitary activities in Cairns was the continuation of work on the anti-malaria drainage scheme. When the scheme was asked its biggest question with the abnormal wet season this year, it was able to answer it effectively. Flood waters were so quickly removed that areas which generally are holding water through the whole of the wet season were found to be effectively drained in a matter of a very few days. Naturally, some damage was done to the drains but service personnel on maintenance soon rectified this.

The question of maintenance of these drains, after the departure of the service units, is one that is of the utmost importance, and it behoves all concerned to ensure that these drains, which are now a definite asset, mirrored by the big fall in malaria incidence, do not become a dangerous liability through any default in maintenance.

Nightsoil collection and disposal had the same close supervision, especially in view of the fact that this service is still fairly heavily taxed, but no major breakdowns occurred and very few complaints were received about the conduct of the service.

The new incinerator was regularly inspected and found on each occasion to be functioning well, and the premises kept in a very clean condition.

Garbage is being disposed of in the reclamation of low-lying land at West Cairns. The local authority has now obtained a loan for the construction of a garbage incinerator and, when such is completed and in operation, Cairns will be in a satisfactory condition as regards the disposal of garbage and other wastes.

A definite improvement has been noted in the control of garbage at service dumps and the latest inspections have revealed a very satisfactory state of affairs.

Rat infestation is still fairly severe in the city, despite the excellent work being done by the local authority staff. Building harbourages, the rectification of which would appear to be impossible till after the war, are perhaps the biggest handicap in this direction. During the year tests were made, with satisfactory results, of two new rat poisons, viz., A.N.T.U. and 1080.

Abuse of public conveniences and air-raid shelters has been a problem and has entailed more work on the local authority than should have been necessary.

Mulgrave Shire.—This local authority, though not suffering the impact of service personnel to the same extent as Cairns, still had problems in this regard, but regular inspections of essential services in this shire revealed a satisfactory state of affairs.

Johnstone Shire.—The usual satisfactory conduct of sanitary and garbage services in this shire was again evident during the year, whilst consideration of a scheme for anti-tetanus injections, and inquiries for the installation of sewerage indicate a worthy desire on the part of this shire to improve conditions generally.

Cardwell Shire.—Visits were paid to this shire and it was found that the essential services were well controlled and functioning satisfactorily.

During the year all children in this shire were given free whooping cough immunisation.

Woothakata Shire.—This is another shire that had to meet abnormal demands on essential services and, with no major breakdowns, coped with the situation in a satisfactory manner.

Attention has been paid to the anti-mosquito drainage in Mareeba and suggestions given for its improvement.

Herberton Shire.—This shire was visited and it was found that the essential services were in reasonable order.

Recommendations for improved drainage at Herberton and Ravenshoe were made as a result of the visit.

Atherton Shire.—Here again was another shire that had to face abnormal demands on the services and it is pleasing to report that these essential services all operated without any serious trouble.

Eacham Shire.—As a result of visits to this shire, it was reported that a satisfactory state of affairs existed.

Douglas Shire.—A fair standard has been maintained in this area and further improvement with the utilisation, by the shire, of a certificated inspector, is expected. An appointment is under consideration.

Some further progress has been made in regard to the installation of a town drainage scheme—a most desirable scheme from all points of view.

Etheridge Shire.—A visit was paid to this shire and, considering all conditions, a fair station of sanitation was observed. Various recommendations for improving any defects noticed were made to the local authority for consideration and adoption.

FOODS AND DRUGS

The following is a summary of the work performed by the officers of this section in connection with the inspection of foods and drugs during the fiscal year 1944-1945. Although routine duties were retarded owing to conditions brought about by the circumstance of the World War, nevertheless every opportunity was availed of to attend to the public food supply and to keep an eye upon the drug section.

Inspection of premises, wholesale and retail, and of stocks therein contained, was so far as possible conducted on the usual lines, and liquor testing, bread weighing, and milk and food sampling carried out in the Brisbane metropolitan area and the following country areas:—Bundaberg, Burleigh, Burpengary, Cleveland, Coolangatta, Coomera, Currumbin, Eumundi, Gayndah, Gympie, Ipswich, Maryborough, Narangba, Oxenford, Palm Beach, Pialba, Pomona, Redcliffe, Searness, Southport, Stapylton, Torquay, Urangan, and Wellington Point.

Ice Cream.—Two ice cream sellers were successfully proceeded against for the offence of selling ice cream that was deficient in the minimum proportion (10 per cent.) of milk fat required to be present.

A cafe proprietor was prosecuted for having sold to an officer ice cream that was not of the nature, substance, and quality demanded. The case was dismissed by the stipendiary magistrate and an appeal against such dismissal has been listed for hearing in the Supreme Full Court.

PROSECUTION OF ICE CREAM VENDORS FOR YEAR ENDING 30TH JUNE, 1945.

Date.	Place.	Basis of Prosecution.	Fines.	Costs.
			£ s. d.	£ s. d.
1944—				
26th September	Brisbane	Ice cream deficient in fat	2 0 0	1 10 0
31st October	Brisbane	Ice cream deficient in fat	5 0 0	0 6 0
7th December	Brisbane	Ice cream not of the nature, substance, and quality demanded by the purchaser	Dismissed (Appeal pending)	
			£7 0 0	£1 16 0

Milk Sampling (Chemical).—During the year a total of 1,721 samples of milk was procured by the headquarters staff and submitted to the Government Chemical Laboratory for analysis. These were official samples taken for legal purposes strictly in accordance with the requirements of the Health Acts, to ascertain their chemical composition.

The quality of this milk is fully dealt with in the report of the Government Analyst.

Samples of milk were submitted to the Laboratory of Micro-biology and Pathology with a view to checking the cleanliness of Brisbane's milk supply and its freedom from contamination with pathogenic organisms. Results of these

examinations are given in the report of the Director of the Laboratory.

Pasteurised Milk.—Particular attention has been given to the bottling and sale of pasteurised milk. Samples are periodically submitted to both the chemical and bacteriological laboratories, and it is found that statutory standards of quality are maintained.

Prosecutions of milk sellers by the headquarters staff for the offences of selling milk adulterated with added water or selling milk deficient in fat, and for breaches of the Regulations resulted in fines and costs amounting to £286 7s. 4d. being imposed. Details of these cases are shown in the accompanying lists.

PROSECUTIONS FOR ADULTERATED MILK (HEADQUARTERS) FOR YEAR ENDING 30TH JUNE, 1945.

Date.	Place.	Basis of Prosecution.	Fines.	Costs.
			£ s. d.	£ s. d.
1944—				
5th July	Brisbane	Milk, added water 23.0 per cent.	20 0 0	1 7 0
5th July	Brisbane	Milk, added water 19.3 per cent.	19 0 0	1 7 0
26th July	Brisbane	Milk, added water 6.5 per cent.	6 0 0	3 9 0
3rd August	Brisbane	Milk, added water 4.7 per cent.	4 0 0	1 7 0
13th August	Brisbane	Milk, added water 5.8 per cent.	5 0 0	5 0 4
3rd October	Brisbane	Milk, added water 3.6 per cent.	4 0 0	1 7 0
3rd October	Brisbane	Milk, added water 4.72 per cent.	5 0 0	1 7 0
3rd October	Brisbane	Milk, added water 6.9 per cent.	7 0 0	1 7 0
26th October	Gympie	Milk, added water 33.8 per cent.	20 0 0	1 7 0
31st October	Brisbane	Milk, added water 21.4 per cent.	20 0 0	1 7 0
31st October	Brisbane	Milk, added water 19.5 per cent.	19 10 0	1 7 0
14th November	Brisbane	Milk, added water 18.8 per cent.	No return of service	
14th November	Brisbane	Falsely described pasteurised milk	No return of service	
7th November	Brisbane	Milk, added water 18.3 per cent.	18 0 0	3 9 0
14th November	Brisbane	Milk, deficient in fat 27.2 per cent.	10 0 0	1 7 0
7th December	Brisbane	Milk, added water 19.9 per cent.	20 0 0	1 7 0
1945—				
30th January	Brisbane	Milk, added water 7.1 per cent.	7 0 0	1 7 0
30th January	Brisbane	Milk, deficient in fat 27.2 per cent.	10 0 0	1 7 0
23rd February	Coolangatta	Milk, added water 13.0 per cent.	13 0 0	3 9 0
2nd March	Redcliffe	Milk, added water 14.0 per cent.	No return of service	
23rd April	Ipswich	Milk, added water 13.7 per cent.	15 0 0	3 9 0
1st June	Redcliffe	Milk, added water 7.6 per cent.	7 10 0	2 8 0
1st June	Redcliffe	Milk, added water 11.4 per cent.	11 10 0	2 8 0
			£241 10 0	£41 3 4

MISCELLANEOUS PROSECUTIONS (HEADQUARTERS) FOR BREACHES OF "THE MILK SELLER'S REGULATIONS, 1938," FOR THE YEAR ENDING 30TH JUNE, 1945.

Date.	Place.	Basis of Prosecution.	Fines.	Costs.
1944—			£ s. d.	£ s. d.
3rd August	Brisbane	Name and address not on milk vehicle	1 0 0	0 6 0
31st August	Brisbane	Milk vehicle not properly constructed	1 0 0	0 6 0
14th November ..	Brisbane	Bottling milk by hand	No return of service	
17th November ..	Gympie	Selling milk whilst not licensed	Convicted only	0 6 0
1945—				
23rd April	Ipswich	No lids on milk measures	0 10 0	0 6 0
			£2 10 0	£1 4 0

Cafes and Refreshment Rooms.—During the year under review constant attention has been directed to cafes and eating houses generally in the Brisbane metropolis and Ipswich, with a view to having hygienic conditions observed, and where possible to promote higher standards.

The main detracting feature in cafe hygiene is structural compromise, which, among other things, has been aggravated by the abnormal times. The increase in population which was thrown upon the resources of cafes, resulted in makeshift additions being made, and often with materials that were not suitable. In this connection the Department exercised a limited toleration, which amounted to a temporary concession, and which will be withdrawn with the approach to normal times.

Two hundred and fifty cafes in the city area were regularly inspected, and attention was paid to principles such as—

- Wholesome food, clean and undeteriorated;
- Manner and methods of preparation;
- Personal hygiene of staffs;
- Utensils, apparatus, &c., used in handling food;
- Freedom of food from risk of contamination;
- General cleanliness of premises and their suitability for the purpose.

Throughout, a fair standard of cleanliness obtains, although much difficulty has at times been encountered with cafes conducted by evacuees who for the most part have an under-standard concept of cafe conduct. It is this element also that has indulged in makeshift additions and which has frequently lowered the structural standard of premises required by the law. Many new cafes had opened while Brisbane was a garrison city, but many have since closed down, and it is evident that only the better class cafe will survive. In addition, labour and materials are easing and these will have a direct bearing upon the whole cafe position.

In two instances, where cafes were found to be in an insanitary condition, an order was issued to close the premises until they were thoroughly cleansed. In other instances default notices were issued directing attention to defects required to be remedied, or improvements needed.

Two cafe proprietors were proceeded against in the Summons Court for the offence of conducting dirty premises and having thereon foods exposed to contamination, and the presiding magistrate inflicted penalties totalling £15 18s. Much moral value was obtained by the publicity given these complaints by the Press, as such publicity materially assists in maintaining a very fair standard in the provision of meals by cafes to the public.

Fish Supply.—Two full-time inspectors at the Brisbane Fish Market are employed in the examination of fish, crabs, and oysters. These officers also visit city shops where fish is sold, and wholesale fish depots.

During the year under review these two officers condemned as unfit for human consumption 14 tons 13 cwt. 3 qr. 21 lb. of assorted fish, including prawns, besides which there were condemned upon arrival at the Fish Market 378 crabs and 32 bags and 4 bottles of oysters.

Townsville Fish Depot.—Following the death of Inspector William Hiddins at Townsville, George Henry Price, Sub-Inspector of Fisheries at that centre, has been appointed a Temporary Health Inspector to empower him to carry out the inspection of fish at the wholesale depot and retail shops.

A detailed list of fish condemned and destroyed at the Brisbane Market is attached.

FISH CONDEMNED AND DESTROYED AT THE FISH BOARD MARKETS, SOUTH BRISBANE.

Class of Fish.	Weight.
	Tons. cwt. qr. lb.
Bream	1 12 2 7
Cat fish	0 1 1 23
Cod	0 0 0 9
Flat head	0 0 3 11
Gee	0 6 1 26
Herrings	0 0 2 9
Forward	2 2 0 1

FISH CONDEMNED AND DESTROYED AT THE FISH BOARD MARKETS, SOUTH BRISBANE (continued.)

Class of Fish.	Weight.
	Tons. cwt. qr. lb.
Carried Forward	2 2 0 1
John Dorey	0 0 0 26
Long Toms	0 0 0 18
Leatherjackets	0 0 0 20
Mackerel	0 8 3 97
Prawns	0 17 1 2
Pilchards	0 0 0 5
Mullet	4 10 3 14
Mixed fish	0 11 1 6
Shark	0 5 0 11
Stingray	0 4 0 18
Squid	0 0 2 8
Sergt. Baker	0 0 0 5
Schnapper	0 0 3 2
Parrot	0 0 1 5
Trevally	2 16 3 10
Squid	0 0 2 16
Sweet Lip	0 0 6 27
Tailor	0 0 2 19
Saw Fish	0 0 0 10
Whiting	0 8 3 24
Yellow Tails	0 2 2 16
	14 13 3 21

Fruit and Vegetables.—Examination of fruit and vegetables at the Brisbane Markets was continued during the year and 847 cases of Southern-grown pears were found to be dangerously contaminated with spray residue consisting of arsenate of lead. Three hundred and seventy-seven cases of this fruit were permitted to be sold to the public after having been satisfactorily cleaned, whilst the remainder were returned by the Brisbane agent to his supplier in another State.

Following representations made to Southern packers, fruit at present arriving on the Brisbane market is free from gross contamination of the nature referred to.

Sampling.—A total of 3,402 samples of foods, drugs, toilet preparations, and disinfectants was obtained by our officers and submitted to the Government Chemical Laboratory for examination. These samples include:—Beer, beverages and cordials, bread, cereals, condiments, disinfectants, medicines, fats (edible), fruit, jams and jellies, meat, milk, milk products, paint, pickles, spirituous liquors, sauces, tobacco, toilet preparations, toys, and vegetables.

Bacteriological Sampling.—Six hundred and five specimens, including the following articles, were collected and submitted by headquarters inspectors to the Director of the Laboratory of Micro-biology and Pathology for examination, viz.:—Bacon, bottles (sterility), bread, butter-milk, camp pie, cerevite mixture, disinfectants, flour, methylated spirit, milk, paper, powdered milk, salt, tomato sauce, wheatmeal, and yeast.

Unsound and Deteriorated Foods.—Arising out of inspections by the headquarters staff, deteriorated and unsound food material of a total weight of 6 tons 10 cwt. 1 qr. 18 lb. has been withdrawn from sale and destroyed under supervision. A detailed list of these articles is as follows:—

UN SOUND FOODS DESTROYED (HEADQUARTERS) FOR THE YEAR ENDING 30TH JUNE, 1945.

Description of Food.	Quantity.	Weight.
		Tons. cwt. qr. lb.
Cabbages	13 parcels	0 13 0 0
Fruit, canned	56 parcels	0 0 3 12
Fruit, evaporated	2 parcels	0 0 1 14
Flour, self-raising	200 parcels	0 2 0 0
Jam		2 10 0 0
Meat		1 12 1 12
Meat, canned sausages	1,453 cans	0 14 3 21
Pickles	324 bottles	0 3 2 16
Padding mixture	13 parcels	0 0 1 1
Peanut paste	8 parcels	0 0 0 4
Poultry (chicken)	12 cans	0 6 2 26
Poultry (duck)	12 cans	0 6 1 24
		6 10 1 18

MISCELLANEOUS PROSECUTIONS (HEADQUARTERS) FOR BREACHES OF "THE FOOD AND DRUG REGULATIONS, 1939," FOR THE YEAR ENDING 30TH JUNE 1945.

Date.	Place.	Basis of Prosecution.	Fines.	Costs.
1944—			£ s. d.	£ s. d.
13th July	Brisbane	Cafe not in a clean and sanitary condition	5 0 0	0 6 0
13th July	Brisbane	Sanitary conveniences to cafe not clean and sanitary	5 0 0	0 6 0
13th July	Brisbane	Cafe not in a clean and sanitary condition	5 0 0	0 6 0
20th September	Brisbane	Confectionery factory not in a clean and sanitary condition	3 0 0	0 6 0
1945—				
3rd April	Caboolture	Bakehouse premises not in a clean and sanitary condition	4 0 0	2 11 0
3rd April	Caboolture	Bread not protected from contamination	4 0 0	2 11 0
21st June	Brisbane	Dirty bakehouse premises	7 10 0	0 6 0
21st June	Brisbane	Bread exposed to contamination	7 10 0	0 6 0
			£41 0 0	£6 18 0

Hotel Inspections.—In addition to visits to hotels for the purpose of testing the alcoholic strength of spirits offered for sale, some 115 hotels in the metropolitan area were inspected under the provisions of the Liquor Acts and the Health Acts to ensure that the licensees provided food and lodging, and the premises and cooking utensils were in a clean and sanitary condition.

Patent and Proprietary Medicines.—In a number of instances the attention of manufacturers was called to the fact that the sale of their patent or proprietary medicinal preparations in this State was objected to by the Director-General. One patent medicine was found to contain no therapeutic dose of any drug that would be useful for the purpose for which the medicine was advertised, and on representation from the Department, the manufacturer has undertaken to withdraw its sale in Queensland and to refrain from any further local advertising of the preparation.

The manufacturer of three proprietary preparations was advised that, in the opinion of the Director-General, the preparations as constituted were of no value for the advertised purposes, and that the prices of same were exorbitant. As a result of this action the preparations are not now offered for sale in this State.

A patent medicine was described as a "Pure Herbal Preparation," whereas the preparation was not a herbal one. Permission to sell this medicine was granted the manufacturer after the label of same had been suitably amended.

Domestic Utensils and Toys.—Objection was taken to the sale of domestic articles constructed of Terne plate (lead-coated) metal, and of toys composed either wholly or in part of lead.

Action taken to prevent the sale of dippers manufactured from a lead-coated metal resulted in 3,500 of these utensils being returned to the manufacturer in a Southern State.

Paint.—Four persons were proceeded against successfully during the year by the headquarters staff for having used upon dwellings, in such positions as were accessible to young children, paint containing more than 5 per centum of soluble lead, in contravention of the provisions of the Health Acts. Penalties amounting to £16 10s. were imposed by the presiding magistrates.

Fifteen legal notices under the Health Acts were served upon owners of dwellings, requiring that paint containing more than 5 per centum soluble lead be removed from all exterior surfaces of the buildings deemed to be easily accessible to children, and also from fences and gates.

PROSECUTIONS (HEADQUARTERS) FOR BREACHES OF SECTION 127 OF THE HEALTH ACTS—i.e., THE APPLICATION OF PAINT TO SURFACES ACCESSIBLE TO CHILDREN.

Date.	Place.	Percentage of Soluble Lead in Paint.	Fines.	Costs.
1945—			£ s. d.	£ s. d.
18th April	Brisbane	17.0	2 0 0	1 7 0
18th April	Brisbane	38.0	1 0 0	3 0 0
18th April	Brisbane	42.0	1 0 0	1 7 0
18th April	Brisbane	74.0	5 0 0	1 7 0
			£9 0 0	£7 10 0

Dangerous Drugs.—Investigations into the possession and sale of dangerous drugs have been made during the year as opportunity offered. The majority of medical practitioners and pharmaceutical chemists are faithfully complying with the requirements of "The Poisons Regulations of 1940," but in some instances, however, it was found necessary to discipline professional gentlemen and others by means of proceedings in the Summons Court. These breaches of the Regulations included:—

- Failure to keep proper records of dangerous drugs;
- Failure to notify the Director-General of the prolonged treatment of a patient with a dangerous drug;
- Dangerous drug prescription not cancelled and properly endorsed by dispensing chemist;
- Dangerous drug prescription dispensed beyond prescribed number of times;
- The writing of a prescription for a dangerous drug by an unqualified person.

Poisons.—Further prosecutions for breaches of the Poisons Regulations included—

- Poisonous substance packed in a beer bottle;
- Package of poison not labelled "Poison";
- Cyanide fumigation of occupied premises endangering the lives of the occupants.

In the accompanying list is given details of proceedings instituted for failure to comply with dangerous drug and poison law.

MISCELLANEOUS PROSECUTIONS (HEADQUARTERS) FOR BREACHES OF "THE POISONS REGULATIONS, 1940," FOR THE YEAR ENDING 30TH JUNE, 1945.

Date.	Place.	Basis of Prosecution.	Fines.	Costs.
1944—			£ s. d.	£ s. d.
27th July	Brisbane	Dangerous drug prescription written by unqualified person	10 0 0	0 6 0
11th August	Brisbane	Dangerous drug records not kept by medical practitioner	20 0 0	0 6 0
11th August	Brisbane	Failure to notify the treatment of a patient with dangerous drugs	10 0 0	0 6 0
11th August	Brisbane	Dangerous drug prescription not endorsed with name and address of chemist and not cancelled	15 0 0	0 6 0
11th August	Brisbane	Drugs book not kept by chemist	7 0 0	0 6 0
22nd August	Brisbane	Poison packed in beer bottles	2 0 0	0 6 0
22nd August	Brisbane	"Poison" label not on package of poison	2 0 0	0 6 0
19th September	Brisbane	Occupied premises fumigated with cyanide	20 0 0	0 6 0
1945—				
26th February	Brisbane	Occupied premises fumigated with cyanide	5 0 0	0 9 0
20th June	Brisbane	Prescription for dangerous drug dispensed beyond prescribed number of times	10 0 0	0 6 0
20th June	Brisbane	Prescription for dangerous drug dispensed beyond prescribed number of times	10 0 0	0 6 0
20th June	Brisbane	Drug book not kept up to date	25 0 0	0 6 0
			£136 0 0	£3 15 0

In submitting this brief report on the work of the Food and Drug Division, it is pointed out that much has been accomplished with a small staff. With the coming of peace, the return of a number of officers from the fighting services may shortly be expected, when the routine work of the Division will be greatly extended.

During the year the inspection branch received transport in the shape of a utility truck, and the use of this vehicle has proved most helpful in the saving of time and manpower.

Reports from officers in charge of sub-offices at Toowoomba, Rockhampton, Townsville and Cairns are attached.

TOOWOOMBA SUB-OFFICE.

Places Visited.—Besides inspections in Toowoomba and the surrounding districts, inspections were carried out at Balldale, Chinchilla, Clifton, Cotton Vale, Crow's Nest, Dalveen, Drayton, Glen Aplin, Greenmount, Millmerran, Oakey, Pittsworth, Stanthorpe, The Summit, Wallangarra, and Warwick.

The number of miles travelled outside Toowoomba, by rail and road, on these inspections totalled 1,136.

Food Premises Generally.—Inspections under the Health Acts and various Regulations have been carried out regularly in Toowoomba, and at all country centres visited. All premises where food for sale was handled, stored, or sold, were inspected. These included cafes, stores, factories, hotels, bakehouses, cake shops, fruit shops, markets, &c., and generally, a safe standard of cleanliness was maintained throughout the district. In a few instances, warnings or notices were issued in respect to faults, but it was not necessary to take legal action to enforce the regulations relating to cleanliness.

Particular attention was paid to cafes and other public eating places, and a good standard was maintained despite shortages of essential crockery and staff.

Fish shops in Toowoomba were inspected weekly on the days fish arrived for sale, and only one complaint concerning unsound fish was received in the year.

Condemned Foods.—The bulk of foods inspected was found to be in sound condition, and only 38 lb. of tinned fish and vegetables were certified as unfit for human consumption.

Liquor Testing.—Liquor testing has been carried out as opportunity offered during the year. This work was rendered most difficult in the larger centres through prevailing conditions in bars, and could not be done to the extent desirable.

The licensee of an hotel at Chinchilla was convicted and fined £7 with £1 7s. costs in respect of a sample of adulterated whisky seized on his premises towards the close of the previous financial year. Proceedings are pending against an hotel-keeper at Greenmount in respect of adulterated brandy.

Milk Supply.—Constant supervision has been exercised over the milk supply of Toowoomba from all sources, and checks made in the larger centres visited. Work under this heading comprised milk sampling, factory inspection, inspection of vehicles, visits to farms, &c. A total of 119 official samples of milk was submitted for chemical analysis, made up as follows:—

Toowoomba	99
Warwick	14
Stanthorpe	4
Crow's Nest	2

Of this number, twelve samples, representing three suppliers, were found to contain added water, and two were slightly deficient in butter fat. Proceedings were taken against the three suppliers, in respect of adulterated milk, and fines and costs totalling £46 1s. were imposed upon them.

A number of unofficial bacteriological samples were obtained from Toowoomba warm milk vendors during the year, and these were examined by the Dairy Technologist, Department of Agriculture and Stock. Results of these show that the improvement effected in the quality of warm milk

last year has been maintained in most cases. Those vendors whose results were unsatisfactory were visited, and given advice in regard to more hygienic milking operations.

In Toowoomba, the big majority of the milk sold is pasteurised milk, and the Dairy Association has continued to produce a good, safe milk. Except for a period of dislocation following industrial trouble, when many key men left the employ of the association, excellent results have been maintained throughout the year from samples examined by the Agriculture and Stock laboratory on behalf of the U.S. Army. A recent addition to the plant is an A.P.V. filtering unit, which replaces the former unsatisfactory filters which more often than not were out of commission. The new unit is doing an excellent job, and must further improve the quality of the finished product. A new bottle-washing machine is on order, but has not been delivered as yet.

Due to industrial trouble, the Toowoomba Milk Factory was out of operation for a week during August of last year, and considerable difficulty was experienced in keeping up a supply of warm milk to the city. In co-operation with officers of the Department of Agriculture and Stock, arranging of bulk supplies, grading, and issuing to vendors were carried out during the strike, and a reasonable supply of milk to most people was achieved.

The Warwick Dairy Association has in operation a small pasteurisation plant for the treatment of army milk. The plant is rather crude, and a number of alterations will be necessary before any bottling for sale is attempted. At present, only processed milk is produced, and Department of Agriculture and Stock tests show varying results—sometimes good, other times bad.

Processed milk from Toowoomba is bottled in approved plants at Stanthorpe and Dalby and retailed as "Pure Milk."

Outbreak of Scabies at Cafe.—During the year, an outbreak of scabies occurred among the staff of one of Toowoomba's largest cafes. A complaint was received by the departmental inspector concerning one waitress, and by arrangement with the management she was given leave of absence until she recovered. Unfortunately, the majority of the remaining staff had already contracted the infection, and, a few days later, they too were found to be unfit for handling of foods for sale. The National Service Office, when acquainted with the position, made available a number of temporary waitresses to carry on the business during their absence from duty.

Although scabies were not uncommon in Toowoomba at the time, there were no further instances of the infection among food handlers.

Poisons and Dangerous Drugs.—The usual inspections of chemists' shops, wholesale and retail sellers of poisons, and stores were carried out, and any faults rectified. Toys, &c., were examined for prohibited metals and paints, and one line of lead toys was withdrawn from sale following the report of the Analyst.

Several inquiries into the handling and recording of dangerous drugs were made in Toowoomba and Oakey, but no prosecutions were launched under this heading. A new system of recording dangerous and restricted drug transactions was introduced at the Toowoomba General Hospital.

SUMMARY OF PROSECUTIONS.

Date.	Place.	Charge.	Fine.	Costs.	Analyst's Fee.
1944—			£ s. d.	£ s. d.	£ s. d.
26th July	Chinchilla	Adulterated whisky	7 0 0	0 6 0	1 1 0
15th August	Crow's Nest	Adulterated milk, 14.8 per cent.	15 0 0	0 6 0	1 1 0
1945—					
26th March	Toowoomba	Adulterated milk, 12.1 per cent.	12 0 0	0 6 0	1 1 0
26th March	Toowoomba	Adulterated milk, 14.7 per cent.	15 0 0	0 6 0	1 1 0
		Totals	£49 0 0	£1 4 0	£4 4 0
		Total Fines and Costs	£54 8 0		

ROCKHAMPTON SUB-OFFICE.

The year 1944-45 was one of continuous activity in health inspection work. The officer stationed at this centre again operated over two normal peace-time areas due to the lack of available staff.

Supervision over the quality and methods of handling of food offered for sale was exercised to the maximum extent possible by one officer. Even allowing for some measure of relaxation occasioned by abnormal conditions which existed, serious breaches of the Health Acts and Regulations dealing with foods resulted in successful legal proceedings in a record number of cases. The total of fines and costs imposed, amounting to £381 14s., would also constitute a record.

Attention paid to inspection and sampling work disclosed the extent to which food was being adulterated and mishandled, and gave obvious proof of the urgent necessity for increased staff.

Inspection visits to many country towns were rendered impracticable by demands in other directions. The time taken up with the numerous prosecutions launched constituted a major factor in restricting travel. In any case the headquarters area of this centre, with a population of approximately 40,000, provides more work than could be attended to by one officer. The benefit of motor transport provided over the latter half of the year was reflected in the step-up of inspection work and results achieved.

Townships beyond the headquarters area to which inspection visits were made were as follows:—Ambrose, Bajool, Biloela, Bororen, Bundaberg, Calen, Calliope, Emerald, Emu Park, Gladstone, Gracemere, Kabra, Keppel Sands, Mackay, Marmor, Miriam Vale, Mt. Larcom, Mt. Morgan, Ogmoo, Raglan, The Caves, Westwood, Yaamba, and Yeppoon.

Some of these had to be visited on more than one occasion, the total distance travelled being 5,128 miles.

Milk Supply.—One hundred and ninety-nine official samples of milk obtained and submitted to analysis were from the following centres: Rockhampton, 131; Emu Park, 1; Gladstone, 8; Mackay, 29; Mt. Morgan, 3; Ogmoo, 2; Yepoon, 25.

Convictions were obtained in legal proceedings against offenders for breaches of the Act and Regulations as follows:—

Milk adulterated with added water	11
Water carried on milk delivery vehicle	4
Defective delivery vehicles	15
Defective measures	2

Fines and costs imposed totalled £273 8s.

Whilst the number of samples of milk which proved to be adulterated with added water was almost twice that of the previous year, it was more than ever apparent that the practice most frequently adopted by offenders is that of carrying water in smaller cans to adulterate the milk when measuring for individual customers.

An increased number of samples was obtained from cafes and other food shops. Two proprietors were proceeded against and convicted for having sold milk adulterated with added water. Other proprietors were warned in respect of the sale of milk which proved to be deficient in fat content, usually the result of failure to stir milk held in refrigerators.

The general standard in construction of delivery vehicles improved during the year, due partly to increased penalties pressed for and obtained in legal proceedings against offenders.

A large dairying concern which commenced to process milk for civilian consumption was required to submit plans and specifications of plant forthwith. This company is now preparing to put out pasteurised (bottled) milk.

Bread.—The quality of bread supplied to the public was not always of a uniformly good standard on account of the varying conditions of stored flour which had to be used. Instances of "rope" required careful and persistent treatment before bakehouses were freed of this trouble. Shortages of staff, materials and equipment at times, together with excessive storage of flour, made it difficult to maintain standards of cleanliness such as could be attained in normal circumstances.

In the course of checking the weight of loaves of bread at bakehouses, two instances of serious shortage in the due weights were detected. Successful prosecution of the offenders followed. The total of fines and costs imposed in these cases amounted to £21 6s.

Cafes, Milk Bars, Restaurants, &c.—A reasonable sanitary standard was obtained in view of the difficulties experienced concurrent with war-time conditions.

Particular attention was paid to protection of food from contamination, and of food wastes against access to rats and other vermin.

Alcoholic Liquors.—Testing of liquors offered for sale in hotel bars was carried out. Convictions were obtained in legal proceedings in six cases for the sale of adulterated spirits. Fines and costs imposed totalled £70 2s.

Fish.—Of the large quantities of fish offered for sale in retail establishments, inspection throughout the year resulted in the condemning and destruction of only 2 cwt. 1 qr. 10 lb. found to be unfit for human consumption. Shops were kept under notice to ensure proper handling and protection against contamination.

Fruit and Vegetables.—Supervision was maintained as far as practicable. The use of poisonous spraying substances on these commodities appeared to be well controlled.

Itinerant Vendors.—A check was kept on proper handling and protection of foods in this class of business.

Unsound Foods.—Foods of a total weight of 3 tons 13 cwt. 1 qr. 23 lb. 2 oz. found to be unfit for human consumption were condemned and destroyed. These are itemised as follows:—

Brandy, 1 qr. 16 lb. 10 oz.
Whisky, 1 qr. 2 lb. 7 oz.
Canned meats, 1 qr. 8 lb. 6 oz.
Canned vegetables, 2 qr. 23 lb. 12 oz.
Cheese, 4 cwt. 0 qr. 26 lb.
Chutney, 2 qr. 10 lb.
Coffee and chicory and other beverages, 6 lb. 11 oz.
Fish, 2 cwt. 1 qr. 10 lb.
Dried fruits, 2 lb. 4 oz.
Golden syrup, 10 lb.
Jams and preserves, 7 cwt. 3 qr. 10 lb. 8 oz.
Malt extract, 5 lb.
Prepared puddings, 1 lb.
Pickles, 6 lb. 8 oz.
Potatoes, 2 tons 16 cwt. 1 qr. 24 lb.

Poisons.—Chemists' shops, wholesale houses, retail shops, and some hospitals were visited in connection with the dispensing, sale, and/or other handling of drugs and poisons generally. No willful breaches of the Poisons Regulations were detected. Advice or instructions to procure proper compliance with the Regulations were given where necessary.

PROSECUTIONS UNDER "THE HEALTH ACTS, 1937 TO 1945," CENTRES OF ROCKHAMPTON AND MACKAY, YEAR 1944-45.

Date.	Place.	Nature of Offence.	Fines.	Costs.
1944—				
7th July	Rockhampton	Milk, water carried on vehicle	£ 10 0 0	£ 1 7 0
27th July	Jambin	Rum, adulterated	5 0 0	1 7 0
27th July	Biloela	Milk, adulterated	8 0 0	1 7 0
18th September	Rockhampton	Milk, adulterated	50 0 0	1 7 0
18th September	Rockhampton	Milk, vehicle without enclosed compartment	5 0 0	0 6 0
18th September	Rockhampton	Milk, vehicle without enclosed compartment	5 0 0	0 6 0
18th September	Rockhampton	Milk, vehicle without enclosed compartment	5 0 0	0 6 0
22nd September	Rockhampton	Milk, vehicle without enclosed compartment	5 0 0	0 6 0
22nd September	Rockhampton	Milk, vehicle without enclosed compartment	5 0 0	0 6 0
22nd September	Rockhampton	Milk, vehicle without enclosed compartment	5 0 0	0 6 0
22nd September	Rockhampton	Milk, vehicle without enclosed compartment	5 0 0	0 6 0
22nd September	Rockhampton	Milk, vehicle without enclosed compartment	5 0 0	0 6 0
24th November	Mount Larcom	Rum, adulterated	5 0 0	1 7 0
29th November	Rockhampton	Milk, adulterated	20 0 0	1 7 0
29th November	Rockhampton	Milk, water carried on vehicle	1 0 0	0 6 0
29th November	Rockhampton	Milk, vehicle without enclosed compartment	1 0 0	0 6 0
19th December	Mackay	Milk, adulterated	20 0 0	1 7 0
19th December	Mackay	Milk, vehicle not kept clean	3 0 0	0 6 0
19th December	Mackay	Milk, measure without lid	0 10 0	0 6 0
19th December	Mackay	Milk, measure without lid	0 10 0	0 6 0
19th December	Mackay	Milk, vehicle without enclosed compartment	3 0 0	0 6 0
19th December	Mackay	Milk, vehicle without enclosed compartment	3 0 0	0 6 0
19th December	Mackay	Milk, vehicle without enclosed compartment	3 0 0	0 6 0
19th December	Mackay	Milk, name and address not on vehicle	1 0 0	0 6 0
19th December	Mackay	Milk, name and address not on vehicle	1 0 0	0 6 0
1945—				
8th January	Mackay	Food, exposed on vehicle	1 0 0	1 7 0
8th January	Mackay	Food, name and address not on vehicle	0 10 0	1 7 0
19th January	Rockhampton	Milk, adulterated	5 0 0	1 7 0
19th January	Rockhampton	Milk, adulterated	20 0 0	1 7 0
19th January	Rockhampton	Milk, water carried on vehicle	1 0 0	0 6 0
19th January	Rockhampton	Paint, adulterated	8 0 0	3 9 0
19th January	Rockhampton	Paint, excess of lead content	5 0 0	1 7 0
23rd January	Rockhampton	Milk, water carried on vehicle	5 0 0	2 8 0
13th February	Gladstone	Milk, adulterated	20 0 0	1 7 0
23rd February	Rockhampton	Paint, excess of lead content	5 0 0	1 7 0
3rd April	Rockhampton	Milk, adulterated	9 0 0	1 7 0
20th April	Rockhampton	Gin, adulterated	7 0 0	1 7 0
20th April	Rockhampton	Whisky, adulterated	15 0 0	1 7 0
20th April	Rockhampton	Brandy, adulterated	15 0 0	1 7 0
20th April	Rockhampton	Gin, adulterated	15 0 0	1 7 0
23rd May	Mount Morgan	Bread, short weight	14 14 0	0 6 0
23rd May	Mount Morgan	Bread, short weight	6 0 0	0 6 0
26th June	Rockhampton	Milk, adulterated	13 0 0	1 7 0
Totals			£341 4 0	£40 10 0
Grand Total			£381 14 0	

TOWNSVILLE SUB-OFFICE.

General supervision has been exercised over the manufacture, distribution and handling for sale of foods within the Townsville district throughout the year, and in most instances proprietors and others responsible were eager to co-operate with the activities of the department.

One cafe proprietor, who ignored instructions issued, was proceeded against for failing to maintain his premises and equipment in a clean condition; a conviction was obtained and a fine of £5, with £2 8s. costs, was inflicted by the magistrate.

Milk Supply.—The Atherton Tableland Co-operative Butter Association Ltd. erected a milk depot in Townsville during the year under review, in which facilities for cold storage, milk bottling, bottle washing, and vending are provided. The milk is pasteurised at the factory in Malanda and transported by rail direct to the depot where large quantities are bottled, and the remainder delivered in bulk to military units, milk bars, cafes, &c. Several portions of the city are now being serviced with a bottled milk delivery from door to door. Approximately 17,000 gallons of milk per week are handled in the above manner.

In addition milk has been supplied in bulk from Ravenshoe, Silkwood, and latterly from Mackay to other wholesalers, whilst local dairymen still endeavour to carry on under very severe hardships, such as staff shortages, transport and equipment shortages, and lack of sufficient fodder.

Milk Samples.—A total of 36 official samples were purchased during the year, within the city area, 20 being from such places as milk bars and cafes, and 16 from street vendors.

The Government Analyst reported four of these samples to be adulterated with added water to the extent of 12.9 per cent., 5.5 per cent., 5.5 per cent., and 8 per cent. The three former relate to milk bar samples, and the latter was from a street vendor.

Legal proceedings were instituted in each case, but the cases will not come before the court before the close of the financial year.

Hotels.—As a result of a complaint, an official sample of wine was obtained from a hotel and submitted to the Analyst, who reported the sample to be in conformity with the standard.

Twelve samples of beer were also submitted for analysis and were found to comply with the standard.

Hotel inspections were carried out periodically, and conditions found to be satisfactory.

Cafes.—Inspections of cafes, refreshment-rooms, dining-rooms, &c., were frequently made and improved conditions now prevail as there are fewer rush periods and the available staffs are more able to cope with their duties than was the case in the previous two years.

Some proprietors have experienced difficulty in replacing equipment essential to their particular class of business, but this factor cannot be overcome until conditions improve.

Bakehouses.—Bread weighing and inspections of premises have also received attention. Delivery vehicles and repairs required to premises are two items that will have to receive consideration in the near future as both are below standard at the moment. As in other cases, improvement is expected in these matters at an early date.

Warehouses, General Stores, &c.—Strict supervision has also been exercised under this heading, and attention given to all classes of food handled.

Details of unsound food withdrawn from sale and destroyed owing to their being unfit for human consumption, are as follows:—

- Coffee, 6 packets.
- Custard powder, 1 packet.
- Fruit flummery, 14 packets.
- Headache powders, 191 packets.
- Honey, 12 tins.
- Margarine, 3 tons 18 cwt. 3 qr.
- Milk (raw), 1,100 gallons.
- Pork and beans, 1,362 tins.
- Sultanas, 9 cases.

Other Inspections.—Special visits were made to Ayr, Charters Towers, Home Hill and Hughenden for the purpose of investigating the milk supply at those towns. A total of seventeen samples were submitted to the Government Analyst, who reported that one sample from Charters Towers was adulterated with added water to the extent of 6.4 per cent., whilst three from Hughenden contained added water to the extent of 5.5 per cent., 4.4 per cent., and 43.9 per cent.

Legal proceedings were instituted against all the vendors and convictions obtained. In the Charters Towers case the fine imposed was £6 with £1 7s. costs of court, and in the Hughenden cases defendants were fined £6, £5 and £20 respectively, plus £1 7s. costs of court in each instance. Total fines and costs, £42 8s.

Breadweighing in the town of Ingham was carried out and two manufacturers were found to have shortweight bread within their premises at the time of the inspection.

Legal proceedings followed, and for a deficiency of 120½ oz. in 72 loaves weighed, one defendant was convicted and fined £15 14s. with 6s. costs of court, and for a deficiency of 4½ oz. in 60 loaves weighed, the second defendant was convicted and fined £10 7s. 6d. with 6s. costs of court. Both defendants had two previous convictions for a similar offence. Total fines and costs, £25 13s. 6d.

CAIRNS SUB-OFFICE.

The passing stages of the year under review are giving some slight indication of a return to normality, but, unfortunately, abnormal conditions have prevailed for the greater part of the year and conditions for the proper implementing of food regulations have been difficult. Nevertheless, a reasonably fair standard has been maintained and much useful work and improvement effected.

Milk Supply.—In regard to milk pasteurisation, some applications have been lodged for franchises covering the pasteurisation of milk in certain towns in the area and the opportunity is being taken to start these premises along the proper lines. There has been a gradual improvement in milk supplies generally over the past few years.

Samples.—During the year twenty official samples were submitted for analysis, including milks, alcoholic liquors and cabbage. As a result of the analysis of the cabbage, a vegetable-grower from Tully was fined £10 and ordered to pay £1 7s. costs for selling a vegetable adhering to which was a poisonous substance.

Thirty-four unofficial check samples were also submitted for analysis, and these included aerated waters, beer, bread, hair, ice cream, milks, sugar and water. The appropriate action was taken as a result of these analyses.

Foodstuffs destroyed by mutual consent during the year totalled 11 cwt. 1 qr. 7 lb.

Inspection Visits.—Towns visited during the year, with the number of times visited in parentheses after the name, are as follows:—Almaden, Atherton (3), Babinda (4), Cardwell (3), Chillagoe (1), Cowley (1), Edmonton (4), Elnasleigh (1), El Arish (1), Euramo (1), Feluga (1), Fishery Falls (1), Forsyth (1), Freshwater (3), Garradunga (2), Georgetown (1), Gordonvale (4), Green Island (3), Hambleton (1), Herberton (2), Innisfail (13), Innot Hot Springs (1), Jungara (1), Kairi (1), Kennedy (1), Kuranda (2), Lower Tully (1), Malanda (5), Mareeba (4), Mena Creek (2), Midgenoo (1), Millaa Millaa (3), Mona Mona (2), Moresby (1), Mossman (4), Mt. Garnet (1), Mt. Surprise (1), Mourilyan (3), Port Douglas (3), Ravenshoe (3), Redlynch (3), Silkwood (3), Silky Oak (1), South Johnstone (2), Stratford (2), Tolga (1), Tully (5), Woree (1), Yorkies Knob (1), and Yungaburra (1).

These visits necessitated the travelling of 6,334 miles.

The provision of official motor transport will be of inestimable value in the carrying out of both special and routine inspections and more effective and efficient work must accrue from such transport.

SECTION OF SOCIAL SERVICES.

The Welfare Officer (Mrs. V. Wills) reports that in the year under review she interviewed 310 girls who had been detained in the Venereal Isolation Hospital, with a view to ensuring positions for them, as far as possible, on their discharge from hospital.

Layettees were obtained for such as were pregnant, and in five instances homes secured for girls and their babies.

Much private business was effected for the inmates of the institution in the way of collecting military allotments, paying rents, obtaining identity cards, ration books and pre-natal ration books, and contacting mothers and relatives with a view to persuading them to take the girls home on release.

Materials and fancy work were purchased so that the patients could employ their time usefully.

From time to time they were escorted to the Brisbane General Hospital and Brisbane Dental Hospital.

Our officer was also engaged in visiting the homes of the sick and aged at various times; conveying children from the School Health Services Branch to the Children's Hospital and to homes under the direction of the Director of Maternal and Child Welfare; assisting soldiers' wives whose husbands were in detention camps; obtaining and filling in forms for widows' and invalid pensions; and getting warm bedding for the aged.

The numerous letters of thanks received serve to stress the good work carried out by our officer and of the need for her services.

LEGISLATION.

On 14th September, 1944, His Excellency the Governor, with the advice of the Executive Council, directed that tetanus be declared an infectious disease under the Health Acts in respect of the whole of the State of Queensland. Proclamation appeared in the "Government Gazette" on 16th idem.

On 22nd March, 1945 ("Government Gazette," 24th idem), notification published in the "Government Gazette" of 23rd January, 1941, declaring the disease known as poliomyelitis (acute anterior) during a period of twenty-one days from the date of onset thereof to be an infectious disease, was rescinded and a declaration made on the same day in the same "Gazette" declaring such disease during a period of fourteen days from the date of onset to be an infectious disease.

In the "Government Gazette" of 20th January, 1945, a regulation amending "The Sanitary Conveniences and Night-soil Disposal Regulations, 1941," was published, its tenor being to forbid the manufacture, sale or supplying of any pan enclosure or pan cabinet unless it complied with the requirements of Regulation 19 of the said regulations.

In the "Government Gazette" of 20th January, 1945, a Act to amend "The Health Acts, 1937 to 1943," was published, its principal purpose being to provide for the constitution of the Queensland Health Education Council, to make provision in respect of the Queensland Radium Institute, and to impose upon the Hospitals Board the duty and responsibility of providing Isolation Hospitals for the isolation and treatment of cases of infectious disease. This measure relieved the Local Authorities of the duty and responsibility of providing Isolation Hospitals.

A new section—131A—was inserted after section 131 in the principal Act, providing that upon the complaint on oath before any justice of the peace by any member of the Police Force that such member believes that any dangerous drug or cyanide of potassium or any poisonous compound of cyanogen is in possession of any person, in or upon any premises or place in contravention of the Act, such justice of the peace may grant a warrant to the member (with or without assistance) to enter, by force if necessary, any such premises or place and search all persons found therein or thereon.

In November, 1944, the Cabinet of the Commonwealth Government decided to set up a committee to make a national survey of the health of coal miners. Sir Raphael Cilento was appointed chairman. In December the committee was to function in conjunction with the Board of Enquiry into the Coal Mining Industry, whose chairman is His Honour Mr. Justice C. G. W. Davidson. After preliminary meetings in December and January, the National Survey Committee on the Health of Coal Miners commenced its task on 8th February, 1945, and its report was submitted to the Honourable the Acting Prime Minister on 30th April, 1945.

During this period—February to April—Sir Raphael was absent from Queensland, and immediately on presentation of the report he left to take up work for the United Nations Relief and Rehabilitation Administration, having obtained special leave from the Queensland Government to do so.

STAFF.

My thanks are tendered to the various members of the staff for their loyal support during the year, and to the members of other Government Departments, particularly those of the Commissioner of Police. The co-operation of local authorities throughout the State is appreciated also.

Lieutenant-Colonel A. Fryberg, M.B., B.S. (Melb.), D.P.H., D.T.M. (Syd.), resumed duty as State Health Officer on 5th March, 1945, after an absence from the Department of four years and seven months, with the A.I.F., the greater portion of which was spent overseas, and during which he received the M.B.E., and was mentioned in despatches.

The continued illness of Dr. D. W. Johnson is regretted, and it is trusted that he will soon be sufficiently recovered to resume his position in the Department.

JOHN COFFEY,

Deputy Director-General of Health and Medical Services.
30th June, 1945.

Appendix A.

WEIL'S DISEASE CAMPAIGN.

General.—During the year, operations extended over the following mill areas:—Goondi, Mourilyan, South Johnstone, Babinda, Mulgrave, Tully, Victoria, and Macknade, while special visits of inspection were made to Mossman mill area during the period mentioned.

The reduced staff of four officers, including the inspector in charge, which has functioned during the two preceding years, has been able to carry out all duties efficiently during the past twelve months.

Very extensive burning of cane was the general practice and was called for due to shortage of labour in field and factory. This resulted in a substantially greater output of cane per cutter per day.

It is noted that burning of cane before harvesting, previously sanctioned only when special circumstances warranted such action, is now commended by many farmers. Certainly cane-cutters will not take kindly to any reversion to the pre-war practice of cutting green cane.

Despite general burning, calls for cane inspection received from gangs were numerous, denoting appreciation of the Department's efforts for the protection of the cutters. Quite a number of requests to inspect cane and give a ruling were received from farmers indicating the development of a wider outlook.

Throughout the harvesting season a high degree of co-operation was received from mill and Pest Board officers generally, but particularly at Babinda, Mulgrave, and Hambleton, where special arrangements covering the provision of health burns by mill officers were most effective.

Reference to Table 1 of this report indicates that tonnage burned for "Health Risk" in these areas compares very favourably with other sections suggesting that co-operation of mill field officers, in addition to my own field inspection work, is at least as effective as individual effort by a health inspector receiving less co-operation.

I have to report however that the district secretary, Australian Workers' Union representing the cutters, voices his disapproval of the above arrangements, contending that burning for health reasons should only be authorised by the health inspector, and that results more favourable to his members would be secured by the efforts of a full-time inspector with headquarters at Gordonvale.

A decision to meet this request would require the appointment of an additional officer to control the areas in question.

Crops harvested were substantially in excess of the previous year, while climatic conditions permitted harvesting with a minimum of time loss.

Farm Inspection.—Inspection of farms was carried out in the various mill areas during the slack season from January to May, 1945.

Abnormal rainfall throughout the northern districts made many of the recommendations made by inspectors impossible of accomplishment, but where possible useful work resulted and many farms maintained a high degree of cleanliness. Complaints were received re shortage of good-quality galvanised wire, thus holding up the fencing off of waste ground for stock use, an effective measure for rat control continually being urged on farmers.

Rat Control.—Flooding of low-lying areas did not occur during the previous wet season, consequently the usual lodging of cane on river flats was at a minimum. This abnormal happening, together with dry weather from April onwards, prevented the development of conditions favourable to heavy rat infestation during the 1944 crushing season.

In addition, cane left "standover" from the previous year stood at a very low figure, thus tending to limit the rat population.

Poisoning and other control measures were carried out by the various Pest Boards who were, however, handicapped by delays in obtaining poison supplies and shortages inseparable from war time.

Zinc sulphide coated wheat was used extensively but is not considered so effective as thallium sulphate, now unfortunately unobtainable.

Bread and phosphorus baits continue in use at Mourilyan and Babinda with excellent results during dry periods, but preparation of this bait entails time and labour which most Pest Boards cannot now provide. Field tests with the new poison 1080 are indeed promising and the outcome of laboratory tests now in progress may lead to a recommendation for extensive use of this poison.

Local authorities continue to make rat poison baits available to occupiers, and in most instances baits are laid periodically in likely sections of townships.

Table 3 attached hereto indicates the number and variety of rat poison baits distributed in their areas by the various Pest Boards.

A recent survey of Mossman mill area disclosed very light infestation only in selected likely localities and later heavy infestation is not expected. This area is burned out annually, and even in normal times practically all cane is burned before the harvest.

Generally, fairly heavy infestation is expected during the coming months in those sections of all mill areas adjacent to rivers where repeated flooding early in the present year prevented effective work being done in the direction of rat control. In several areas the rainfall during the first quarter of the year reached the average annual precipitation.

Crop estimates are higher than last year, the labour position in field and mill has improved considerably, and there is every reason to expect harmonious and expeditious handling of this year's harvest.

TABLE 1.

Mill Area.	Area Harvested.	Tons Crushed.	Area Burned.	Tons Burned.	Total Health Risk Burn.	
					Tons.	Acres.
Johnstone ..	10,023	177,107	9,710	169,000	12,832	725
Goondi ..	6,953	166,437	6,697	159,199	18,203	703
Mourilyan ..	7,727	137,542	7,661	135,552	4,218	279
Mulgrave ..	10,736	179,098	9,740	162,622	13,657	825
Babinda ..	9,200	199,480	8,500	179,838	13,948	635
Tully ..	11,193	218,645	10,860	211,770	5,978	429
Victoria ..	10,785	248,620	10,284	225,453	5,424	612
Macknade ..	8,845	206,602	7,812	195,348	6,282	714
Hambledon ..	7,270	129,901	5,923	93,397	9,520	1,252
Totals ..	82,732	1,663,432	77,187	1,532,179	90,062	6,174

TABLE 2.

Mill Area.	Average Number of Cutters.	Number of Gangs.	Area of S. over Cane.	Duration of Crushing.
			Acres.	Weeks.
Johnstone ..	260	50	29.9	28½
Goondi ..	186	29	Nil	29
Mourilyan ..	243	44	3	24
Mulgrave ..	260	60	Nil	23½
Babinda ..	250	65	8	26
Tully ..	393	60	15	27
Victoria ..	390	56	Nil	27
Macknade ..	281	50	Nil	26½
Hambledon ..	300	37	Nil	22½
Totals ..	2,473	451	55.9	234

* Including 50 aboriginals.

TABLE 3.

RAT POISON BAITS DISTRIBUTED BY CANE PEST BOARDS DURING YEAR ENDING 30TH JUNE, 1945.

Mill Areas.	Thallium (Wheat.)	Phosphorus (Bread.)	Strychnine (Wheat.)	Arsenic (Wheat.)	Zinc Phosphide.	Other.
Johnstone ..	..	..	720,000	..	..	Oz. Phos.
Goondi ..	159,960	..	157,696	..	37,944	190
Mourilyan ..	54,000	14,000,000	..	..	27,500	..
Babinda ..	..	1,896,000	..	..	..	..
Mulgrave ..	82,500	564,000	..	..	..	..
Tully ..	336,143	..	..	..	..	..
Victoria ..	..	..	..	..	768,000	..
Macknade ..	244,656	..	..	..	1,045,216	..
Hambledon ..	125,440	..	..	85,760	842,240	..
Mossman ..	..	..	..	..	574,000	..
Totals ..	1,002,699	16,460,000	877,696	85,760	3,294,900	190

TABLE 4.

LEPTOSPIROSIS CASES NOTIFIED.

District.	Cane-cutters.	Labourers.	British.	Italian.	Spanish.
Innisfail ..	2	1	1	1	1
Tully ..	0	0	0	0	0
Ingham ..	0	0	0	0	0
Babinda ..	0	0	0	0	0
Gordonvale ..	1	0	1	0	0
Cairns ..	0	0	0	0	0
Totals ..	3	1	2	1	1

Sanitation.

Johnstone Shire.

					Innisfail Area.
Number of places visited ..	..	..	..	..	190
Number of sanitary conveniences inspected ..	..	..	..	..	179
No action required ..	..	..	..	..	103
Number of places without sanitary conveniences ..	..	..	..	..	1
Number of septic tanks ..	..	..	..	..	11

Cardwell Shire.

					Tully Area.
Number of places visited ..	..	..	..	..	7
Number of sanitary conveniences inspected ..	..	..	..	..	14
No action required ..	..	..	..	..	12
Number of defective privies ..	..	..	..	..	2

Hinchinbrook Shire.

					Ingham Area.
Number of places visited ..	..	..	..	..	58
Number of sanitary conveniences inspected ..	..	..	..	..	58
No action required ..	..	..	..	..	19
Number of defective privies ..	..	..	..	..	37

D. Class—Regulation cabinet.
G. Class—Below standard, but not allowing soil pollution.
E. Class—Allowing soil pollution.
F. Class—No sanitary convenience.

Johnstone Shire.

First inspection—				
D. Class.	G. Class.	E. Class.	F. Class.	
72	66	60	1	

Cardwell Shire.

First inspection—				
D. Class.	G. Class.	E. Class.	F. Class.	
12	0	2	0	

Hinchinbrook Shire.

First inspection—				
D. Class.	G. Class.	E. Class.	F. Class.	
19	11	27	1	

Appendix B.

HOOKWORM CAMPAIGN.

General.—The staff on field hookworm control at the beginning of July, 1944, comprised a microscopist in charge and two residential sisters at Cairns. Sister Garvey terminated her services with the Hookworm Campaign on 31st January, 1945.

Mr. J. Bain was appointed as temporary inspector to the Hookworm Campaign and commenced duties with his headquarters in Innisfail on 18th January, 1945. The headquarters of Inspector Bain were transferred from Innisfail to Ingham on 7th June, 1945.

During the period under review school survey work was carried out in the Cairns, Innisfail, Tully, and Ingham areas.

In the Innisfail and Ingham areas Inspector Bain carried out school survey, intensive survey among coloured families, together with sanitary inspections.

Lists of all sanitary inspections made by the inspector were forwarded to Brisbane at the end of each month.

The Microscopist examined all specimens and carried out mass treatments of aboriginals at Mossman, Daintree, Innisfail, Tully, and Ingham areas.

With the co-operation of Mr. W. H. Kelly, State Government inspector, Mossman, Daintree, and Mona Mona missions were visited by car. Also with the co-operation of Mr. Rodger, Weil's Disease inspector, it was possible to visit Innisfail and Tully areas and carry out this most important work among the aboriginals.

If motor transport could be given to the Hookworm Campaign, all aboriginals at missions and camps between Ingham and Daintree could be visited at least once a year and mass treated for hookworm disease.

From all areas, 2,692 specimens were examined, 258 of these being positive for hookworm, and of the positives found 104 were coloured people. Also 225 specimens examined showed different types of other parasitic worms, namely—*Oxyuris vermicularis*, *Trichuris trichiura*, *Hymenolepis nana*, *Taenia saginata* and *Trichostrongylus orientalis*.

Notices were sent out to all these hosts, advising them of the type of worm they were harbouring and to seek medical attention.

A fair number of specimens have been received for examination from the Mossman, Babinda and Tully Hospitals.

It was necessary to place 20 heavily-infested hookworm hosts into different hospitals for treatment and to be kept under observation.

Of the 149 hookworm hosts re-examined after treatment, 85 showed that they had been treated to a cure.

A close watch is being kept on the sanitation at the homes of positive hookworm hosts so as to prevent the spreading of hookworm disease.

From the Innisfail and Ingham areas, 13 positive hookworm specimens were cultured and all showed free living larvae of the *Ancylostoma* type.

The school sister prepared all treatments and notices, visited schools, carried out general school (medical) work, and assisted with the preparation of specimens when a great number were on hand.

During the last six months the wet weather in the hookworm belt has been very bad and has held up field work to a certain extent.

Medical practitioners, school teachers, and the local health inspectors have co-operated wholeheartedly and have given every assistance to the campaign in its important work.

Name.	Census.	Specimens.					Treatments.			
		Received.	Examined.	Re-examined.	Positive.		Notices.	Delivered.	Posted.	Cured.
					Hook-worm.	Others.				
Cairns area—										
Schools	235	239	234	5	3	18	18	3	0	4
Mossman area—										
Schools	0	1	0	1	1	0	0	0	1	0
Innisfail area—										
Schools	356	417	368	49	42	38	38	6	36	30
Tully area—										
Schools	615	683	646	37	51	69	69	12	39	25
Ingham area—										
Schools	377	386	383	3	16	39	79	21	0	2
School total	1,583	1,726	1,631	95	113	164	204	42	76	61
Other hosts—										
Cairns area	0	9	0	9	3	0	0	2	1	6
Mossman area	0	6	0	6	4	0	0	2	2	2
Innisfail area	0	6	0	6	2	0	0	1	1	4
Other hosts total ..	0	21	0	21	9	0	0	5	4	12
Aborigines—										
Cairns area	130	157	130	27	68	0	0	431	4	8
Mossman area	6	6	6	0	0	0	0	126	0	0
Innisfail area	149	147	141	6	19	14	14	29	0	4
Tully area	1	1	1	0	1	0	0	90	0	0
Ingham area	79	77	77	0	16	20	20	16	0	0
Aborigines total ..	365	388	355	33	104	34	34	683	4	12
Miscellaneous—										
Cairns area	95	95	95	0	9	6	6	6	3	0
Mossman area	66	66	66	0	5	5	5	1	14	0
Innisfail area	301	289	289	0	12	12	12	10	2	0
Tully area	103	98	98	0	6	4	4	2	2	0
Ingham area	9	9	9	0	0	0	0	0	0	0
Miscellaneous total ..	574	557	557	0	32	27	27	19	21	0
All areas—										
Cairns area	460	500	459	41	83	24	24	442	8	18
Mossman area	72	79	72	7	10	5	5	129	17	2
Innisfail area	806	859	798	61	75	64	64	37	39	38
Tully area	719	782	745	37	58	73	73	104	41	25
Ingham area	465	472	469	3	32	59	59	37	0	2
Grand total	2,522	2,692	2,543	149	258	225	265	749	105	85

Treated in Hospital—Cairns 3, Mossman 4, Babinda 5, Tully 2, Ingham 6.

Hookworm Cultures.

Innisfail area	3
Ingham area	10
	13

Ancylostoma.

Appendix C.

REPORT OF INDUSTRIAL HYGIENE FOR THE YEAR 1944-45.

Remarks made in the record on industrial hygiene in the annual report of last year continue to apply in most instances, and staff difficulties are still occurring. In some instances the opening of a field of inquiry reveals far wider problems than can be dealt with, and shows many incidental problems which have to be solved before the main inquiry can be tackled. In the majority of cases where complaint has been made, investigation has been undertaken to render, as it were, "first aid."

Industrial Lead.—Lead and lead compounds are still used in many industrial processes, and though some relief has been obtained by the release of zinc for use in paints, the position is probably still poor, though we are unable to carry out sufficient investigations to confirm this. This is an impression, however, which we have received from examining certain industries using lead, and although many steps have been taken and recommendations made in the past, war conditions prevent much renewal of equipment to alleviate dust fumes. Substitutes in many cases have not been obtainable, nor can unsuitable buildings be altered. The detection of the hazard is still very difficult. The most certain method appears to be the estimation of lead in air, but as this has to be carried out over long periods and under all variety of conditions, we have not been able to do this in more than a few instances.

The major difficulty encountered in the diagnosis of lead poisoning has been the tendency on the part of patients, and often on the part of busy general practitioners, to consider—in an occupation in which lead is involved, however light the risk that exists may be—that that occupation is *prima facie* evidence that the symptoms of which the patients complain are due to lead, until that has been excluded as a cause. While this may be so in many instances, one feels that the majority of complaints arise from either—

- (a) Fatigue due to long hours and/or bad atmospheric conditions, particularly in summer; or
- (b) Organic disease.

Two hundred and seven men have been examined by this Department during the year by full clinical, occupational history and urinary lead estimations; 30 have been examined by urinary lead estimations only. Upon the results of these the previous remarks are based.

One point noticed particularly was that where one person in an industry is diagnosed as suffering from lead intoxication, a minor panic occurs among the workmates, and this results in a large number thinking that they are suffering from lead poisoning. This, while causing a strain on the department, is not altogether a bad thing in that people having symptoms of organic disease do come up to be examined, whereas had there been no panic, the majority would have gone on for years untreated.

A series of re-examinations of a group of carpenters using white lead under conditions in which they would be fully protected by proper personal hygiene, was carried out by means of supervised voiding of urine for urinary lead estimations. Examination of these specimens, which averaged in volume from 200 c.c. to 500 c.c., indicates that no reliance can be placed on a single test and little reliance on three tests by our present methods. We are further hampered in this work in not having a reasonable series of results for people in Queensland not exposed to lead.

The shipbuilding industry has been made the subject of several field investigations, due to the large number of men presenting themselves from there in a state verging on the panic referred to above. A definite lead hazard for welders working in unventilated confined spaces was detected. The shipbuilding industry was made the subject of a conference between the Government, representatives of the employers, and of the employees towards the end of 1944, and it was resolved that the question of substitutes for lead in ship-painting be referred to the Commonwealth Government. It was pointed out at the conference that ventilation was the key to the whole problem, and that lead was only a part of the trouble. This is further shown by the lack of complaint during the colder months of the year. Due to their structure, ventilation of ships under construction represents a major problem in regard to the amount of equipment

required; and, furthermore, due to the shifting of centres of work throughout the ship, the men must be able to transport and set up ventilation equipment intelligently.

Certain work in connection with air conditions in ships under construction and repair was intended, but staff shortage has prevented this work.

On account of the number of cases presented to the Department, a rapid survey of the battery industry in Brisbane was made. All work places in Brisbane are on a small scale, the largest employing about twenty workers, and the usual being from two to four workers in which the employer is included. From our impressions, these places were classified as "good," "bad," or "fair" and the classification was compared with the number of people who had received compensation in the battery industry from various firms. A remarkable agreement was noted between the two groupings. This survey is still incomplete, but it was sufficient to show that at that time (early 1945) few precautions were taken and that in construction and assembly works conditions were hazardous. We are pleased to note that steps have been taken on our advice by some firms to instal good equipment, and we hope that these will serve as models for other manufacturers.

The construction of pontoons at an Ipswich workshop was kept under observation, white lead being used for painting and for stopping seams. This had been the subject of investigation in the previous year. After exhaustive testing, conditions were found to be satisfactory. This work illustrated well the importance of personal hygiene in the control of hazards from such a source.

Education of employers and employees has been undertaken by means of a pamphlet, in which the sources of danger are pointed out and the extent to which employers and employees can protect themselves are shown. It is gratifying to note that employers are also more conscious of the fact that what was good enough in the past is not good enough now. Our only regret has been that we have been unable to help them as much as we would like to do.

Silicosis.—As the result of reports from overseas on the incidence of silicosis in foundries, and representations by the unions concerned in foundry work in Queensland, the incidence of silicosis in foundries was made the subject of a preliminary examination, 100 foundry workers of three or more years' experience being tested. A brief clinical examination was made and the occupational history obtained. The men were then examined radiologically and 5 per cent. were found to be suffering from silicosis. Only one case was very advanced. A conference was then called of all interested parties under the chairmanship of the Minister, where it was resolved to investigate the position further. Owing to staff shortage and shortage of X-ray film, the objectives of these resolutions cannot be realised as yet, and an abbreviated survey to cover those men who are probably affected in order to prevent further exposure, is to be carried out.

A preliminary survey of certain Brisbane quarries was carried out for the purpose of appraising this Department of the conditions obtaining, and it is felt that this industry is worthy of further investigation.

Dermatitis.—This still continues to be a nuisance and has been investigated in connection with cement and benzol. In two other places scabies and tinea were also investigated and advice given.

Head lice are occasionally a cause of worry to employers of female labour, and steps to eradicate the trouble have been taken successfully in the places where complaint has been made. It is suspected, however, that this complaint is more widespread than would appear from the representations made to the Department.

Incidental Investigations.—The use of ammonium sulphide in hairdressing salons from the point of view of risk to operatives, was investigated, and no hazard was detected in the places examined.

The use of radioactive painting in dial painting is under constant review.

Other toxins investigated were lead arsenate in connection with handling and zinc phosphide in connection with rat baits.

The dust nuisance in peanut silos was again investigated, and the fact of its being no more than a nuisance was confirmed. The problem of dust eradication has not yet been solved, but the company concerned has hopes that a solution will be found in the near future.

The disposal of waste from a fertiliser factory was investigated also, and certain recommendations made.

Apparatus.—Part of the equipment ordered in the previous year for air analyses has been delivered. The Government Chemical Laboratory has continued to be of great assistance in taking analyses of samples, and in suggestions with regard to the steps to be taken to eliminate hazards.

Appendix D.

GOVERNMENT CHEMICAL LABORATORY.

Government Analyst and Chief Inspector of Explosives:
L. A. Meston, F.A.C.I.

The year's work both in regard to volume and number of samples is the largest yet recorded in the history of the laboratory. The staff generally has worked under pressure that is fully justifiable in war time. During peace-time such practice would not be desirable because officers are afforded but scant time to keep in touch with scientific literature and the many advances in chemical science, nor is the opportunity afforded for special investigations which are called for in a laboratory of this character. Excessive routine is not inspiring nor is it conducive to display of originality and initiative in professional work.

The table following compares the number of samples examined with that of last year, and with the previous record number in 1936-1937:—

TABLE I.

	Number of Samples Examined.		
	1936-37.	1943-44.	1944-45.
Commonwealth Customs	2,149	1,954	1,622
Commonwealth War Services ..	..	3,877	4,460
Allied War Services	..	1,134	732
Health and Home Affairs	8,182	3,520	4,826
Geological Survey and Mines ..	1,741	478	369
Irrigation and Water Supply ..	412	571	769
Main Roads Commission	295	393	432
Police	363	364	250
Postmaster (Explosives)	1,193	1,079	1,104
Railway	125	59	77
State Stores Board	437	67	58
Other Departments (8 to 10) ..	406	144	347
Public	118	465	388
	15,421	14,105	15,434

SECTION I.

Department of Health and Home Affairs and Railway Department.

Analysts.—A. S. Hurwood, B.Sc., A.R.I.C., M. H. Gabriel, B.Sc. (8 months), R. S. Potter, Assistant Analyst.

Temporary Analysts.—L. F. Gunnis, D.I.C. (9 months), G. Lahey, B.Sc.

The number and source of samples examined by this section were as follows:—

Department.	Number of Samples.
Health and Home Affairs	3,420
Commerce and Agriculture (Commonwealth) ..	2,581
Inspector of Army Supplies	678
Other Commonwealth War Services	295
Railway	77
Miscellaneous	28
	7,079

TABLE II.

Summary of Samples Examined for the Department of Health and Home Affairs

Nature of Sample.	Number of Samples.	Passed.	Rejected.
Beverage or cordial	38	31	7
Bread	30	10	20
Cereal	23	21	2
Condiment	24	9	15
Disinfectant	21	11	10
Drug or medicine	38	17	21
Fat (edible)	15	9	6
Flock	15	2	13
Fruit	41	11	30
Jam or jelly	13	3	10
Meat	38	8	30
Milk	2,444	1,970	474
Milk product	49	30	19
Paint	348	249	99
Spirituous liquor	55	42	13
Tobacco	16	13	3
Toilet preparation	10	7	3
Vegetable	48	15	33
Miscellaneous	151	100	51
	3,420	2,558	862
Industrial hygiene	60		
Biochemical and clinical specimens ..	1,222		
Water	124		
	4,826		

The rejected samples include samples not conforming with prescribed standards, falsely described, or incorrectly labelled. "Falsely described" implies exaggerated or false claims in relation to a food, drug, or medicine.

TABLE III.

Details of Legal Samples taken by Inspectors in accordance with the Provisions of the Health Acts.

Nature of Sample.	Number of Samples.	Passed.	Failed.
Ice cream	13	6	7
Milk	2,099	1,676	423
Paint	10	4	6
Spirituous liquor	15	1	14
Miscellaneous	11	3	8
	2,148	1,690	458

TABLE IV.

Particulars of Legal Samples of Milk.

Place.	Number of Samples.	Passed the Standard.	Below the Standard in Fat.	Below the Standard in total Solids and/or Solids not Fat.	Watered Samples. (Per Cent.)
Greater Brisbane Area	1,666	1,353	48	217	48
Bundaberg	18	10	1	7	..
Gympie	11	7	1	2	1
Mackay	24	18	4	2	..
Maryborough	26	21	..	2	3
Rockhampton	135	92	15	19	9
Toowoomba	97	86	1	..	10
Townsville	36	28	1	3	4
Warwick	14	13	1	..	..
Yeppoon	21	15	5	1	..
Other Places (11)	51	33	2	8	8
	2,099	1,676	79	261	83

TABLE V.

Summary of Table IV.

	Percentage of Total Samples.
Adulterated with water	3.95
Deficient in fat only	37.6
Below the standard in total solids and/or solids not fat	12.44
Passed the standard	79.85
	100.00

TABLE VI.

Milk Position Compared with Previous Years.

Year.	Number of Legal Samples.	Deficient in Fat. (Per Cent.)	Watered Samples. (Per Cent.)	Added Water. (Per Cent.)
1940-41	2,877	1.7	3.6	10
1941-42	2,738	2.0	3.5	11
1942-43	1,950	1.9	4.4	11
1943-44	2,005	2.7	4.5	11
1944-45	2,099	3.7	3.9	12

The proportion of watered samples, 3.9 per cent., is slightly below that of the two previous years, but it is still much too high. The number, 261, of naturally poor milks which failed to conform with the low standard prescribed for milk is also unsatisfactory. There were also too many milks below the standard in fat. The visible dirt in the great majority of the samples did not exceed two parts of moist dirt in 100,000 parts by volume of milk.

Calculation of added water in milk from the freezing point.

The Queensland Health Acts prescribe that when a person is convicted of selling milk adulterated with water, the penalty imposed shall not be less than £1 for each 1 per centum of added water up to the maximum penalty (£50) permitted.

Because of this mode of fining, which has been in force for many years, the commonly adopted method of calculating the added water by simple proportion, namely:—

$$W = \frac{T - T'}{T}$$

where W is the proportion of added water, T the freezing point of normal milk, and T' the freezing point of the sample,

is not used by this laboratory as it records from 1 to 2 per cent. more water than was added. Hence, the more precise formula—

$$\text{Added water by weight} = \frac{T - T'}{T} \times (100 - \text{Total Solids})$$

is employed. It is obviously simple to convert weight to volume in which terms it should be reported.

Bread (30 samples).—Eight samples were deficient in the proportion of whole-meal flour required to be present, seven were deteriorated when received, three were infected with "ropiness," and two contained objectionable animal material. Many complaints have been received during the last two years in regard to the quality of bread from some Brisbane bakeries. The Australian Commonwealth States and Great Britain limit the water in the crumb of bread to 45 per cent., which proportion is never exceeded in white bread in Brisbane.

The United States of America prescribes a maximum of 38 per cent. based on the entire loaf, which is equivalent to 45 per cent. in the crumb.

More than 45 per cent. of water in bread is visually evident. Until two years ago, Queensland bakeries had at their disposal the best bread flour in Australia.

Flour prepared from the strong or hard Queensland wheats permits of the incorporation of more water than weak or soft flour in the manufacture of bread.

The following are comparative percentages for water based on the entire loaf:—

	Hard-wheat Flour.	Soft-wheat Flour.
Bread from entire wheat flour ..	41.0	39.5
Bread from white flour	38.8	36.9

Wholenmeal bread usually contains about 2 per cent. more water than white bread.

The average composition of Queensland white flour in the immediate pre-war years was—

	Per Cent.
Protein	12.20
Carbohydrate	74.10
Ether extract (fat)	1.24
Crude fibre	0.18
Ash	0.58
Moisture	11.70
	100.00
Wet gluten	36.5
Dry gluten	12.5

The gluten was of good quality.

The average wet gluten content of white flour at time of writing is 28.5 per cent. and it is not of good quality.

This great reduction in gluten is due to deterioration in some Queensland-grown wheats and to admixture of Queensland flour with a large proportion of inferior quality flour from other States.

This mixed flour is yielding only about 100 loaves to the sack, as against 105 for straight Queensland flour.

In normal times, the vast majority of the makers aimed at producing good bread and, while each liked to obtain a maximum number of loaves from his flour, this consideration was secondary to quality and no more water was added than was compatible with good quality.

Prescribing of Proprietary Medicines.—The prescribing of expensive proprietary medicines is a common practice. The pharmacist usually replaces the proprietary label with his own and in some instances places the medicine in a different container hence its original identity is not known to the purchaser.

While the prescribing of proprietary medicines may maintain the patient's faith in his medical practitioner it also augments the profit of the pharmacist. Since the advent of price fixing, however, such augmentation has been reduced. The British Pharmacopoeia—the vade-mecum of pharmacists—includes practically every drug required in medical practice and if these drugs were prescribed and dispensed in the usual manner they would generally cost less than when contained in a proprietary package.

Homeopathic Medicines.—As is common with homeopathic medicines, those submitted during the year consisted of milk sugar only. One preparation was being sold at the rate of £15 9s. per lb., whereas milk sugar of similar composition may be purchased retail at 2s. 4d. per lb. The substances said to have been added to the milk sugar, namely, calcium phosphate, potassium phosphate, magnesium phosphate, and calcium fluoride are contained in comparatively massive quantities in milk and other foodstuffs.

Two hundred tablets of one preparation (a month's course) contained no more mineral substance than one-third of a teaspoonful of milk. Further, milk includes almost every

mineral element found in the human body and in much greater proportion than in any of the homeopathic preparations examined by this laboratory.

In favour of homeopathy with its added traces of elements, the effect on the teeth of some children of one part of fluorine per million in their drinking water has been cited. The water, however, is taken at the rate of at least ten thousand grains a day, whereas the daily dose of one homeopathic medicine examined was six grains.

In the light of modern therapeutics, there would appear to be necessity for health administrations to define their attitude towards homeopathy. It has been said by one qualified observer that modern therapeutics has inherited from homeopathy the knowledge of the remarkable power the body possesses of healing itself, if given a chance.

Breast Shield.—One breast shield submitted consisted of thirty-two parts of lead and sixty-eight parts of tin. It yielded lead to breast milk, hence its use for the purpose intended was questioned. The vendor of the shield claimed that lead lactate is formed through the interaction of the milk and the lead in the shield and that this compound assists in the healing of the nipple. Be that as it may, the shield was reported as a potential hazard to the health of the infant.

Feeding Lantana to Stock.—A complaint from North Queensland that meat from cattle fed on lantana was found to be discoloured and malodorous was investigated. The meat submitted was too old when received by post to ascribe its condition to lantana feeding. It is well known to stockowners that lantana is poisonous to cattle and that it has no apparent ill effects on goats. Children are frequently made ill by eating the fruit of the lantana. Dermatitis and staggering gait are produced in cattle by the plant. It also induces inflammation of mucous membranes, producing a brick-red colour which has given rise to the name "Pink Nose." This disease appeared in Queensland in 1916 in the coastal districts from Cairns to Townsville. The fat of the meat from lantana-fed stock is a dirty reddish-yellow in colour, but there is no evidence known to the writer that the meat is rendered malodorous. Nevertheless, it would appear not to be of the nature, quality, or substance demanded by the purchaser.

ASCORBIC ACID (VITAMIN C) POTENCY OF QUEENSLAND-GROWN FRUITS.

Investigations were made during the year of the composition, including vitamin C content, of fruits as delivered at the canneries and fruit drink factories in Brisbane. Vitamin losses in processing, canning and storage were also determined.

TABLE VII.
International Units of Vitamin C per Pound of Juice.

	Orange.	Lemon.	Grape Fruit.
Maximum	7,200	4,500	4,080
Minimum	2,720	2,700	2,260
Mean	4,540	3,600	3,440

Smooth Leaf Pineapples.					
	Fresh Green.	Fresh Ripe.	Canned Juice.	Canned Cored Pieces.	Canned Choice Pines.
Maximum	2,450	2,670	1,340	870	1,480
Minimum	1,300	1,250	790	580	760
Mean	1,750	1,770	1,000	720	1,000

	Rough Leaf (Ripe).		Ripley Queen (Green).	
	Skin.	Juice.	Skin.	Juice.
Maximum	5,400	4,300	4,730	3,200
Minimum	3,800	2,600	3,970	4,670
Mean	4,650	3,670	4,460	3,880

The results generally are similar to those obtained in the United States of America from the same kinds of fruits.

Vitamin C Potency of *Tropaeolum majus*, commonly known as Nasturtium, or Indian Cress.

Two years ago this laboratory investigated and published the vitamin C potency of the leaves of this plant, and found them to range from 24,500 to 30,850 international units per pound. Recently, Sutherland (New Zealand) has published results from the same plant of from 18,140 to 42,200 units,

thus confirming the high Queensland figures. The true nasturtium, *N. officinale*, belongs to the order Cruciferae which includes the common water-cress which also has considerable antiscorbutic properties.

Vitamin Claims.

Evidence of a world made excessively vitamin-conscious by nutritional authorities and vendors of patent foods and medicines is the presence of vitamins in cosmetics and hair restorers. In 1941, the writer recommended to the Queensland Department of Health that the vitamin claims for foods and patent medicines should be restricted within the known knowledge on the subject or within scientific bounds, and that the Canadian regulations, which came into force on the 1st of January, 1941, governing the use of the word "vitamin" in labels and in connection with advertising material, should be adopted. We have since examined vitamin claims in the light of these regulations. In 1943, the Commonwealth National Health and Medical Research Council recommended "That steps be taken to require the manufacturers or distributors of foodstuffs for which claims are made that they are sources of vitamins, to indicate on the label and in all advertising material the quantity of each vitamin present per unit of weight either ounce or pound."

A similar recommendation was made in regard to drugs and medicinal preparations except that in the labelling of these materials declaration of the quantity of each vitamin present per dose was suggested.

Apparently these excellent recommendations have not been implemented by any Commonwealth State.

The grossly exaggerated claims made for some patent medicines would be very liable to delay or prevent sufferers from obtaining qualified medical advice.

Bedding Material (Flock).—Out of eighteen samples of bedding material examined, only two samples conformed with "The Bedding and Upholstery Regulations of 1943," which in part specify that such material shall contain not more than thirty parts of chlorine in every 100,000 parts by weight. The samples which failed to comply with this limit were new material containing up to 300 parts of chlorine. They were not condemned.

When opportunity offers the present incomplete regulations should be amended to include a limit for free and saline ammonia and a turbidity test to be made by washing a given weight of the material in a specified volume of water.

Paint.—Out of the 348 samples of paint submitted 99 samples contained more than 5 per cent. of soluble lead. The tolerance for soluble lead, 5 per cent., is considerable, and powdery paint containing this proportion is a definite hazard to a young child.

Insect Sprays.—The insect sprays submitted contained organic thioyanates and/or paradichlorobenzene and were of low efficiency. None contained D.D.T. or pyrethrum.

The miscellaneous samples examined included bricks, bread and butter, cement, cheese wrappers, dyes, flux, food colourings, icing sugar, kitchen utensils, metals and metal toys, milk cans, paper, pyrethrum, salt, soda ash, sodium fluoride, soil, spoons and sugar.

SECTION IA.

INDUSTRIAL HYGIENE.

We have to regret the loss of Mr. M. H. Gabriel's competent service to this section, he having been seconded to a State Social Service Fellowship in medicine. Mr. C. R. Lulham, who was also assigned to industrial hygiene investigations, was accorded a similar Fellowship last year. As it is virtually impossible to obtain competent analysts at the present, the work of the section was markedly restricted this year.

Already hard-pressed analysts in other sections have had to share the urgent examinations.

Investigations may be thus summarised—

- (i.) Visit to Mt. Morgan in connection with the use of diesel engines underground. It was found that under the ventilation conditions prevailing there was no carbon monoxide hazard.
- (ii.) Examination of conditions obtaining after an explosion which occurred on 1st February, 1945, at No. 3 Ebbw Vale Colliery, Woodend, Ipswich, involving the death of four miners. Mr. V. R. Cundith, B.Sc., a senior analyst and inspector of explosives, of this laboratory, gave evidence at the resulting inquiry.
- (iii.) Examination of conditions obtaining in the Howard coal mines.

- (iv.) Examination of conditions following an explosion in a sewer on Nudgee road, Brisbane.

Other hazards investigated were—

- (v.) Handling of a shipment of chlorosulphonic acid by waterside workers.
 (vi.) Use of welding flux at a large engineering works.
 (vii.) Welding over lead paint.
 (viii.) Dust at tannery, sawmills, foundries, quarries, peanut-silos, asbestos-cement sheet factory, sand-blasting cabinets, and in dead-wool sorting and electric welding in ships.
 (ix.) Petrol vapour at large petrol tank installation.
 (x.) Lead in battery plate manufacture.
 (xi.) Ammonia and ammonium and/or sodium sulphide in hair-waving salons.

The essential hygiene problems of industry are based on smoke, dust and fume. These problems come within the province of the engineer and analyst; the physiological results are the concern of medical science. This important section should be re-staffed as soon as possible, as industrial hygiene will be an important subject for the attention of the Department of Health in the post-war years.

SECTION II.

TOXICOLOGICAL, CLINICAL AND BIOCHEMICAL SPECIMENS.

Analysts: S. B. Watkins, M.Sc., M. J. Guyder, B.Sc.

Specimens examined, 1,180.

POLICE DEPARTMENT.

The Police Department submitted 250 specimens, as against 364 last year. One hundred and twenty-four specimens were connected with 29 cases of real or suspected homicide or with suspicious deaths. The findings in these cases were arsenic (4), barbiturate (1), cyanide (1), methyl alcohol (1), nicotine (1), strychnine (4).

The remaining submissions were as follows:—

Nature of Case or Specimen.	Number of Specimens.
Abortion (3 cases)	15
Animal poisoning (6 cases)	25
Drug or medicine	18
Foodstuff	16
Opium	29
Spiritous liquor	7
Miscellaneous	16
	126

Expedition in Examination of Viscera.

This laboratory uses a modification of the Stas-Otto method for examining viscera. Bamford (Analyst, 1938) states that this method is criticised on the grounds of slowness. In reply, he said "usually a complete examination of stomach, intestines (with their contents) takes about four days, with work in the mornings only and with very frequent interruptions." We would have no trouble in completing the examination in the time stated by Bamford, but in cases where a man's life or liberty is at stake, expedition is of secondary importance and its attainment should not imperil the accuracy of the work. The writer has examined, without assistance, three strychnine viscera cases in six days while doing other work besides; but in these cases qualitative tests had indicated the nature of the poison present.

Smoking Opium.

Most of the opium samples were opium prepared for smoking. The average morphine content was about 2 per cent. lower than in pre-war years.

The following represents the composition of the samples:—

	Per Cent.
Water	26.3
Extract	73.7
	100.0
Morphine	8.0
Ash	10.3
Proportion of extract soluble in water	91.0
Proportion of mineral substance soluble in water	96.0

Smoking opium or Chandu is usually prepared by extracting the raw or gum-opium with boiling water and evaporating the settled extract to the required consistency, hence most of the extract and mineral substance should be soluble in water. The ash or dross remaining after smoking is known as Yen-Shee or opium charcoal. The best kind of smoking opium involves roasting of the opium in its preparation.

A Chinese charged with illegal possession of opium claimed that it had been prepared by evaporating tincture of opium, for which he had a prescription from a doctor. The opium had the composition following:—

	Per Cent.
Water	17.8
Extract	82.2
	100.0
Morphine	15.0
Ash	8.0
Morphine on dry substance	18.2

Extract and mineral substance were almost entirely soluble in water. The results indicate that the product could have been prepared from British Pharmacopoeia tincture of opium. The odour, however, was much stronger of smoking opium than the extract prepared from the tincture. Under the "Poisons Regulations," drugs are to be used only for the purpose intended and it is illegal to evaporate tincture of opium for the purpose of smoking the extract.

Doping of Horses and Dogs.

Samples have been examined in connection with alleged "doping" of horses and dogs. Some consisted of a mixture of caffeine and codeine (in gelatine capsules), one was a solution of arsenic (Fowler's), and one a solution of strychnine. Arsenic and strychnine, usually in the form of nuxvomica, are commonly used as tonics for animals. The caffeine-codeine mixture is given to the horse about two and a-half hours before the race, as this time is assumed to be necessary for the absorption of the drugs.

Doping of racing animals dates back to about 1533 when substances such as sandarac with honey and anise were used. England, in 1660, prohibited the use of exciting substances for racehorses. In recent times, many potent substances have been used, including alcohol, atropine, brucine, caffeine, cocaine, codeine, digitalis, ephedrine, heroin, kola nut, morphine, nitroglycerin, nuxvomica, quinine, scopalamine, strychnine and veratrine.

No evidence can be adduced that any of these substances increases the speed of the racing animal. Atropine affects the eyes and causes the horse to "gallop in the air." Morphine and heroin are said to be used for slowing horses. Doping of racing animals is a pernicious practice that has been rightly condemned by every racing authority.

Death from methyl alcohol poisoning.

The first recorded case of death from methyl alcohol poisoning occurred during the year. As methyl alcohol has no medicinal uses it is rarely if ever found in the homes of persons not associated with its use in industry. In the United States of America it has caused many hundreds of cases of death and blindness. The minimum lethal dose of methyl alcohol for an adult is 1 oz. According to the evidence it would appear that if ten persons drank 4 oz. of methyl alcohol within three hours all would have marked abdominal distress, four would die, two of them becoming blind before death, and six would eventually recover, of whom two would be permanently blind. The following are the findings in the Queensland case:—

	Methyl Alcohol. (Per Cent.)
Blood (W/V)	0.42
Urine (W/V)	0.70
Mixed viscera (liver, kidneys, spleen)	0.28

CLINICAL AND BIOCHEMICAL SPECIMENS.

Submitted by the Department of Health, hospitals and private medical practitioners.

	Number of Specimens.
Blood	97
Hair and nail cuttings	53
Urine for lead	838
Urine for "sulpha" drugs	212
Miscellaneous	30
	1,230

Lead in Normal Urine.

The urine of a cross-section of Queensland Government Public Service personnel yielded the results following:—

Lead (mgm. per litre).	Percentage of Specimens.
01	24.0
02	32.0
03	8.0
04	20.0
05	8.0
06	4.0
07	4.0

These are lower than overseas figures but much further investigation will be necessary before normals for Queensland generally are established. The campaign, however, of the Queensland Department of Health against lead in paint, toys, crayons, tobacco, and foodstuffs should reduce the human intake of lead in Queensland to a figure as low as any in the world. The normal lead content of Queensland foodstuffs has not yet been determined but considering the lead-urine results it must be very low in Brisbane.

Lead-urine Certificate.

The lead-urine certificate issued by this laboratory to hospitals and private medical practitioners reads—

Lead milligrams per litre.

"The lead in the urine of apparently healthy adults varies from .01 to .07 milligrams per litre. Ninety per cent. of the urines examined in Brisbane contained .05 milligrams or less and 60 per cent. were below .03.

"While some authorities on lead poisoning have stated that mean concentrations as high as .09 milligrams per litre are compatible with normal health and well-being of adults, nevertheless it would appear advisable to regard .05 or less as the normal for lead in urine."

Arsenic in Hair and Urine.

Based in part on our own investigations, the following form of report is presented in connection with arsenic in hair and urine:—

"Normal arsenic content of hair—2 parts per million.

"Normal arsenic content of urine—.02 part per million.

"The passage of arsenic into the hair is not contemporaneous with its deposition in other parts of the body. In acute poisoning, arsenic is present in the blood but is not present in the hair. After continued arsenic medication arsenic will appear in the hair about twelve days after medication began. Arsenic has been found in the hair years after it had apparently disappeared from other parts of the body. If arsenic is found in the urine and none is present in the hair, it may be safely assumed that the arsenic had been taken recently. It therefore appears that in all cases of suspected chronic arsenic poisoning, urine (6 oz.), hair (about 30 grains) and nail cuttings (fingers and toes) should be examined for arsenic."

Reporting of Analytical Results.

It is the policy of this laboratory to make reports on analyses as full and enlightening as is consistent with the findings. We regard it as a reflection on the imagination of the analyst to have the certificate returned for explanation or further information.

SECTION III.

GEOLOGICAL SURVEY, DEPARTMENT OF MINES, PORTMASTER (EXPLOSIVES) AND ROADMAKING MATERIALS.

Analysts: V. R. Cundith, B.Sc., D. Mathers, M.Sc., H. G. Dunstan, B.Sc.

Assistant to Analysts: T. R. Lowth, B.Sc.

Department.	Number of Samples.
Geological Survey and Mines Department	369
Portmaster (explosives)	1,104
Allied War Services (5)	732
Commonwealth War Services	461
Main Roads Commission and Allied Works Council ..	428
Forestry	197
Private war industries	195
Public	68
	3,554

Geological Survey and Department of Mines.

Nature of Sample.	Number.	Purpose of Examination.
Coal	75	Proximate analysis
Gas (mine air)	17	Presence of dangerous constituents
Ore	137	Gold and silver
Ore	23	Gold, silver, and other elements
Ore	23	Elements other than gold and silver
Water	32	Pollution of river by mining activities
Miscellaneous	62	
	369	

The work done for the Allied Works Council consisted of 85 samples of tar and 323 samples of bitumen emulsion.

Explosives.

Samples examined, 1,104.

Industrial Explosives Imported into Queensland during the Year ended 30th June, 1945.

(Australian Manufacture.)

Explosive.	Number of 50lb. Cases.
Blasting gelatine "2"	565
A.N. gelatine dynamite "75"	1,640
A.N. gelignite "60"	5,413
50 per cent. gelignite S.N.	3,142
A.N. gelignite "50"	6,941
Ajax	6,240
Quarry monobel	252
40 per cent. ligdyn	3,200
A.N. ligdyn "40"	1,100
	28,493

Blasting powder	750 cases.
Blue fuse	4,176,000 feet.
Prima cord	20,000
No. 6 detonators (aluminium)	1,000,000
E.D. fuses No. 6 x 72	105,000
E.D. fuses No. 6 x 120	30,000
E.D. fuses No. 6 x 144	10,000
E.D. fuses No. 8 x 12" (submarine)	3,800
E.D. fuses No. 8 x 14" (submarine)	2,000
Fuse igniters	69,500

The large reduction in consumption of explosives from 48,905 cases in 1942-43 to 28,943 in 1944-45 is chiefly due to decreased activity in metalliferous mining.

Condemned Explosives.

The following explosives were condemned during the year:—

Explosive.	Number of 50lb. Cases.
Quarry monobel 1"	40
14" gelignite "60"	20
Ajax 1"	107
A.N. gelignite	2
Electric detonators (number)	320

With the exception of the detonators, these explosives were old stock owned by a State Government department.

Explosives Licences in Force.

	1943-44.	1944-45.
Bulk magazines	6	6
Retail magazines	550	534
Backrock	3	3

Three hundred and twenty-one (321) retail licenses and one bulk license were issued, for which fees were not received.

SECTION IV.

IRRIGATION, WATER SUPPLY AND SEWERAGE DEPARTMENT.

Analyst: J. A. Forbes, A.A.C.I.

The 1,118 samples of water examined by this section, as against 917 samples last year, were submitted by the following authorities:—

Department.	Number of Samples.
Commonwealth War Services	51
Health	124
Irrigation, Water Supply, and Sewerage	769
Local Government	47
Machinery	9
Other Departments (8)	33
Public	85
	1,118

Waters are submitted for examination in regard to one or more of the following purposes:—

- (i.) General analysis for potability and domestic use;
- (ii.) Steam raising;
- (iii.) Town supply;
- (iv.) Industrial purposes;
- (v.) All purposes, stock, irrigation and human consumption.

The field covered is extensive as it includes much investigational and advisory work. It keeps the one analyst employed fully occupied. The investigation last year by this section of the fluoride content of Queensland bore waters used for human consumption is the most extensive recorded in Australia. It is important that it be continued but, because of intensive pressure of routine work, nothing further has been done.

SECTION V.

COMMONWEALTH CUSTOMS AND EXCISE, AND STATE STORES BOARD.

Analysts: J. R. W. Adamson, A.A.C.I., H. B. Cribb, A.A.C.I.

Samples examined, 2,203.

The samples submitted by the Commonwealth Customs are mainly for customs duty classification purposes and in connection with the Excise and Commerce Acts.

They include oils—lubricating, fuel and kerosene—petrol, spirituous compounds, textiles, chemicals and medicines.

The table following records the total number of samples examined by the section:—

Department.	Number of Samples.
Commonwealth Customs	1,622
Commonwealth War Services	394
State Stores Board	58
Other Departments and Public	129
	2,203

Cost of Analytical Work—

Period.	Total Units of Professional Personnel.	Number of Samples Examined.	Samples per Unit of Professional Personnel.	Total Cost per Sample.
1925-33 (5 years) ..	11.6	44,325	764	£ s. d. 0 18 5
1933-35 (5 years) ..	12.0	68,291	1,138	0 12 1
1935-43 (5 years) ..	14.5	82,607	863	0 16 4
1943-44 ..	14.75	14,105	956	0 14 11
1944-45 ..	15.0	15,431	1,029	0 15 3

This costing does not include the incidentals of electricity, water and accommodation. Based on present day salaries, the costs for the quinquennial periods shown in the above table would be higher.

Considering the nature of the samples this year and the quality of the work done, the output per unit is outstanding and highly commendable.

General.

Contribution of the Laboratory to the Fighting Forces.

Royal Australian Navy, K. A. Glover (Lt.), Assistant to Analysts.

A.I.F., I. L. B. Henderson (Lt.), Analyst.

J. E. O'Hagan (assistant to analysts) was called up for the A.M.F. and later joined the A.I.F. He has now been released from military service and is attending the Queensland University under the Commonwealth Training Reconstruction Scheme.

Mr. L. G. Crookall, laboratory mechanic, who had been attached to the Ammunition Factory, Rocklea, for three years, returned to the laboratory in February, 1945.

Sick Leave.

The total sick leave taken was 103 days as against 22 days last year.

Recreation Leave.

With the exception of one officer, every officer had recreation leave.

Overtime.

Overtime was worked by some sections but no claim was made for it.

Immediate Future Outlook.

During the year 5,192 samples were examined for the War Services, an increase of 181 samples on the work of the previous year. It is expected that there will be a diminished number of samples in the coming year from this source.

The laboratory is urgently in need of more analysts and in this connection I would say that if the prestige of the laboratory as the chief analytical authority in Queensland is to be maintained or improved, it is imperative that most discriminating selection be made of its future professional personnel. Men capable of doing the ordinary routine analytical work will be plentiful in the early post-war years, but really competent analysts will be just as rare as ever. Without such analysts no important chemical investigations can be undertaken.

Appendix E.

SCHOOL HEALTH SERVICES.

Chief Medical Officer: L. St. Vincent Welch, M.R.C.S. (Eng.), L.R.C.P. (Lond).

Chief Inspector, School Dental Services: E. W. Haenke, L.D.Q.

Before the war immigration was a grave problem for the Federal Government; with the loss of so many potential fathers it has become the more acute. Every Australian child is thrice precious to the nation, and its successful rearing a matter of first magnitude if Australia as a nation is to survive as a powerful factor in Pacific world politics. It, therefore, becomes a matter of simple fact that every effort must be made to encourage child birth; ensure the health and safety of all potential and prospective mothers; assure the correct and sufficient nourishment of all potential mothers ante-natally and during pregnancy and lactation; make full provision for adequate and suitable nourishment of all children from birth to adolescence, by instructing parents and prospective parents in simple dietetics, by teaching the elements of dietetics to school children, and by providing canteens in all schools to enable wholesome food to be served, thus ensuring at least one full and balanced meal per school working day.

During the formative years of life, from birth to the termination of adolescence, the dental and medical needs of the child should be met in full.

This phase of school health work has existed in a small way for some considerable time but, to give complete expression to its requirements, will need a greatly augmented staff of dentists and nursing sisters. There are more than 200,000 children attending the State schools of Queensland. The nursing staff at present available for this army of young Australians is twelve. To adequately deal with the present situation would require a staff of some seventy nursing sisters, each in charge of a group of schools.

Per capita, Queensland is further advanced in social legislation than any other State in the Commonwealth, but, in the matter of child nurture and health, there is still a mountain of problems to solve, but the fact that so much progress has been made augurs well for the future.

Looking in retrospect over the past eighteen years, it is indeed a satisfaction to note what has been accomplished in School Health Services activities—the improvement in the dental and physical conditions of school children, the greater understanding of health measures by teachers, and their sympathetic co-operation with the staff of School Health Services. Many who were school children in those early years are now parents with their offspring attending the selfsame schools. Those lessons regarding attention to their physical defects have borne fruit and the newer generation is benefiting accordingly.

What has been said respecting the medical examination of school children and their health requirements is equally true of the Dental Section; indeed, no health service can function with any degree of perfection unless the dental section caters fully and efficiently for the children's dental needs.

Preventive dentistry is the foundation upon which all sound health must be built.

The system inaugurated in 1929 of employing fully-trained hospital nursing sisters to supervise school pupils and to report any departures from health to the correct official quarter has proved entirely successful and an extension of this method is recommended in all parts of the State. The fullest and most cordial co-operation with members of the medical profession wherever the scheme operates has been experienced and consequently the cases referred for medical or surgical diagnosis and treatment have greatly benefited. The nursing staff do not diagnose but their experience enables them to detect children who are not making progress physically.

The present personnel of the School Health Services is as follows:—

Chief Medical Officer.

1 Medical officer (position vacant).

1 Medical officer (ophthalmic).

1 Part-time medical officer.

1 Part-time ophthalmic surgeon specialist.

19 Medical practitioners carrying out ophthalmic treatment in country areas.

1 Chief Dental Inspector.

15 Dental inspectors.

1 Part-time dental officer.

1 Motor-driver mechanic.

15 Trained hospital sisters (two recently appointed).

Head Office—

1 Clerk-in-charge of General Office.

1 Junior clerk.

1 Clerk-typist.

The official homes of the school sisters are at the following centres:—

Eight stationed in Brisbane and one each at Gympie, Maryborough, Bundaberg, Rockhampton, Townsville, Cairns, Ipswich, and Toowoomba. (The recently appointed nursing sisters will shortly be transferred to country centres.)

The sister in the Cairns district is also engaged to a large extent on Hookworm Campaign duty.

This staff is not adequate to maintain a satisfactory and efficient service covering all parts of the State.

The war years have made difficult the functioning of the School Health Services. A number of the staff has enlisted and efforts to fill temporarily the vacancies have been unsuccessful. Much work has been accomplished, as the following table bears witness:—

Number of children examined by medical officers	8,776
Number of children notified as defective	833
Number of children treated by private medical practitioners ..	647
Diseases of tonsils and adenoid overgrowth	547
Other diseases of nose and throat	13
Defects of vision	177
Diseases of eyelids	5
Squint	13
Hearing	7
Otorrhoea	9
Heart	10
Skin diseases	3
Hernia	32
Number of children examined by school sisters—	
Metropolitan	22,275
Country	15,431
Number of children referred to private medical practitioners by country school sisters	1,573
Number of children treated by private medical practitioners ..	1,217
Number of homes visited by school sisters	1,185
Apparent physical defects discovered by country school sisters and recommended to private medical practitioners for diagnosis and treatment—	
Tonsils and adenoid overgrowth	1,167
Vision	196
Affections of eyelids	7
Squint	12
Hearing	88
Otorrhoea	12
Skin diseases	51
Scabies in metropolitan area (treated by school sisters) ..	313
Number of children found to be vaccinated—	
In Australia	13
Out of Australia	74
Number of cases of diphtheria in school children—	
Metropolitan	130
Country	1
Number of schools swabbed	661
Number of pupils swabbed	14
Number of pupils found to be carriers	212
Percentage of carriers	2
Number of virulent carriers	3
Percentage of virulent carriers	130
Number of cases of scarlet fever in school children—	
Metropolitan	154
Country	1
Number of cases of infantile paralysis in school children—	
Metropolitan	1
Country	1
Inspection and treatment performed by school dental inspectors—	
Number of children dentally examined	29,802
Number treated	11,134
Number of extractions	15,912
Number of fillings	20,638
Other treatments	8,207
Treatment at Brisbane Dental Hospital—	
Number treated	6,327
Number of extractions	22,729
Number of fillings	22,582
Other treatments	18,577

The Hookworm Campaign continues to function. It is unlikely that this work will ever cease to call for close attention. The gradual improvement in water-borne sanitary conveniences and the constant vigilance of local authorities' health inspectors enables this serious menace to be kept in check. The nomadic aboriginal and other natives tend to disseminate the disease.

The Wilson Ophthalmic School Hostel has proved, as heretofore, a boon to school child sufferers from trachoma. This disease is still prevalent in many parts of Western

Queensland, and although the grave eye conditions met with sixteen years ago are now rarely seen, there are sufficient cases of the disease to constitute a grave menace to healthy eyes and good vision.

The ophthalmic officer attached to the staff of the School Health Services was called up early in the war years, with consequent serious difficulty in seeking out suitable cases for the institution. With a return to peace conditions it is anticipated that he will again be available to continue this important duty.

The problem of vermin eradication in schools has been a cause of great anxiety. Due to the thousands of servicemen moving among the population the two pests—scabies and pediculosis—have been present in an ever mounting degree, and the difficulty of procuring satisfactory fine-tooth combs and other means of eradication has added to the worry of parents.

During the year experiments have been conducted in supplying eight ounces of malted milk mixture to children at 11 a.m. The scheme was suggested by a member of the School Health Services nursing staff who found many children hungry by 9 a.m. and eating the food intended for the midday meal at this early hour.

The milk ration, combined with cocoa and sugar, represents 150 calories, which "peps" up the child at a time when such extra energy is most needed. Results have been most encouraging.

Since the Chief Medical Officer commenced the organisation of the School Health Services eighteen years ago, great changes have taken place in sanitation, building construction, lighting and ventilation, and there is every indication that the tempo of these changes is rapidly increasing. To remodel and improve nearly two thousand schools is a mighty task which can only be accomplished over a number of years.

Much has been learnt by experience, and "hastening slowly" has probably been the means of avoiding many mistakes and pitfalls in construction while gathering valuable data. Amusement is not at the little accomplished but at the permanency and excellence of all new construction. The most cordial relationship exists between the School Health Services and the Department of Public Works, whose officials have given most valuable assistance and advice and have ever been ready to co-operate in all matters affecting the health of the school population.

To quote one instance: It was suggested by the Chief Medical Officer that a room, solely for the use of the School Health Services staff and the school inspector, should be incorporated in every new school and in all schools undergoing reconstruction. This suggestion was agreed to, and already the principle has been carried out in a number of schools, with the happiest results.

Following most cordial co-operation between the city health authorities and the School Health Services, immunisation of school and pre-school children has reached a figure which far surpasses that in any other State of the Commonwealth, a condition to which all officials concerned can turn with pride and thankfulness. In this respect the civic authorities have reason to feel happy that they have unquestionably saved a large number of child lives within the Greater Brisbane area, and the School Health Services officers have contributed their services in assisting the Brisbane City Council in this respect.

Rail Dental Clinics Nos. 2 and 3, whose construction the Honourable the Minister for Health and Home Affairs (T. A. Foley, Esq., M.L.A.) recommended and Cabinet approved, will be of inestimable value to the children of rural Queensland. There is no doubt as to their success in this respect.

In conclusion, it may be stated that all members of the staff—medical, dental and nursing—have carried out their duties conscientiously and faithfully in the face of many difficulties.

SCHOOL DENTAL SERVICES.

Inspection.—The subjoined table details the total findings revealed at the different inspections of the full staff of School Dental Officers during the year:—

Children—Number Examined.	Number with Sound Mouths.	Condition of Mouth.			Use of Tooth Brush.			Permanent Teeth.			Carious Teeth.		Permanent Carious Teeth.		Percentage of Children with Dirty Mouths.	Total Number of Carious Teeth (Permanent).	Average Number of Carious Teeth per Child (Permanent).
		Clean.	Fair.	Dirty.	A.	B.	C.	Lost or Extracted.	6-year Molars Extracted.	Filled.	Permanent.	Temporary.	Saveable.	Unsaveable.			
30,357	3,875	3,965	21,391	5,001	3,143	20,712	6,502	9,523	8,206	42,106	69,206	48,325	56,892	12,314	Per Cent. 16	69,206	2.2

Clinical Phase of Service.—Tabulated hereunder are particulars of the complete amount of treatment which was performed through the various clinical activities which were attached to, or were associated with, the service for the period under review.

Number of Children Treated.	Number of Extractions.	Number of Fillings.	Number of Other Treatments.
19,499	30,874	41,465	11,547

OPHTHALMIC SCHOOL HOSTEL.

The following table summarises the admissions, discharges, &c., for the year:—

	Boys.	Girls.
Children on the roll at 1st July, 1944	20	27
Admitted during the year	12	14
Discharged during the year	15	20
On the roll at 30th June, 1945	17	21

Admissions during the year came from the following centres:—Mt. Isa (7), Cloncurry (7), Dobbins (2), Townsville (1), Springsure (1), Quilpie (1), and Cunnamulla (7).

The average stay of those discharged from the Hostel had been nine months. The daily average of the Hostel was 39.3, showing a decrease of 9.7 for the year.

The admissions have mostly been mild cases; there were none of the severe cases with corneal complications such as formerly constituted a considerable proportion of the children coming to the Hostel.

A survey of the Western children is greatly to be desired to ascertain the present incidence of trachoma; whether its prevalence and severity are diminishing; and to select the most suitable cases for treatment in the Hostel.

During the year members of the 4th Ordnance Vehicle Park contributed very materially to the entertainment of the children at the Hostel. On 16th December they presented the children with a Christmas party and tree; in January arranged a picnic to Margate for them; and on 13th May gave them yet another party, with a bright concert to follow.

The ground has been prepared for the children's gardens, and all the necessary tools have been procured. To date, however, progress is hampered by the fact that no pipeline has yet been extended for the water.

Recently a Wilson Ophthalmic School Hostel scout pack has been formed, and is proving a source of great interest to the boys, who are very keen. Every Saturday afternoon, instruction is given by two patrol leaders from the Albion Troop, who also instruct the younger boys as Cubs. It is hoped at a later date to provide similar instruction for the girls as Girl Guides.

Appendix F.

SECTION OF MATERNAL AND CHILD WELFARE.

Director: T. Henry R. Mathewson, M.B., Ch.B. (Edin.).

Superintendent: D. Bardsley, A.T.N.A.

Public opinion is awakened more than ever before to the value of measures directed to the improvement of health, and it is recognised that parent education and guidance must become an increasingly important aspect of the activities of this service.

The war has disturbed family life to an alarming degree and the sad fact has to be faced that it will cause many broken homes. On the other hand, of those who return from the war there will be many who, having lived under its hardships and deprivations will wish to establish themselves in homes and rear families. It is acknowledged by all social leaders that unless a regrowth of family life can be encouraged and brought about, the outlook for the future is not bright. In order to accomplish this there must be provided suitable houses with adequate living space both inside and outside, labour-saving devices and, where necessary, communal services in connection with laundry, house-cleaning, and cooking. There must also be established kindergartens and day nurseries for children under school age. While it may be stated that the essential function and privilege of a woman is motherhood and that bringing up a family is a whole-time job, her husband and the children as they grow older must see to it that she does not become a slave to the family, but be restored to her place of honour in the home.

The pleasures and interests of life, cultural and otherwise, as well as the responsibilities, must be shared by all. If the home is to be a happy one there must be companionship between husband and wife, spiritual, intellectual and physical companionship, and there must be understanding and sympathy between parents and children. During school life and later adolescence, children require to be trained for parenthood and their training should include instruction and guidance, not only in regard to the care of their own health and the health of infants and young children, but also in regard to family relationships, remembering always that the most effective instruction is provided by the example set by the parents. In view of the fact that incompatibility leading to disharmony in the home is frequently mentioned as a cause of delinquency and nervous breakdown, it would seem that such instruction is imperative and urgent.

The value of homes established by the service in Brisbane for the admission into residence of mothers with babies whose feeding and management require whole-time supervision by child welfare trained nurses has been fully demonstrated during the war years, and similar homes outside the metropolitan area are to be established as soon as suitable buildings and staff become available. At the Sandgate Home there has been a steady demand for the admission of children whose mothers require to go into hospital to have other babies or are taken suddenly ill.

Valuable as these and other homes, such as the State Woolloomin Home and the home of the Mothercraft Association, have proved, they do not meet the need of the large family in which there are several young children whose parents wish them to remain at home. The requirements in this case would be more adequately and appropriately met by a trustworthy, motherly middle-aged woman, and in other cases by a trained home assistant.

The shortage of domestic assistance has increased the need for institutions or homes to which mothers may go for rest before and after confinement. There is inadequate provision for the mother who is living at a distance and who, for the sake of safety, has to be admitted to hospital before her due date, thus placing a strain on the already overtaxed accommodation of the hospital. There are many mothers who, after their confinement, would benefit by residence for a short time in a home, where they would learn to handle their babies before taking up the duties and responsibilities of home life again, or by passing through a mothercraft section established within the maternity hospital itself. This need not prolong the mothers' stay as the period in the obstetric section would be shortened.

The problems and difficulties created by the shortage of houses which frequently come under the notice of the staff call for urgent consideration and action.

Staff shortages have handicapped and limited the scope of maternal and child welfare activities in many directions.

It is gratifying to be able to report that, in spite of this and the many adverse conditions affecting the health of mothers and young children, the maternal and the infant mortality rates have fallen substantially, each being the lowest on record.

In an effort to lower mortality rates it needs to be kept in mind that the obstetrician requires to be concerned not only with the survival of the mother, but also with her health and the health of her child. The causes of still births and deaths during the first month of life are intimately related to the adequacy of ante-natal care and of care during childbirth. The management of newborn babies, particularly premature babies, should be under the supervision of doctors and nurses specially trained in their care.

Research into the causes of maternal and infantile mortality and into such matters as nutritional requirements, supply and production of milk, availability of fresh foods, suitability of clothing and housing, requires to be undertaken with the view to determining their effect upon the health of the mothers and children throughout the State. This will mean additional staff and more money, but in the end should prove economical.

Illustrating the need for research it may be stated that sisters in charge of centres in the northern and western areas of the State report marked loss of weight in infants and young children during the intense heat of summer, the children in Blackall showing signs of exhaustion during last summer. This is no doubt due in part to loss of appetite. It has been observed that breast-fed babies are less affected than those fed artificially.

As in England and Wales the birth rate for the year 1944 reached its highest level since 1925. The opinion is held that there is nothing in the available statistics to indicate any probability of a sustained rise in the birth rate in Queensland and in Australia as a whole, but rather that natural increase in the population will rapidly dwindle after

1950, and that in another thirty years deaths may exceed births. The attitude towards child-bearing must be changed if a downward trend of the birthrate is to be averted in the post-war years.

Much remains to be done in the field of preventive medicine and particularly in that section of it which concerns the health and welfare of mothers and children.

To achieve success in this branch of the Health Service there is required by each member of the staff not only a knowledge of the work but enthusiasm and a sympathetic understanding of the needs of mother and child, vigilance, patience, perseverance, sound judgment, common sense, and an aptitude for the work.

It is to be regretted that indifference by nurses and medical practitioners to the responsibility of weaning babies prematurely is still frequently coming under notice, particularly when it is born in mind that facilities are provided by this service to help mothers who experience difficulty in regard to breast feeding.

The mother is largely influenced by the attitude of the doctor and the nurse, and she should be made to realise the importance both to herself and her child of her being able to fulfil her natural and rightful function. Much educational work requires to be done among medical students, nurses, and mothers. It is gratifying to be able to record that in one country hospital the sister in charge of the child welfare centre was allowed to assist a mother in restoring her breast milk. It would be appreciated if other hospitals co-operated in this way.

While the establishment of maternal and child welfare centres has proved and is still proving of great assistance to mothers and infants, not sufficient provision has been made for the healthy development of the child after the period of infancy is passed. It is true that centres have been opened for the regular examination of children up to school age, but these do not provide for the daily care of the young child who has reached an age when he is less dependent and is learning through play and other activities to adjust himself to his surroundings and to other children with whom he comes into contact. It is during this most important formative period of his life that his character and pattern of behaviour are being formed and these are going to determine to a large extent his value as a future citizen.

Where possible many mothers are availing themselves of the day nurseries and kindergartens, where their children in the care of those trained in the management and guidance of children under school age, are able to find suitable outlets for their activities amongst those of their own age, and in many cases under conditions which are more hygienic than those under which, owing to shortage of houses, they are compelled to live. Parent guidance also is a prominent feature of the activities of these organisations.

Child care centres have been opened in many places and most of these will become whole-time kindergartens as soon as trained teachers and equipment are available. The care of the health of children admitted to these will become an increasingly important function of the Maternal and Child Welfare Service.

Decay of the teeth is frequently found amongst children attending centres for the examination of children under school age.

In the annual report of this service for the year ending 30th June, 1940, attention was drawn to the fact that only a relatively small number of the children who attended school for the first time were found to have sound teeth, and of these the greater number was found in those areas where maternal and child welfare centres had been established and the feeding and care of the children had come under the supervision of the sisters in charge.

It was stated that there was need for a complete survey of the condition of the teeth of the child under school age, and that this was required to be undertaken by a dentist who was capable of understanding and handling children at this rather difficult age. It was suggested also that a section of the Dental Hospital should be suitably furnished and equipped to examine and treat these children, and that a child welfare trained nurse should be attached to the section in order to instruct the parents in regard to the importance of diet, dental hygiene, and other preventive measures.

NOTES ON THE YEAR'S WORK.

Owing to serious staff shortages, an increasing amount of work has had to be undertaken by the sisters, many of whom are married women with home ties who have volunteered for service and have been appointed to fill vacancies created by those called up for military service, by those who have retired on reaching the age limit, and by others who after marriage have become expectant mothers.

EXTENSIONS.

The staff shortage has rendered it impossible to make a number of extensions for which departmental approval had been received.

ST. PAUL'S TERRACE HOME.

Unfortunately shortage of nursing staff between the terms of training has limited the number of mothers and babies that could be taken into residence. Every effort has been made to provide attention at the centres for those whom it has not been possible to admit, but in a number of cases feeding difficulties cannot be satisfactorily solved without whole-time supervision. These difficulties may occur or be increased because houses are being shared and there is lack of agreement amongst those responsible for the child's management. In other cases the mother is living in a flat or a room where facilities for the child's proper care do not exist and the neighbours are unfriendly or interfering. Priority of admission to the Home is given to premature and other weakly infants and to those for whom restoration of breast feeding is required. These are referred by doctors and nurses of hospitals and by sisters in charge of child welfare centres.

	Babies.	Mothers.
Total admissions	109	78
Test feeds given	9,675	..
Complementary feeds	5,616	..
Artificial feeds	7,503	..

During the year various improvements have been made at the Home. The construction of a drying room has greatly facilitated the laundry work. The removal of air raid shelters and baffle walls has enabled more comfortable quarters to be provided for mothers and better accommodation for sisters and trainees who are on early shift duty and require to sleep at the Home. Plans for the conversion of a room into a babies' bathroom have been approved.

ST. PAUL'S TERRACE TRAINING SCHOOL.

During the year 53 nurses were released by the Deputy Director-General of Manpower to do their training in child welfare, 28 during the term August to November, 1944, and 25 during the term February to May, 1945. Forty-eight passed the examinations and received certificates from the Nurses' and Masseurs' Registration Board. Of these 16 returned to the hospitals from which they had obtained leave to do their training. A number of the trainees were married women whose husbands are in the Army and who are available for relieving work only.

Nurses who enter on child welfare training remark on the dissimilarity between this and other training in nursing which they have completed, in that in child welfare training the emphasis is not on illness but on health and its preservation. During the four months' intensive course the trainees receive very thorough tuition in the care and management of the infant and young child, and particularly in the principles and practice of dietetics and nutrition, a subject in connection with which extensive research has been carried out in recent years and great advances made.

A number of trainees show great interest in their work and letters of appreciation received from them subsequently clearly indicate the value they place on the training.

During the year demonstration and lecture material has been revised and teaching equipment added, but more is required. Demonstration counts for a great deal in teaching as through it the students obtain a mental picture of the subject and their powers of observation are stimulated and improved. This assists them in understanding and retaining what they have been taught, and results in economy of time and effort. In these days when text books are expensive and beyond the means of some, an epidiascope, films, up-to-date charts and posters would be of great assistance. If teaching is to be successful it is necessary to keep pace with the latest developments in the particular field of knowledge concerned.

Owing to the advances made in connection with this branch of medical and nursing knowledge all authorities associated with child welfare training in Australia agree that the course should be extended to cover a period of six months.

CLAYFIELD HOME.

At this Home there were admitted into residence 122 babies, practically all of whom had shown difficulties in connection with feeding. This represented an increase of 43 over the previous year. Sixty-one of these babies were accompanied by their mothers, and in these cases breast feeding was established wholly or in part.

The excess of artificially fed over breast fed babies gives some indication of the number of babies who are being prematurely weaned. There is no doubt that in many more cases restoration of breast feeding could have been brought about if the accommodation had permitted the admission of more mothers.

	Babies.	Mothers.
Total admissions	122	61
Test feeds given	7,222	..
Complementary feeds	4,227	..
Artificial feeds	10,538	..

CLAYFIELD TRAINING SCHOOL.

Towards the end of 1944 the first group of ten trainees completed their twelve months' training and sat for their examination. Nine of these satisfied the examiners and qualified as Child Welfare Assistants. On November 9th, the Minister for Health and Home Affairs (Honourable T. A. Foley) presented the certificates to the successful candidates. A second group of five girls will complete their training in July, 1945. A third group of ten began their training at the beginning of 1945, and a fourth group is being enrolled.

Of the first group three have commenced their training in general nursing at the Ipswich Hospital and four are engaged as child welfare assistants in private homes. One is employed at the Sandgate Home and one at the Tuffnell Home. Of the second group all, with the exception of one who is shortly to be married, are intending to undertake their training in general nursing, but some will be available for work in private homes for a time. Some of the girls have stated that it is their ambition to be appointed to the staff of this service after they have secured their general, obstetric and child welfare certificates. There is no doubt that the training received at the Clayfield Home not only equips the girls to care for well babies and young children in private homes, but also provides a foundation and a background of great value to them when they proceed to their training in general or other branches of nursing. This is evidenced by the very satisfactory reports received.

During the year a lecture room and a change room for the trainees were erected.

SANDGATE HOME.

Into this Home which was opened in March, 1944, for the admission of children whose mothers have been admitted to hospital to be confined or on account of illness, and for whose care no other suitable arrangements can be made, 259 children were received into residence during the year.

It has been found that these children soon settle down after their admission and become a happy and contented family. Those whose parents gave a history of feeding difficulties at home enjoy their meals after being in residence for a few days. Some of the younger children who have been accustomed to taking their milk from feeding bottles learn to drink from cups within a comparatively short time. Apart from minor ailments the health of the children has been good.

A number of children who had not been trained in clean habits were able to develop these under the patient and sympathetic guidance of the staff. On taking their children home parents have commented upon their healthy appearance, and have sought advice in regard to their diet and management.

Clothes are being made by the staff when opportunity permits, and this has overcome the difficulty that was being experienced owing to children being sent into the Home with few clothes or clothes which required mending.

Shortage of nursing and domestic staffs has caused considerable inconvenience at times. Improvements to the Home and the installation of a septic and a hot water system have improved the efficiency of the work.

CHILD WELFARE CENTRES.

The total attendances at the centres throughout the State for the year numbered 342,985, and 21,020 mothers were visited in the hospitals in which they were confined or in their own homes.

The opening of centres in the suburbs in which the mothers live, which has been carried out in Brisbane, continues to be appreciated, as the attendances indicate. Improved accommodation has been secured in several places. The ideal would be to occupy buildings or portions of buildings, of which this service has sole use. The total attendances at the metropolitan centres (including the suburban centres) numbered 143,724 compared with 124,606 last year.

Owing to the temporary closure of some centres due to staff shortages, the work in the cities as well as in the country areas has suffered. Continuity of service is the very foundation of the work and when an interruption occurs, even though it be for a brief period, ground is lost which it may take several months to regain, and it is doubtful if it is then completely regained. This applies particularly to the country where mothers are depending upon the service of one centre.

The temporary closure of centres and curtailment of services have been mentioned in the superintendent's monthly reports.

In all 47 centres and sub-centres were closed for periods varying from 1 day to 7 days, and the following centres were closed for longer periods: Gayndah and sub-centres, Goondiwindi and sub-centres, Kingaroy and sub-centres, Charters Towers, Roma and sub-centres, Murgon and sub-centres, Somerset Dam.

In spite of being short staffed the Maternal and Child Welfare Railway Car has done its regular itinerary between Winton, Mt. Isa, Kajibbi and Dajarra, the sister-in-charge advising mothers at the following places en route: Corfield, Olio, Stamford, Dobbins, Quamby, Nella, Nonda, Maxwellton, Butru, Wonigan, Duchess, Boree, Whitewood, Undina, Rifle Creek, Malbon, Elsey, as well as at Hughenden, Richmond, Cloncurry and Julia Creek.

It has been found possible to open new centres at the following places during the year:—

Kumbia, opened 13th July, 1944; visited fortnightly from Kingaroy (alternately with Yarraman.)

Dayboro, opened 26th September, 1944; visited fortnightly from Brisbane.

North Mackay, opened 26th February, 1945; visited weekly from Mackay.

CENTRES FOR EXPECTANT MOTHERS.

The improved financial position of many mothers appears to be responsible for the large number who are attending private medical practitioners, from whom they receive antenatal supervision and enter private hospitals or intermediate wards of the Women's Hospital to be confined.

The total attendances for the year numbered 1,944, compared with 1,858 for 1943-44, an increase of 86. The attendances increased at Fortitude Valley by 191, at Caboolture by 41, at Herschell street by 38, and at Nundah by 10, while they decreased at Woolloongabba by 106, Corinda by 17, Morningside by 15, and West End by 40. The mothers at Caboolture are particularly appreciative of the service.

EXPECTANT MOTHERS' CORRESPONDENCE SERVICE.

This service was established towards the end of the year ending 30th June, 1944. A letter was forwarded to the secretary of every public hospital having maternity beds, explaining the nature of the service and stating that on receipt of the names and addresses of mothers booked to be confined in the hospital, serial letters containing advice appropriate to the period of pregnancy would be forwarded to them at monthly intervals. A number of hospitals have complied with the request, but some have been unable to undertake the additional clerical work involved.

The results are as follows:—

Circular letters forwarded to expectant mothers	1,549
Response to circular letters	528
Circular letters forwarded to expectant mothers (other than above) re "Expectant Mother" book	548
Serial letters to expectant mothers	2,154
Special letters of advice sent on request	308
Copies of "The Expectant Mother" sent on request	466
Copies of baby patterns sent on request	31
Copies of other patterns sent on request	20
Copies of special exercises sent on request	59

DIRECTOR'S CONSULTANT CENTRE.

A number of infants and toddlers whose feeding or management had proved difficult or who were not making satisfactory progress were referred to the Director at St. Paul's Terrace during the year by sisters in charge of various centres. A number were also referred by medical practitioners. The total number of attendances was 1,358.

TODDLERS' CENTRES FOR THE EXAMINATION OF CHILDREN BETWEEN THE AGES OF 1 TO 5 YEARS.

In order to impress upon parents the importance of supervising the health of every child during the whole pre-school period, and with the object of correcting defects such as malnutrition, decayed teeth, deformities of limbs, abnormal conditions of eyes, ears, nose and throat, &c., during this most important period of the child's life, nine centres have been established, namely, Rosalie, West End, Woolloongabba, Fortitude Valley, Herschell street, St. Paul's Terrace, Ashgrove, West Ashgrove Kindergarten, Ipswich.

The total examinations made during the year numbered 1,110. Of these 671 were first examinations, and 439 subsequent examinations.

PARENT EDUCATION AND GUIDANCE.

There is no doubt that the necessity for parent education is very widespread. Girls are being brought up with little or no knowledge of the simplest domestic arts and, owing to small families, are totally unaware of the needs of infants and young children. The sisters of the centres are confronted daily with the most amazing ignorance on the part of young mothers.

With the object of counteracting this, it is proposed to give talks on the care and management of infants and toddlers, and the formation of mothers' clubs has been suggested. This, however, can only be done in the metropolitan area where a sister with special pre-school child experience is attached to the Toddlers' Health Centres. In any case

educational work of this kind is limited to mothers interested enough to come and hear talks or form groups and these are often not those who are most in need of instruction. Newspaper articles which appear in sixty-five newspapers and in the "Agricultural Journal" are also useful in teaching mothers interested enough to read them. There is no doubt that continued radio and film publicity is urgently needed to bring before many parents the importance of correct feeding and management of the infant and young child in order that he may grow up a healthy, contented and good citizen.

CORRESPONDENCE SECTION.

There has been a marked increase in the number of letters of advice written during the year. In addition to a wider knowledge of the service, some of the main reasons for this increase are petrol rationing which makes it impossible for many mothers to attend country centres, and the temporary closure of centres owing to staff shortage. The response to circular letters sent has increased over 100 per cent, since the mothers' task of replying has been simplified by enclosing a typed form in which she is asked to fill in the answer to certain questions regarding her child's feeding and general health. Apart from household duties so many mothers, on account of manpower shortage, have to assist in farm and dairy work. Many mothers, especially those in the extreme north and western districts, have expressed appreciation of the help received. Shopping has been done for country mothers unable to procure foodstuffs and other commodities locally. Provision also has been made for the hiring of scales. Responses to newspaper articles have been received. In centres where cows' milk has been unobtainable, information regarding the purchase of goats has been sent on request. Mothers who have been corresponding have called at St. Paul's Terrace when they have come to Brisbane on a visit. Every effort is made to maintain individual and personal contact with mothers.

In response to requests from Western Australia, Victoria and New South Wales, the publications "Care of Mother and Child" and "The Expectant Mother" have been sent.

	Year Ending 30th June, 1945.	Year Ending 30th June, 1944.
Number of birth notifications received	4,069	3,718
Number of circular letters posted—		
(1) Within reach of centre	2,117	1,961
(2) Not within reach of centre	1,951	1,757
Number of follow-up circulars posted to mothers who did not respond to circular letters No. 1 and No. 2	2,257	1,725
Letters to correspondence section in response to circular letter No. 2	624	298
Attendances at centres in response to circular letters	784	828
Letters of advice in regard to feeding and management sent on request	1,688	1,030
Number of "Care of Mother and Child" sent on request	575	323

SOCIAL WELFARE OF HEALTH VISITOR SECTION.

It is encouraging to note that the work being carried out by the sister in charge of this section of the service is becoming better known and is proving a help to many others. Usually the visits to the homes extend over short periods following a mother's discharge from hospital, and are mainly confined to those cases in which, during the convalescence, the mother is unable to attend a centre owing to distance and lack of transport facilities. Mothers with twins are visited for longer periods. Four hundred and sixty-six mothers have been visited during the year. It has been disappointing to find so many young babies weaned either in or shortly after the mother has left hospital. Some of these have been admitted to the homes of this service with their mothers for restoration of breast feeding, but, owing to lack of accommodation and shortage of nursing staff, some have been weaned by the mother while she was waiting for a vacancy to occur. The mothers' difficulties are increased by the housing shortage and consequent overcrowding of families in flats and apartments. If provision could be made to admit more mothers and infants even for a short period of observation and adjustment of feeding fewer babies would be weaned.

Owing to the fact that so many mothers have no permanent place of residence difficulty is often experienced in locating them and much time is wasted. Many mothers who have to do their own shopping are out when the sister calls. Those living in outer suburbs receive leaflets by post and some avail themselves of the correspondence service.

In many cases problems arising in connection with the feeding and management of the baby can be solved in no other way than by making an observation of the home conditions. It is impossible for the one sister at present in charge of this work to see more than a small proportion of the mothers who should be seen. It is the aim of this service to appoint to each of the three main metropolitan centres a sister to undertake this work in the particular area covered

by the centre. Departmental approval of a second sister to be attached to this section has already been received but, owing to the acute staff shortage, it has not been possible to make an appointment. Owing to the peculiar demands of domiciliary visiting, it is necessary that sisters employed in this work should be highly experienced and have special qualifications for social work.

During the year the sister has interviewed 5,280 mothers in the Women's Hospital, Brisbane, and has told them about the activities of the Maternal and Child Welfare Service, inviting each mother to attend the centre nearest her own home for advice and the regular weighing of her baby.

LECTURE DEMONSTRATIONS TO SCHOOL GIRLS.

This work, which is carried out by a sister specially qualified for teaching, is regarded as one of the most important activities of the service. The need for education in preparation for marriage and motherhood is very widespread and the demand for it is increasing.

Girls at the ages of 14 to 16 years show great interest in the lessons on the care and management of the baby and young child, as well as in the care of their own health. Scrap books illustrating the lessons have been prepared by the girls and many of these were excellently done.

The lessons were given in twelve schools in the metropolitan area and in one school in Ipswich. In most of the schools the teachers have taken a great interest in the work. Seven hundred and seventy-six girls attended the lessons, and of these 533 passed the examination, obtaining 60 per cent, or over. Towards the end of the year each of these schools was visited by the superintendent or senior members of the staff, and prizes and certificates presented.

It is proposed to prepare suitable lectures for boys and young men.

WOMEN'S SERVICES.

Again this year, at the request of the Department of Public Instruction, working in collaboration with the Army Education Service, two courses of twelve lecture-demonstrations on the feeding, care and management of the infant and young child were given at St. Paul's Terrace to women selected from the A.W.A.S. and A.A.M.W.S. The teaching was shared by the Director, superintendent, and nurse-lecturer. An examination was held at the end of each course.

KINDERGARTEN STUDENTS.

At the request of the Principal of the Kindergarten Training College lectures on "The development of the child from birth to two years," "Infections," and "Rashes" were given to the students by the Director, and lectures on "Nutrition" by the superintendent.

MEDICAL STUDENTS.

Fourth year medical students attended two lectures on Maternal and Child Welfare given by the Director at the Medical School. They also attended demonstrations on infant feeding at St. Paul's Terrace Training School given by the sister in charge and clinics conducted by Lady Cilento, Specialist Lecturer in Mothercraft at the University of Queensland, at one of the centres.

OTHER LECTURES.

The sister in charge of school lecturing (nurse-lecturer) gave a course of lectures on the feeding, care and management of the infant and young child to a group of V.A.D. and Red Cross Link girls, as well as to young expectant mothers and girls engaged to be married.

At the request of women's organisations such as V.A.D. and the Girl Guides' Association, a number of lectures were given during the year by sisters in charge of country centres.

NEWSPAPER ARTICLES.

During the year a copy of an article on some aspect of maternal and child welfare has been sent each month to sixty-five newspapers in the State for publication. The titles of the articles were as follows: "When the Children Have Colds—Do's and Don't's for Mothers"; "The Care of Baby's Skin", Parts I and II; "How about a Family Health Squad?"; "Can Your Children be Proud of their Teeth?"; "The Care of your Children's Teeth"; "The Expectant Mother"; "Radiant Motherhood—the Importance of Exercise"; "Another Talk for the Expectant Mother"; "Mother, Make Babyhood Safer for your Baby"; "Mothers and Children must have Milk"; and "Posture—Its Importance in Childhood."

PUBLICATIONS OF THIS SERVICE.

Numerous requests were received during the year for copies of the two books published by this service, "The Expectant Mother" and "Care of Mother and Child." These have been distributed to mothers who have attended the centres and to those who have been advised by correspondence. Copies of "The Expectant Mother" were also given to mothers attending the antenatal clinics of the Women's Hospital, Brisbane.

EDUCATION CO-ORDINATION COMMITTEE.

During the year the Director attended meetings of this committee consisting of five Government representatives, four of whom are officers of the Department of Public Instruction, and an equal number of representatives of the Education Committee of the Creche and Kindergarten Association.

INTERSTATE CONFERENCE.

During April, 1945, at the invitation of the Director-General of Health, Dr. J. H. L. Cumpston, C.M.G., the Directors of Child Welfare and the Directors and other officers of pre-school child development and education of the various States of the Commonwealth met in conference in Melbourne. Some interesting discussions took place and resolutions were forwarded to Canberra for consideration by the National Health and Medical Research Council.

The value of such a conference is that it provides opportunities for sharing experiences and discussing various aspects and problems of the work. In the interests of mothers and children it is very desirable that there should be uniformity throughout the Commonwealth, not only in regard to the training of child welfare nurses but also in regard to the services rendered.

HEALTH WEEK.

At the request of the Creche and Kindergarten Association, this service, as well as the Department of Agriculture and the Brisbane City Council, joined in an exhibit which had for its object the education of the people in the preservation of the health of the community, particularly of the mothers and children. The exhibit was held in the basement of the City Hall from 25th to 29th June, 1945. Many of those who attended were interested in problems concerning their own children, and the display of infants' and toddlers' garments. Some were interested in the method of keeping milk cool when no refrigerator or ice chest was available. A number of grandparents showed interest in comparing modern methods with those in vogue when their families were young. Men who attended seemed interested in a balanced diet. Groups of girls and young women who were members of the classes conducted by the nurse-lecturer attended. A small group of boys from a secondary school showed great interest in the display, particularly in the posture charts, the Oslo lunch and the method of keeping milk cool.

The evening lectures were well attended but the attendances during the day were disappointing.

PUBLICITY.

Participation in the Health Week exhibit emphasised the need for a publicity department in connection with this service. Such a department would be responsible for providing up-to-date charts and posters for the centres, radio and film publicity, &c. Therefore it is noted with satisfaction that the Queensland Health Education Council has been constituted by the Government to deal with health education generally.

STAFF.

On 3rd. July, 1944, Doctor J. Randolph-Bedford was appointed Assistant Medical Officer to the Maternal and Child Welfare Service.

To replace nurses resigned, retired, &c., six permanent and six temporary nurses were appointed, the total nursing staff now numbering 85.

ACTIVE SERVICE.

Six members of the staff remain on active service with the A.A.N.S., A.I.F., four of the ten nurses who obtained special military leave having resigned owing to marriage.

RESIGNATIONS.

Three nurses resigned during the year on account of marriage.

Miss E. Rice, who was appointed to the office staff in November, 1936, resigned on 22nd June on account of her approaching marriage. Miss Rice was the first clerk-typist to be appointed to the Maternal and Child Welfare Service and on her resignation was in charge of the office, the clerical staff of which has increased to five.

RETIREMENTS.

Senior Sister D. Rabbets, who was in charge of West End Centre and who had completed twenty years in the service, retired on 31st December, 1944. To mark the occasion of her retirement from the service, Mrs. Rabbets was presented with a wallet of notes from the administrative and nursing staffs, and to her was extended appreciation of loyal and devoted service rendered to the Department, and good wishes for a happy period of retirement.

Senior Sister A. Fleiner who had been on extended sick leave from 3rd October, 1944, was retired from the service on 21st May, 1945, at her own request, owing to ill-health. To Miss Fleiner regret has been expressed at the cause of her retirement, and appreciation of her twenty years' excellent service in the work of maternal and child welfare.

THE STAFF POSITION.

The deterioration of the staff position, to which attention was drawn in the 1944 report, has continued. The fact that of a staff of 85 more than half are temporary nurses, some with very little experience other than their actual training, is a matter for serious concern. There is no doubt that the careful selection of the right type of nurse for maternal and child welfare work has been responsible in the past for much of the success of this service, and for the confidence which mothers have placed in the sisters at their particular centres. Further, it is realised that in no other class of nursing is experience of more importance. In spite of the difficult staff position, every attempt has been made to select the right type of temporary nurse, especially for country centres where she must work alone. Unfortunately it has been necessary on a number of occasions to choose between closing all the centres in a given area and sending to that area a sister who in normal times would have been considered wholly lacking in the requisite experience for such a position. The adverse effect on the whole structure of the work has been inevitable.

The fact must be faced that very few nurses are making applications for positions in this service when such are advertised, and this is retarding efforts to build up a stable permanent staff for the time when many of the temporary nurses who have resumed work as a war-time job will be seeking release.

Since 1942 and until recently, the number of nurses receiving training has been considerably less than usual, and many of them have been nurses who could best be spared from hospital nursing by the manpower directorate—married women with husbands in the Forces, nurses released from hospitals owing to some disability or who, for some domestic reason, could not leave Brisbane. Obviously such trainees are not those who will ultimately become interested in this work and apply for permanent positions.

In any grade of trainees there are relatively few who are keenly interested in the work for its own sake and who are temperamentally suited to its particular demands. There is no doubt that something of a missionary spirit, in addition to other qualifications, is necessary in nurses taking up work in this service. Nurses are required to serve in any part of the State and in some areas in which centres are established conditions are definitely adverse. In a one-nurse centre where the sister in charge has to travel long distances on slow trains in all sorts of weather, the work is physically very strenuous as well as mentally exacting. As sisters spend a limited time in each town they have little opportunity for social and cultural relaxation, even if these are available. Accommodation is difficult to obtain, highly expensive and often of a poor order. This was so, even before the outbreak of war. Although, like teachers, the sisters in this service render an invaluable service to the community, very little interest is taken by the people in seeing that their off-duty time is made as congenial as possible. The question as to whether it is practicable to bring before communities the special needs of the nurses in this respect is one which must be considered, if this service is to attract and keep the best nursing personnel. The loss of experienced permanent staff due to retirement, marriage, &c., has all tended to add to the difficulties of the situation.

The Director and Superintendent desire to place on record their appreciation of the selfless devotion to duty which has been shown by the remaining members of the permanent staff and by those of the temporary staff who have given a long period of service. Many of them have remained on duty in spite of illness and have opened centres during weekends and on holidays when delayed transport would otherwise have deprived country mothers of much needed advice. Many letters of appreciation from mothers bear witness to the benefit they have received.

STAFF MEETINGS.

Several meetings attended by the Director, Superintendent and nursing staff were held. These were addressed by visiting lecturers, including Dr. P. A. Earnshaw, who spoke on the underweight child, and Mr. Kent of the Department of Agriculture, who spoke on milk and milk problems. These were greatly appreciated by all those present.

WAR SAVINGS GROUP.

The honorary secretary's report showed that the sum of £507 4s. 6d. had been collected during the twelve months ended 16th June, 1945. The total collections since the formation of the Group on 22nd June, 1940, amount to £2,108 11s., and the total number of certificates purchased to 2,633.

COMMENTS ON STATISTICS.

Births.

As stated in a Bulletin issued by the Government Statistician, Brisbane, "during the year 1944, 24,520 births were registered in Queensland, giving a crude birth rate of 23.0 per 1,000 population. The number of births was 1,286 more

than in 1943, in which year occurred the highest number of births ever previously recorded in this State. The birth rate (23.0) reached its highest level since 1925 when it was 24.2 per 1,000. The rate reached its lowest level in 1933 (18.1) and since that year has risen steadily. However, it must be remembered that the increased numbers of births have been due largely to a very high proportion of first births during recent years, following increased numbers of marriages due to marriages delayed from the depression years, and marriages hastened by war conditions. The net reproduction rate for Queensland for 1944 was approximately 1.32, indicating that current births were 32 per cent. more than the number required to replace the present generation. It is clear that such a high rate cannot be maintained after the war with the present fertility rates of married women, as the proportion of newly-married mothers must fall. Whether the rate will fall back to, or below, unity or replacement level cannot be forecast before the event. A satisfactory feature of rates of recent years, however, is the tendency for births other than first births to increase."

"If births in Queensland continue at the same rate as they reached in 1944 in spite of the effects of the war and the number of husbands absent with the Forces, they will eventually produce an average of 2.73 children per marriage. The effect of the war showed itself in some reduction in the number of births to newly-married couples. There has been a definite increase in the number of children born to married couples who have been married for four years or more, who have been comparatively little affected by the war. It is reasonable to expect that, if so many husbands had not been absent and had adequate housing been available, the newly-married couples would have shown a similar increase which would have brought the indicated figure of average family up to 2.90.

"The number of children per marriage required to replace the present population is 2.29 after allowing for those who die in childhood or do not marry. The number of children now being born is therefore 20 to 25 per cent. more than is needed to replace the present population and gives Queensland the basis of a future expansion which most of the other States do not seem to possess. The greatest contribution to this increase comes from the rural population and from the cities of Cairns, Mackay, Gympie, Maryborough, and Bundaberg. Brisbane and Townsville at present are not producing enough children to replace their adult population and Rockhampton and Toowoomba only do so by a narrow margin.

"In 1944, of the women aged 20-24, 47 per cent. were married as against only 36 per cent. in 1938, and figures for other ages show a similar reduction of the age of marriage. As compared with pre-war ages of marriage this reduction will increase the number of children born by about 5 per cent. and from the population point of view it is certainly to be hoped that this lower average age of marriage will prove permanent."

Marriages.

"Marriages during 1944 numbered 11,325, compared with 8,853 in 1938. All the war years have shown very high numbers of marriages, particularly 1942 (11,722) and 1944. In aggregate the war years have recorded over 9,000 more marriages than would have occurred had the 1938 level been maintained. There have been nearly 3,000 marriages of American servicemen in this State.

"During the last few years not only has the normal contingent of marriageable women been married, but also large numbers both of young girls and of older women, and the reserves of marriageable women have by now been seriously depleted.

Deaths.

The number of deaths of women due to diseases associated with pregnancy, childbirth and the puerperal state was 74, compared with 89 in 1943, and the mortality rate (maternal deaths per 1,000 live births) 3.02, compared with 3.83 in 1943, 3.97 in 1942, 4.28 in 1941, and 4.65 in 1940. Of these deaths 37 followed childbirth, the mortality rate being 1.51, compared with 49 deaths and a mortality rate of 2.11 in 1943 and 2.08 in 1942. Of these 37 deaths, 11 followed surgical operations including Caesarian section; 8 were due to haemorrhage; 8 to infections; 7 to toxæmias.

Deaths of women due to diseases and accidents of pregnancy (excluding abortion) numbered 27, a mortality rate of 1.10. Sixteen of these were due to toxæmias, 7 to ectopic gestation, which were the main causes last year.

The total number of maternal deaths in the metropolitan area was 21, and the mortality rate 2.46. Of these deaths 9 followed childbirth—a mortality rate of 1.05. Of these 9 deaths 3 followed surgical operations, 3 were due to infections, 2 to toxæmias, and 1 to haemorrhage. Deaths of women in the metropolitan area due to diseases and accidents of pregnancy (excluding abortion) numbered 6—a mortality rate of 0.70. Of these 4 were due to toxæmias; 1 to ectopic gestation.

D

During the year ending 30th June, 1944, the latest date for which figures are available, there were 16,223 women admitted to public maternity hospital and maternity wards in general hospitals in Queensland, and in these hospitals there were 14,666 living children born and 410 children stillborn. This represents a still birth rate of 27.20 per 1,000 births (live and still births) compared with a rate of 25.84 in 1943 and 26.40 in 1942.

In Queensland during the year, 768 children under the age of one year died, being 110 less than during 1943. Of these 533 died under the age of one month and 235 between the ages of one month and one year. The infantile mortality rate (deaths of children under the age of one year per 1,000 live births) was 31.32, compared with 37.79 in 1943, and was easily the lowest ever recorded in Queensland. Coupled with the highest number of births ever recorded in the State this record low infantile death rate constitutes a very satisfactory result for the year.

In the metropolitan area 258 children under the age of one year died. Of these 193 died under the age of one month and 65 between the ages of one month and one year. The infantile mortality rate was 30.20. In the State the mortality rate of infants dying under the age of one month was 21.74 and of those aged one month and under one year 9.58, compared with 25.44 and 12.35 respectively in 1943. The chief causes of death during the first month of life were prematurity (258 deaths), injury at birth (105 deaths), malformations (63 deaths), atelectasis (34 deaths). Deaths during the succeeding eleven months were due chiefly to infections of respiratory tract, such as bronchitis and bronchopneumonia (57 deaths), diarrhoea (42 deaths), malformations (41 deaths) of which 12 were malformations of the heart, 10 hydrocephalus).

In the metropolitan area the mortality rate of infants dying under the age of one month was 22.59 and of those aged one month and under one year 7.61, and the causes were similar to those in the rest of the State.

GENERAL SUGGESTIONS AND OBSERVATIONS.

Notification of Stillbirths.

As stated in last year's annual report the true infant mortality rate cannot be known and no complete investigation into its causes carried out until notification of all stillbirths is made compulsory.

Registration of Day Nurseries and Child-minding Centres.

As these centres are being established in increasing numbers, it is very desirable that, in the interests of the health of the children concerned, they should be registered and subject to inspection by a medical officer of the Department of Health.

Sub-Centre Accommodation.

As some of the public halls in which the work of sub-centres is carried on are unsuitable, it would be greatly to the advantage of the service if every sub-centre were accommodated in a small building of uniform design or, failing this, in a shop or cottage of which the sister in attendance had exclusive use.

ACKNOWLEDGMENTS.

The Director wishes to place on record his appreciation of the assistance of those branches of the Queensland Country Women's Association which have placed the use of their rooms at the disposal of the service.

He also wishes to express appreciation of the co-operation of the officers of other departments, including Public Service Commissioner's, State Children, Railway, Public Works, Bureau of Industry, of medical officers, matrons and secretaries of hospitals throughout the State, of the Acting Principal of the Kindergarten Training College, the proprietors and editors of newspapers in which copies of the articles forwarded by this service have appeared each month, and of all others who directly or indirectly have assisted in forwarding the work for the welfare of mothers and children of this State.

The Director takes this opportunity of thanking every member of the staff for her loyal co-operation and for her unflinching devotion to the work of the service during a year when staff shortages have made her duties arduous and difficult, and when problems arising out of the exigencies of war have tested her professional ability and her capacity to deal with them.

Appendix G.

SECTION OF MENTAL HYGIENE.

Report under section 4 of "The Mental Hygiene Act of 1938."

During the year ending 30th June, 1945, difficulty has been experienced at times in maintaining a full staff of medical officers, and the shortage of female nursing staff at the two largest mental hospitals has been very acute. Generally speaking, however, and with the whole-hearted loyalty of the staff, the requisite standards of treatment have been maintained, and to some extent the psychiatric service to the public has been extended.

The advantage of recent mental medical legislation is now becoming apparent through the increased number of voluntary patients who are seeking admission to the mental hospitals for the benefit of the skilled treatment therein; and in the implementation of this legislation a Psychiatric Clinic has recently been established in Brisbane.

Two Social Welfare officers have been appointed to the staff of the Brisbane Mental Hospital, one certificated in the several branches of nursing, and the other with training in psychology. The benefit of their work has already been felt to a marked degree, and at a later date their services will be seconded to the Psychiatric Clinic. This clinic has been accommodated in temporary offices in Brisbane under the control of the Director of Mental Hygiene.

Dr. S. Baumatz has been appointed Director of the Psychiatric Clinic, and associated with him will be Professor Kyle, Psychologist, Dr. Ellis Murphy, Physician Specialist, and the two social welfare workers, together with the necessary clerical staff.

In its initial stages the guidance of the clinic has been readily availed of, and this public service appears to be meeting a long-felt want.

This clinic will be further developed as soon as the necessary alterations have been effected to an existing building which is being taken over for the time being.

The hospitals have retained the services of the whole of their visiting specialists staff with the exception that at the close of the year, Dr. H. Johnson, was forced to discontinue his visits owing to the pressure of private practice.

The dental health of the patients at the Mental Hospitals and the Home for Epileptics is cared for by the Visiting Dentists to the respective institutions, whilst their optical needs are attended to by the Visiting Optometrist. During the past year we were without the services of the Honorary Chiropodists, who have been unable to continue their visits for the time being.

The Inspector of Asylums, Dr. Fryberg, visited the hospitals during the year, whilst the official visitors also made monthly visits.

The mental hospitals at Brisbane and Toowoomba continue to suffer an acute shortage of female nurses, which greatly accentuates the merit of the work being performed by those serving on the staffs at present. The Department is deeply appreciative of the excellent service rendered by the staffs of the various institutions and which has enabled the standard of the hospitals to be maintained.

Prior to the period now under review, so acute had the shortage of female nursing staff become at the Brisbane Mental Hospital, that for the period 13th to 20th April, 1944, the female nurses at that hospital refused duty, and the administration was greatly perturbed although managing to maintain essential services during that period. Various factors contributed to the serious staff shortage, not the least of which was the number of absentees. So aggravated did those remaining on duty become, that, apparently as a gesture of protest at what they considered the unfair allocation of the national labour, and to draw public attention to their plight, they felt constrained to make this demonstration. A great measure of relief was effected by a number of Army nurses serving with the A.I.F. taking up duty at that hospital temporarily, and the position thus became eased.

Similarly, and for the same underlying motives, at the Toowoomba Mental Hospital since March, 1935, the staff have refused to serve in one, and sometimes two, of the female wards, and have reserved to themselves the right to nurse only the patients in those wards which they claim they can adequately staff; and this condition persists at the present juncture. The welfare of the patients in the wards concerned is being safeguarded, and they are being adequately cared for.

The electric shock therapy treatment at the Brisbane Mental Hospital continues to function satisfactorily as also do the various other therapeutic treatments. A shock therapy machine has also been installed at the Toowoomba Mental Hospital, whilst an occupational therapy building is also under construction thereat. During the past twelve months one accidental death occurred, that of a female patient at the Brisbane Mental Hospital; one suicide of a male patient also occurred there, and another male patient who was on leave was accidentally drowned. Two births occurred at the Brisbane Mental Hospital, both female children.

There was a total of 34 male and 7 female patients who escaped from the various hospitals, of whom 27 males and 7 females were returned to the hospitals concerned.

In September of last year, the Australian servicemen who were under treatment in the Brisbane Mental Hospital were transferred by the military authorities to one of their own hospitals in the nearer Brisbane suburbs.

A summary of the statistics of the three mental hospitals is forwarded herewith. These disclose that since the beginning of the war there has been a relative increase in the number of

female patients under treatment in comparison with former years. The total admissions in 1939 numbered 621, which had increased to 649 in 1945, this increase being effected by a decrease of 3 male admissions and an increase of 31 female patients admitted.

The average number of patients resident during 1939 totalled 3379, which had increased to 3602 at the end of 1945. This increase was brought about by there being 45 male patients fewer resident and 263 females more than in 1939. The ratio of males to females was 59 per cent. to 41 per cent. in 1939 as against 53 per cent. to 47 per cent. at the present time.

The Rockville Home for Epileptics received six patients admitted during the year, two were discharged, whilst there were two deaths. There were 45 males, 60 females, total 105 patients of the Epileptic Home at 30th June, 1945.

The school facilities at the Home, of a high standard formerly, have been further enhanced by the provision of a manual handicrafts workshop, whose woodwork classes are conducted by an officer from the Toowoomba Technical College.

The ancillary services of the Toowoomba Mental Hospital nearby are extended to cover the needs of the inmates of the Epileptic Home.

Daily newspapers and periodicals are provided to the various wards throughout the mental hospitals, and the libraries are kept replenished.

Entertainments are held regularly and frequently in the recreation halls at the hospitals, comprising picture shows throughout the year and dances during the cooler months; whilst concert parties frequently visit the hospitals and provide much appreciated entertainments.

The religious interests of all patients are guarded at each institution, and services of various denominations are held regularly whilst some patients attend divine service in the nearby churches.

The Red Cross Society has continued to supply liberal weekly supplies of cake, fruit, sweets, tobacco, cigarette papers, &c., to the returned soldier patients from both wars in the mental hospitals, whilst the local sub-branches of the R.S.A.I.L.A. also provide for the comfort and entertainment of these patients in each centre. During the past year, too, the 4BH Smokes for Soldiers Fund made regular weekly donations for a period to each of the ex-service patients.

The canteen at the Brisbane Mental Hospital continues to function satisfactorily and it would appear to be an undoubted boon to patients and their visitors. There is a total of 600 patients having small trust accounts, of which more than half are operated on regularly through the canteen ledger sales. In addition during the month of June, there was a total of 3051 small cash sales over the counter. During the last twelve months, the average monthly turnover at the canteen was £434.

The Psychiatrist finds that the ordinary amenities of life are influential to a greater degree in the treatment of patients suffering from mental illnesses than is the case in physical illness, and of recent years no effort has been spared to enhance the various aspects of physical life in the several Mental Hospitals.

At the three mental hospitals, the furnishings of the nurses homes have been considerably improved, and a dining-room has been constructed for the male nursing staff at the Toowoomba Mental Hospital. The appointments in the general kitchen and laundries have been very largely added to, as also have those in the kitchens of the nurses homes.

The transport facilities at the Brisbane Mental Hospital have been largely mechanised and arrangements are in hand for the provision of motor transport at the other mental hospitals. A tractor has been provided at the farm of the Brisbane Mental Hospital and a rotary hoe at the Ipswich Mental Hospital, whilst the vegetable gardens at the Brisbane Mental Hospital have had irrigation plants installed and the obsolete methods of hand cultivation have been discarded in addition to the benefits that resulted to the hospitals from these innovations, a very definite psychological benefit must accrue to the patients engaged in this form of occupational therapy by using modern methods and up-to-date machinery.

The investigation work necessary for the establishment of the new mental hospital in Northern Queensland has further advanced, and the construction of this hospital, as well as being of benefit to the regional population, should also tend to relieve the over-crowding in the southern mental hospitals.

The construction of the repatriation block at Wacol is proceeding apace and the buildings are now taking definite shape.

The appendix hereto shows items indicate of progress in medical and administrative aspects of mental hygiene, together with a list of the various works that have been undertaken, during the past seven years.

MENTAL HYGIENE SERVICE, QUEENSLAND.

STATISTICS RELATING TO THE MENTAL HOSPITALS FOR THE FINANCIAL YEAR ENDING 30TH JUNE, 1945.

Mental Hospital.

	Brisbane.			Toowoomba.			Ipswich.			Townsville.			Total.		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
On books of hospitals, 1st July, 1944	990	928	1,918	621	623	1,244	379	159	538	2	5	7	1,992	1,715	3,707
Admitted and re-admitted	256	249	505	31	28	59	9	4	12	39	33	72	335	314	649
Transferred from other Mental Hospitals (contra)	60	40	100	6	1	7	33	4	37	1	1	2	100	46	146
Total under care during the year	1,306	1,217	2,523	658	652	1,310	421	167	588	42	39	81	2,427	2,075	4,502
Discharged, recovered	117	120	237	11	16	27	4	..	4	4	4	8	136	140	276
Discharged, relieved	46	9	55	7	5	12	3	..	3	..	..	..	56	14	70
Discharged, not improved	3	3	6	1	..	1	..	..	..	..	..	..	4	3	7
Died	96	82	178	28	29	57	20	9	29	2	1	3	146	121	267
Transferred to other Mental Hospitals (contra above)	39	5	44	5	6	11	25	2	27	31	33	64	100	46	146
Remaining on books on 30th June, 1945 ..	1,005	998	2,003	606	596	1,202	369	156	525	5	1	6	1,985	1,751	3,736
Average number daily resident	965	912	1,877	603	592	1,195	367	158	525	2	3	5	1,937	1,665	3,602
On leave of absence, 30th June, 1945 ..	28	65	93	11	14	25	3	1	4	..	..	..	42	80	122

In conclusion I would like to express my appreciation of the courtesy and consideration that has been extended to me by the officers of those other Government Departments with whom my duties have brought me into contact.

APPENDIX TO THE REPORT OF THE DIRECTOR OF MENTAL HYGIENE, SHOWING THE PROGRESS IN THE MENTAL HYGIENE SERVICE DURING RECENT YEARS AND PLANS FOR THE FUTURE.

A—LEGISLATION.

1. Mental Hygiene Act of 1938 and Regulations.

Important aspects of the Act provide for—

- Voluntary and temporary patients;
- Generally simplifying admission;
- A Trainee system for nursing instruction;
- Managerial system of administration.

2. Backward Persons Act.

The Dalby Training Farm was established in May, 1941. Subsequently, the building was required to implement the war organisation, and the farm subordinated accordingly. It is hoped that this project will be resumed as soon as the war demobilisation conditions permit.

A Psychiatric Clinic has been inaugurated in temporary offices.

3. Criminal Code Amendment Act of 1945.

This is noteworthy in that it recognises that Psychiatry is concerned with certain aspects of delinquency.

B—ORGANISATION AND ADMINISTRATION.

The Administration set-up has been re-organised as set out hereunder:—

Director of Mental Hygiene—

Medical Superintendents—

Deputy Medical Superintendents and reclassification of Medical Officers.

Additional appointments—Specialists; Dentists; Optometrists; Occupational Therapists; Welfare Officers.

Managing Secretaries—

Non-medical administration.

C—RESEARCH ACTIVITIES.

No tangible progress has been made apart from machinery for the foundation of this service.

- Pathological Laboratory and Technician;
- Linison with the University;
- Psychiatric Clinics.

I believe that a fair estimate of the clinical standard of a hospital can be made from the efficiency or otherwise of its pathological and research facilities. In this regard the Mental Hygiene Service must improve.

D—FUTURE PLANS.

The following projects have received general departmental approval:—

- Establishment of a central office of the Director of Mental Hygiene;
- Reorganisation of the Brisbane Mental Hospital;
- Special accommodation for Returned Soldiers;
- Northern Mental Hospital;
- Special Institution for Backward Persons;
- Special Institution for Criminal Mentally Sick;
- Special Intermediate Psychiatric Hospital;
- Special provision for Senile Psychoses (old people who through great age are mentally incompetent);
- Special provision for Epilepsy;
- Provision of school and recreation grounds at the Epileptic Home;
- Main road surfaces to be bituminised in the hospital grounds.

E—WORKS EXECUTED.

(a) Brisbane Mental Hospital.

- Laboratory has been constructed by the conversion of an existing brick building adjacent to the hospital ward and provision made for the necessary appointments therein.
- New female ward has been erected with which is incorporated all the latest forms of treatment.
- Cafeteria system of meals has been instituted in one of the large male wards to serve 300 patients for each meal.
- Additional shelter sheds have been constructed in the male and female wards and the grounds of the hospital.
- Nurses' quarters.—An additional building has been erected for the nurses' accommodation. Improved furnishings and appointments, such as stove, refrigerators, wireless sets, furniture, ironing points have been made and reading and writing rooms provided.
- Dental Surgery, Dispensary and X-ray plant.—Alterations have been commenced to the general storeroom to provide accommodation for the above.
- General kitchen has been remodelled with improved lay-out and additional appointments such as cake-mixer, bacon slicer, stainless steel serving table, new coke ovens, additional potato peelers, &c. The staff has been provided with a dressing room.
- Bakehouse.—A dough mixer and hot water system have been installed.
- Laundry has had additional appointments of electric irons, extra drying cabinet, 8-roll ironing machine, and uniform pressing machine.
- Canteen has been erected in the grounds of the hospital and supplies light meals to visitors, and patients may purchase their extras direct from this canteen.

- (11) Lecture room has been provided for the nurses. Lectures were previously given in the recreation hall.
- (12) Residences.—The old isolation hospital was remodelled and converted into two flats for locum tenens, and improvements and alterations have been effected to the residences provided for several of the officers.
- (13) Cemetery attached to the hospital has been abolished and burials are now done in the township cemetery. A motor hearse has been provided for funerals instead of the old horse-drawn vehicle.
- (14) Motor transport has been substituted in part in lieu of horse transport.
- (15) Work room of improved design has been provided for the manufacture of clothing, &c.
- (16) New vegetable garden has been constructed, provided with an irrigation plant and a new flower garden and nursery has also been constructed.
- (17) Food menu has been varied and improved considerably and fruit is now a regular item.
- (18) Clothing has been varied and taken away from the institutional type as much as is possible.
- (19) Entertainments are much more frequent and average two per week.
- (20) Ward furnishings and appointments have been improved so as to obviate the former barrack-like atmosphere and create a more homely effect.
- (21) Engine room appointments are being improved to bring them into line with modern requirements. The coal bunkers are being altered to facilitate deliveries of coal.
- (22) Concrete mixer has been provided to enable the various repair works to be done efficiently and in modern style.
- (23) Farm has been supplied with concrete silos, milking shed, new stables, and tractor. The cattle herd has been improved by the introduction of new strains bred on production lines. The pig stud has been discontinued and regular turn-over of baconers substituted.
- (24) Fences have been removed around many of the wards in order to improve the general outlook.

(b) *Toowoomba Mental Hospital.*

- (1) Fire escapes have been constructed to Male Ward A and Female 1.
- (2) Shelter sheds for the use of patients against the weather have been constructed in Male Wards A, C, and D and Female Wards 1, 3, and 4.
- (3) Wireless sets have been provided in every ward as an additional amenity on modern lines.
- (4) An occupational therapy block is being constructed to provide an additional avenue for therapeutic treatment.
- (5) Cold storage has been provided and the butcher's shop extended.
- (6) New heat storage cooker has been installed in the general kitchen and appointments improved.
- (7) Laundry has been improved by the provision of an electric iron and the installation of additional drying cabinets.
- (8) The sewing room appointments have been similarly bettered by the provision of additional sewing machines and an electric iron.
- (9) Nurses' quarters have been enlarged and the furnishings and appointments considerably improved by the provision of a wireless, refrigerator, electric urn, electric grinders and toasters, &c., whilst the furnishing of the living quarters have been made much more comfortable. New quarters are being constructed for the assistant matrons in a self-contained building.

- (10) Town water supply now reticulates through the hospital; similarly the electric current is now drawn through the town supply.
- (11) New engine room has been constructed with dressing room accommodation for the staff. A new pumping station has been erected.
- (12) Blacksmith's shop has been provided to take the place of the former open-air workshop.
- (13) New dining room has been constructed as a mess room for the male artisan staff.
- (14) New lavatory blocks have been constructed at the stock yard and also adjoining the engine room.
- (15) New residences have been constructed for the engineer and assistant engineer, and the residences provided for the various other officers were renovated and added to.
- (16) New entrance gates were constructed entering the hospital grounds.
- (17) Food menu has been varied and improved considerably.
- (18) Ward furnishings and appointments have been improved so as to obviate the former barrack-like atmosphere and create a more homely effect.

(c) *Ipswich Mental Hospital.*

- (1) The Children's Ward has been enlarged to cope with the increased number of child admissions.
- (2) Quarters for relieving medical officer have been constructed and the residences of the other officers renovated.
- (3) Matrons' and nurses' quarters have been enlarged and the furnishings and appointments improved. The dining room has been made fly-proof and the kitchen has been added to.
- (4) Fire escapes have been constructed on Male Ward 2 and Female 1.
- (5) An automatic telephone system has been installed.
- (6) A multi-coin telephone has been installed in the nurses' quarters for the nurses' personal use.
- (7) Furnishings and appointments of the wards and the occupational room have been improved to obviate the former barrack-like atmosphere and so create a more homely effect.
- (8) Sewing room has been provided by the conversion of the disused general bathroom.
- (9) Lavatories have been constructed at the recreation hall.
- (10) Workshop has been constructed for the blacksmith.
- (11) A silo and new piggeries have been constructed at the farm.
- (12) A bush house has been erected to provide an extra avenue of occupational therapy.
- (13) Food menu has been varied and improved considerably.
- (14) Rotary hoe has been provided for use in the vegetable garden, bringing this section into line with modern practice.
- (15) The road surfaces have been bitumenised thus facilitating transport.

(c) *Epileptic Home.*

- (1) Sleep-out verandas have been constructed in the female division.
- (2) An additional area has been added to the reserve and it is hoped to build a school there. At present the school is conducted in a room at the Home and it is considered that a definite step forward would be made by having the school as a separate unit in its own grounds.

The Royal Sanitary Institute

Library.