

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

Contributors

Queensland. Department of Health.

Publication/Creation

Brisbane : Government Printer, [1950]

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1950.
QUEENSLAND.



ANNUAL REPORT
ON THE
HEALTH AND MEDICAL SERVICES
OF THE
STATE OF QUEENSLAND
FOR THE
YEAR 1949-50.

PRESENTED TO PARLIAMENT BY COMMAND.

BRISBANE:
BY AUTHORITY: A. H. TUCKER, GOVERNMENT PRINTER.

A. 38—1950.

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ANNUAL REPORT OF THE DIRECTOR-GENERAL OF HEALTH AND MEDICAL SERVICES, 1949-50.

The Honourable the Minister for Health and Home Affairs.

Sir,—I have the honour to submit for your information the annual report of the activities of the Health and Medical Services Branch of the Department of Health and Home Affairs (Queensland) during the year ended 30th June, 1950.

STAFF.

Dr. J. I. Tonge has been studying in the United States under the terms of the scholarship awarded to him by the Rockefeller Foundation.

Dr. C. R. Lulham, the first of the Departmental fellowship holders to complete the medical course, having completed twelve months' post-graduate hospital experience, commenced duty as assistant—part-time—to the Director of Industrial Medicine and to the Laboratory of Microbiology and Pathology. Previous to commencing his medical course, Dr. Lulham was an analyst in the Government Chemical Laboratory.

Dr. V. F. B. Lennon commenced duty at Peel Island, following the resignation of Dr. E. J. Reye.

Dr. L. Archibald resigned as Medical Officer, School Health Services.

SECTION OF MATERNAL AND CHILD WELFARE.

Shortage of trained staff has limited the expansion of the service it is desired to give, but it is pleasing to note that, despite this, new subcentres have been opened in some country areas.

The staff, particularly in isolated areas, have carried on under great difficulties, being forced to travel at all hours and to live in hotels where amenities are limited. Appreciation of their services is shown by the many mothers who travel long distances to bring their infants for advice. The results of their work appear in the falling infantile mortality rate. It is hoped that suitable living accommodation will be made for them when new centres are erected in country districts.

SECTION OF INDUSTRIAL MEDICINE.

Appreciation of the assistance given by this Section is shown by the increased requests for advice received from employers and employees. It is emphasised that the officers desire to act as independent advisers, and for this reason do not wish to introduce regulations under section 61 of "The Health Acts, 1937 to 1949," particularly as such regulations might conflict with those of other Departments. The liaison with other Departments has shown improvement

and will be further improved by the establishment of a Committee of Representatives of the various interested Departments that is being formed to discuss problems associated with industrial hygiene.

SCHOOL HEALTH SERVICES.

Two vacancies for medical practitioners exist on the staff, one being in Brisbane, the other at Townsville. If it is desired to carry out the policy of supervising the health of the children of this State up to leaving school, it is essential that the children be examined by a medical officer at least once in three years. As a step towards this, it is hoped that some of the fellowship students who graduated in 1949 will, after post-graduate experience in hospital, be allotted to this Section. The nurses are deserving of commendation for the excellent work they are doing, but it was never intended that they replace medical practitioners.

The School Dental Service is not giving the necessary service because of unavailability of staff. The policy of bringing a dental service to the children of isolated areas was taken a step forward when rail dental clinic No. 4 was commissioned to service the schools on the great northern railway route as far west as Mount Isa.

LABORATORY OF MICROBIOLOGY AND PATHOLOGY.

Two graduates who completed the Science course in Medical Science of the University of Queensland were appointed to the laboratory staff. This course was established to train students in laboratory procedures, and the first of the students graduated in 1949. Queensland University is one of the few universities in the world which conducts such a course.

The Director of the Laboratory (Dr. J. I. Tonge) will return at the end of the year, and as a result of the knowledge gained while studying as a Rockefeller Fellowship holder it is anticipated that the Laboratory's activities will expand. This will only be limited by available accommodation.

GENERAL.

The happy relations existing between the Department and the business firms of the State continue. Concern was felt at the possible damage which might be done by X-ray machines in shoe stores, both to the public and to employees. A conference was held between representatives of the employers, officers of the

Department, Professor H. C. Webster, and Mr. D. F. Robertson of the Physics Department of the University of Queensland. It was pleasing to note the readiness with which the owners of the machines were willing to have them tested and altered to meet the standards recommended.

Bakehouses have been inspected in regard to standard of bread and hygiene. There was criticism of my remarks at various times by the then secretary of the Bread Manufacturers' Association. This criticism was directed mainly towards the reference to the standard of flour being used, but no mention was made of the rush methods necessary to get "hot" bread on the cart by 7 a.m. following the 5 a.m. start. This, in my opinion, is the main reason for the quality of the bread of Brisbane.

Concern is felt at the continuance of the war-time measure of pasteurised milk vendors in Brisbane using the footpath as a "depot." A meeting was held with both wholesalers and retailers, and all agree that this unhygienic practice should cease. It is realised that building restrictions prevent the erection of the ideal structure, but temporary buildings would be acceptable as better than nothing. Legal action will be taken after a reasonable time to prevent the practice if it does not cease.

The 50 per cent. subsidy made to Local Authorities for mosquito control was commended by Professor E. Ford, Professor of Public Health at the University of Sydney, in an article on "The Malaria Problem in Australia and in the Australian Pacific Territories," published in the Medical Journal of Australia. I am of the opinion the encouragement given to Local Authorities in this practical manner is responsible for the absence of malaria in this State. Approval has been given for it to be continued this year.

VITAL STATISTICS.

Population.—The estimated population of Queensland at 31st December, 1949, was 1,160,300, an increase of 27,735 for the year. Of these 429,530 lived in Brisbane. Table I. shows the growth of Queensland and of Brisbane since the turn of the century, according to the various censuses.

TABLE I.

SHOWING THE POPULATION OF QUEENSLAND AND OF BRISBANE AT THE VARIOUS CENSUSES, AND THE PERCENTAGE OF TOTAL POPULATION LIVING IN BRISBANE.

Census Year.	Queensland.	Brisbane.	Percentage Living in Brisbane.
1901	498,129	119,428	24.0
1911	605,813	139,480	23.0
1921	755,972	209,946	27.8
1933	947,534	299,748	31.6
1947	1,106,415	402,030	36.4

Although the population of Brisbane is increasing at a rate disproportionate to the population of the rest of the State, the percentage of the total population living in the capital city is not nearly as high as in New South Wales (almost 50 per cent.), Victoria (60 per cent.) and South Australia (65 per cent.). Probably the development of secondary industries in Brisbane has caused the relatively rapid rise in population. Nevertheless, the majority of people still live in country districts, scattered in small communities over a tropical and sub-tropical area of 670,000 square miles, and the provision of modern services in preventive and curative medicine is no mean undertaking. The Flying Doctor Service, the rail dental clinics, maternal and child welfare clinic car and sub-centres in isolated districts help to reduce the feeling of isolation frequently felt by people who live in outback areas far from medical or nursing aid. In some cases, maternal and child welfare nurses pay regular visits by air to centres difficult of access. To encourage people to go into the country and develop it for food production, these medical services will not only have to be maintained but they must be expanded, but such expansion can only be realised if trained nurses are willing to go to the country.

Births.—During the year 1949, 27,748 births were registered in Queensland. The crude birth rate (births per 1,000 mean population) was 24.2. Table II. compares the crude birth rates of Queensland with those of other States and overseas countries since 1910.

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

	1910.	1920.	1930.	1940.	1945.	1946.	1947.	1948.	1949.
Commonwealth of Australia ..	26.7	25.5	18.8	18.0	21.7	23.7	24.1	23.1	22.9
Queensland	27.3	27.2	20.8	19.9	24.8	24.8	25.7	24.7	24.2
New South Wales	27.8	26.1	20.6	17.8	21.1	22.8	23.2	22.2	22.1
Victoria	24.5	23.9	18.5	16.8	20.5	23.1	23.1	22.1	21.9
South Australia	26.5	24.7	17.4	16.7	22.3	24.8	25.2	24.1	23.8
Western Australia	28.0	24.7	21.4	19.4	21.9	24.6	25.6	25.1	25.4
Tasmania	29.2	27.3	21.7	20.8	23.3	27.2	27.7	26.4	26.1
New Zealand	26.2	25.1	18.8	21.2	23.2	25.2	26.4	25.5	24.9
United Kingdom	25.0	25.4	16.8	14.6	16.2	19.4	20.7	18.1	17.0
United States of America ..	n	23.7	18.9	17.9	19.6	23.3	25.7	24.2	24.1
Canada	n	29.4	23.9	21.5	23.9	26.9	28.6	27.0	26.6

n Not available.

It is apparent that the birth rate is commencing to fall from its high post-war level. Nevertheless it remains above the latest rate

recorded for the Commonwealth of Australia, and good economic conditions will tend to keep the birth rate above those of the pre-war period.

The natural increase (excess of births over deaths) was 17,587 for 1949, being equal to an increase of 1.6 per cent. of the population.

Deaths.—During 1949, deaths from all causes totalled 10,161, giving a crude death rate

(deaths per 1,000 mean population) of 8.9, which was the lowest rate in Australia except for Tasmania.

Table III. compares the crude death rates of the Commonwealth, Queensland, other States, and certain overseas countries since 1910.

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

	1910.	1920.	1930.	1940.	1945.	1946.	1947.	1948.	1949.
Commonwealth of Australia ..	10.4	10.5	8.6	9.7	9.5	10.0	9.7	10.0	9.5
Queensland	9.7	10.7	8.2	9.0	8.8	9.8	9.2	9.3	8.9
New South Wales	9.9	10.1	8.4	9.4	9.2	9.7	9.5	10.0	9.4
Victoria	11.5	11.1	8.9	10.7	10.2	10.6	10.4	10.4	10.3
South Australia	10.1	10.4	8.5	9.5	9.6	10.2	9.6	10.3	9.5
Western Australia	10.1	10.3	8.8	9.5	9.7	9.6	9.4	9.1	9.0
Tasmania	11.1	9.7	9.8	9.9	9.7	10.1	9.2	9.6	8.8
New Zealand	9.7	10.2	8.6	9.2	10.1	9.7	9.4	9.1	9.1
United Kingdom	14.0	12.9	11.7	14.0	12.7	12.1	12.1	10.9	11.7
United States of America ..	15.0	13.1	11.3	10.7	10.6	10.0	10.1	9.9	9.7
Canada	n	13.7	10.7	9.8	9.4	9.4	9.4	9.3	9.1

n Not available.

Table IV. shows the principal causes of death in Queensland over a period of years since 1920. Features meriting comment are the absolute decline in total deaths from infectious diseases, diarrhoea and enteritis, puerperal infection, diseases of infancy, and childbirth, and causes

due to pre-natal and early infancy, despite a considerable increase in population. These figures afford striking proof of the effectiveness of modern methods of prevention and treatment of disease.

TABLE IV.
CAUSES OF DEATHS OF RESIDENTS OF QUEENSLAND. *

Diseases.	1920.	1930.	1940.	1945.	1946.	1947.	1948.	1949.
Whooping Cough	48	38	21	15	15	26	5	9
Diphtheria	133	58	24	17	20	13	5	18
Tuberculosis (Respiratory)	341	353	262	314	303	261	248	238
Tuberculosis (Other)	36	30	17	20	16	11	18	19
Syphilis	68	42	95	36	50	61	50	60
Influenza	122	51	87	33	58	17	95	21
Measles	54	3	21	2	12	12	4	5
Other Infective and Parasitic	194	122	110	97	82	86	78	88
Cancer and Other Malignant Tumours ..	592	746	1,052	1,125	1,191	1,204	1,239	1,239
Tumours (Non-Malignant or Unspecified) ..	9	9	72	72	77	83	68	70
Chronic Rheumatism and Gout	16	15	21	22	23	15	14	25
Diabetes Mellitus	68	75	154	148	172	168	213	188
Alcoholism (Acute or Chronic)	28	17	24	13	31	26	44	23
Vitamin Deficiency Diseases, Other General and Blood Diseases, Chronic Poisonings ..	149	130	182	161	155	163	169	150
Meningitis (Simple) and Diseases of Spinal Cord	116	55	55	32	52	35	61	49
Intra-Cranial Lesions of Vascular Origin ..	338	331	646	814	926	897	1,016	1,138
Other Nervous System	157	170	141	150	125	125	101	105
Diseases of the Heart	1,007	1,237	2,209	2,632	3,186	2,936	2,964	2,855
Other Circulatory System	166	279	164	210	218	181	222	214
Bronchitis	192	94	88	81	111	99	130	103
Pneumonia, Broncho-Pneumonia	365	384	460	392	520	455	546	457
Other Respiratory System	169	178	166	140	161	198	202	186
Diarrhoea and Enteritis	708	152	114	84	77	145	81	70
Appendicitis	63	72	74	61	62	56	47	33
Liver and Biliary Passages	110	104	118	100	115	120	104	116
Other Digestive System	273	189	211	239	222	213	202	256
Nephritis	394	508	610	505	516	515	550	516
Other Genito-Urinary System	132	157	201	218	197	175	171	173
Puerperal Infection	46	52	34	16	16	8	9	7
Other Diseases of Pregnancy and Childbirth	40	28	61	50	45	38	32	33
Skin, Bones, and Organs of Movement ..	48	79	53	25	16	21	13	18
Pre-Natal and Early Infancy Causes ..	675	536	539	647	632	619	578	529
Senility	486	458	275	350	351	292	365	332
Suicide	139	181	136	85	127	129	117	127
Homicide	10	16	17	11	23	14	4	8
Automobile Accidents	53	83	168	116	169	173	170	181
Other Violent and Accidental	401	419	501	396	524	506	490	472
Unspecified or Ill-Defined	..	4	20	30	52	20	37	30
Total, All Causes	7,946	7,455	9,203	9,459	10,648	10,116	10,462	10,161

Not so striking, however, are increases in deaths from cancer and other malignant tumours and from diseases of the heart and vascular system. The increase in the mortality rate of cancer may be more apparent than real due to better diagnosis (e.g. fewer people are being diagnosed as dying from causes such as digestive diseases and senility), to fewer deaths from other causes, and to the fact that more people are surviving into the age group when cancer has its highest incidence—the so-called “cancer age.” While these factors also operate in diseases of the heart and vascular system, all statisticians are agreed that the increase is an absolute one which cannot be explained by better diagnosis or by increased expectation of life. For instance, 41 per cent. of all deaths in 1949 were due to disease of the heart and vascular system, as compared to 15 per cent. in 1920. (See Figure 1.) The cause remains obscure, but there must be some factor or factors (whether dietetic or mental) in modern living that make the incidence of these diseases so high. Diseases of the heart and vascular system present a challenge to research, for, apart from their mortality, they cause considerable morbidity (or ill-health).

Infantile Mortality.—The infantile mortality rate is the number of deaths under one year of age per 1,000 live births. Table V. shows the infantile mortality rates of Queensland, Australia, other States, and certain overseas countries since 1910. The decline in infantile mortality from 62.9 in 1910 to 24.7 in 1949—the lowest ever recorded in Queensland—is a considerable achievement, as the infantile mortality rate is one of the best indices of public health. Further details of infantile mortality

are given in the report of the Section of Maternal and Child Welfare, but it may be pointed out that of the 686 infant deaths in 1949, no fewer than 501 were due to pre-natal causes such as malformations, premature birth, and birth injuries. These pre-natal causes are the core of the problem, and must be attacked with vigour.

The fall in the infantile mortality rate is due mainly to the reduction in the number of infants who die from prematurity. To assist in reducing this rate still further, a booklet on “Problems of Prematurity” has been published, and is being distributed to doctors and hospitals. Thanks are due to Drs. Shedden Adam and Felix Arden, and Miss E. McCorkindale, who assisted the Director of Maternal and Child Welfare (Dr. H. C. Murphy) in producing this booklet. It should assist in reducing the prematurity mortality rate because of the special measures recommended to ensure the survival of the premature infant.

While factors such as the introduction of new drugs and antibiotics, together with a greater knowledge of blood conditions, are important elements in this reduction, the work of the nursing staff of the Section of Maternal and Child Welfare also plays a significant part in the decrease. In this regard I would refer to the departmental mothercraft homes at Brisbane and Toowoomba. It is recognised that homes such as these contribute materially to the reduction of infantile mortality, particularly in the early months of life, and it is hoped that the awaited alterations to the homes which have already been purchased elsewhere will soon be carried out so that they will be able to function.

TABLE V.
INFANT MORTALITY RATE (DEATHS UNDER ONE YEAR PER 1,000 LIVE BIRTHS).

	1910.	1920.	1930.	1940.	1945.	1946.	1947.	1948.	1949.
Commonwealth of Australia ..	74.8	69.1	47.2	38.4	29.4	29.0	28.5	27.8	25.3
Queensland	62.9	63.2	40.0	35.3	29.8	29.3	30.8	28.0	24.7
New South Wales	74.7	69.4	49.8	39.0	30.6	30.2	29.8	30.3	27.3
Victoria	76.9	73.7	46.6	39.5	28.0	27.2	26.2	23.9	21.9
South Australia	70.2	67.3	48.4	35.5	28.1	27.1	24.3	23.7	27.7
Western Australia	78.2	66.0	46.7	44.2	29.5	31.1	30.9	25.6	26.4
Tasmania	101.7	65.5	50.6	35.2	27.5	30.1	27.3	27.7	23.9
New Zealand	67.7	50.6	34.5	30.2	28.0	26.1	25.0	21.9	23.7
United Kingdom	105.0	82.0	63.0	61.0	48.8	42.7	43.5	36.0*	n
United States of America ..	n	85.8	64.6	47.0	38.3	33.8	32.0	32.0*	n
Canada	n	n	89.3	56.4	51.3	46.7	45.5	42.0*	n

* Provisional.

n Not available.

Maternal Mortality.—The maternal mortality rate is the number of maternal deaths in child-bearing per 1,000 live births. For 1949, the Queensland mortality rate reached the low

figure of 1.44. Better obstetrical techniques, better ante-natal supervision, and the use of modern antibiotic drugs have materially reduced the risk of death in childbirth. (See Table VI.)

Figure 1

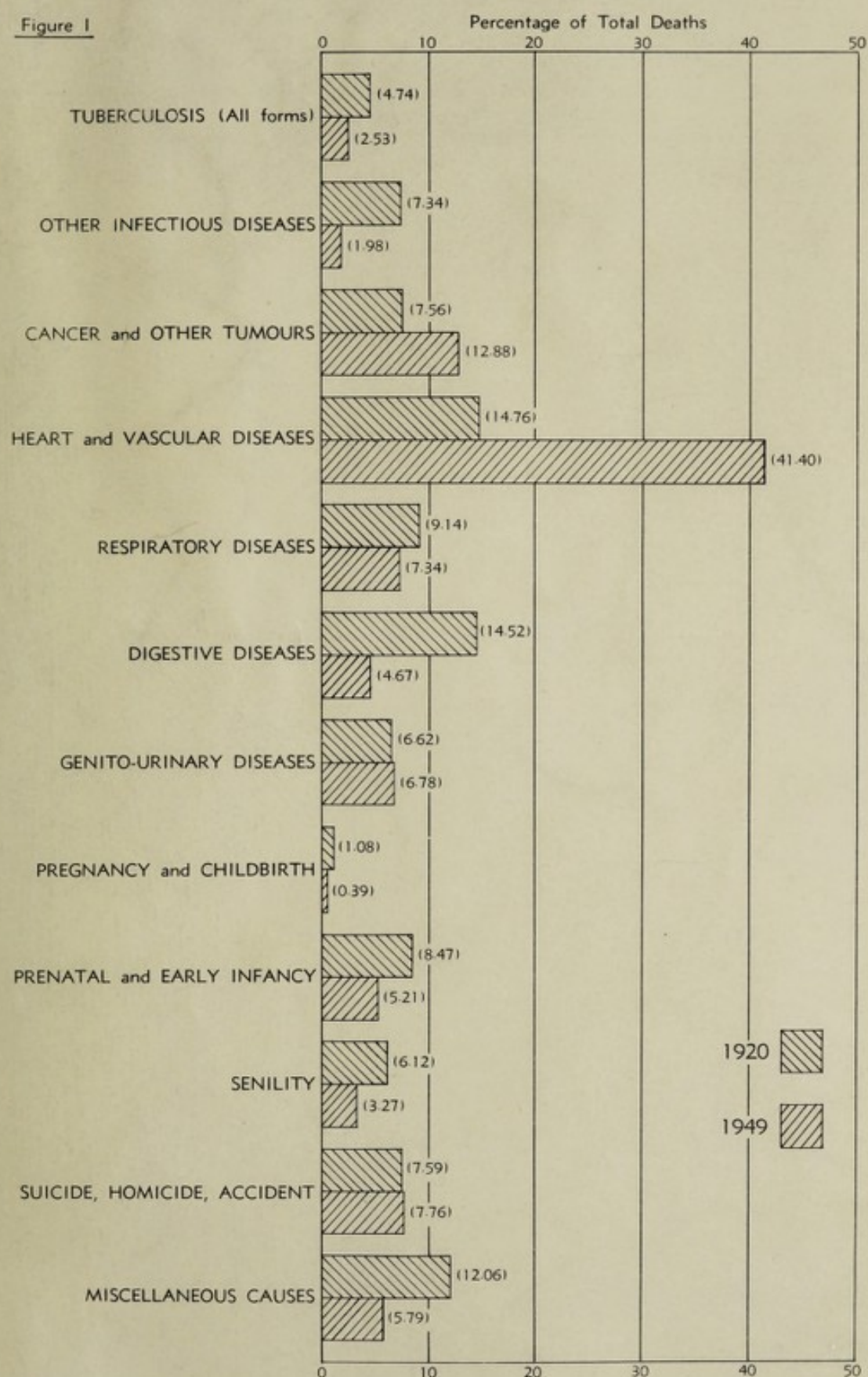


Figure Showing Proportion of Deaths from Principal Causes (expressed as a percentage of Total Deaths) for the years 1920 and 1949.

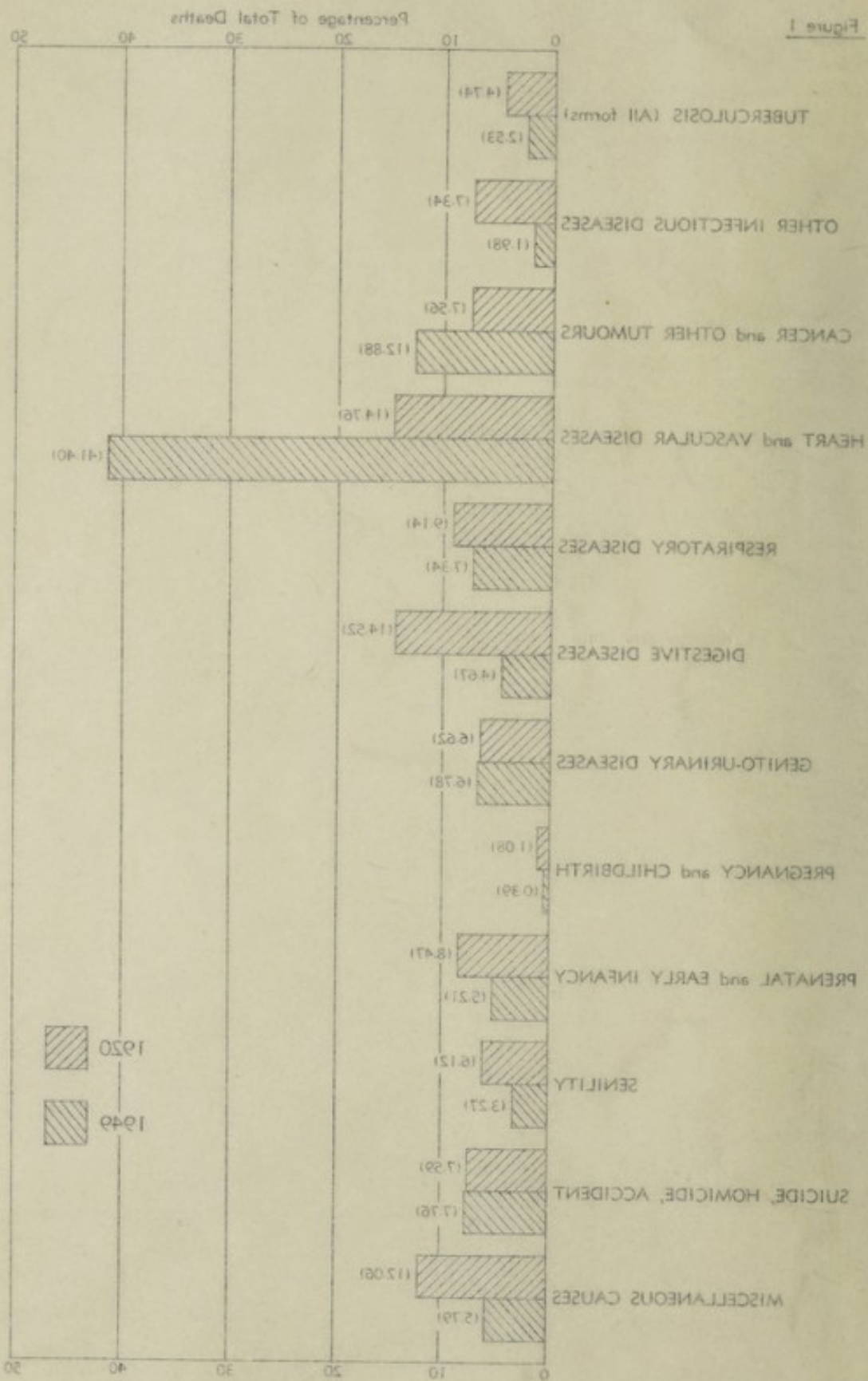


Figure Showing Proportion of Deaths from Principal Causes (expressed as a percentage of Total Deaths) for the years 1920 and 1949.

Figure 1

Mothers and Infants.—For a population to increase by natural means, the birth rate must be sufficiently high, and the maternal and infantile mortality rates must be so low that the great majority of mothers and infants survive. In addition, the net natural increase must be such that the population can at least replace itself. To demonstrate these aspects, Table VI. has been inserted, in which various rates for Queensland and Australia have been included.

The crude birth and infantile and maternal mortality rates have been defined previously. The crude birth rate is not entirely satisfactory as a reproductive index, as it takes no account of the age and sex distribution of the population. To obtain a truer measure of fertility statisticians make use of gross reproduction rate, net reproduction rate and true replacement rate. The Government Statistician defines the gross reproduction rate as "the number of children who would be born to the average woman during the whole child-bearing period of her life if current rates prevailed throughout the whole of the time." The net reproduction rate is obtained from the gross rate by allowing for the production of female children who themselves fail to reach child-bearing age. The gross reproduction rate is not affected by age composition and is to be preferred to the crude birth rate; it measures fertility but it does not take mortality of women into account

nor does it measure the rate at which the population is replacing itself. For this purpose the net reproduction rate is used. This indicates the average number of female children who would ultimately be born to girls born during the year if the fertility and mortality rates for that year remained unchanged. A net reproduction rate of less than unity indicates a declining population, provided no immigration occurs and provided fertility and mortality remain unchanged. The true replacement rate is based on still more information, in that it takes into account not only varying proportions of women of child-bearing age but also the differing proportions of women in the early years of married life at which period fertility is always higher than in the later years of marriage, irrespective of the age of the wife when the marriage commenced. It is the net reproduction rate adjusted to eliminate temporary fluctuations in the proportion of women married and in numbers of married women at each duration of marriage. In 1949, the true replacement rate was 1.22—i.e., the women of Queensland reproduced 22 per cent. more children than were required to replace the present generation of mothers.

The important conclusion to be drawn is that the Queensland population is reproducing itself and in this respect compares more than favourably with the Commonwealth of Australia and, indeed, with other English-speaking countries.

TABLE VI.
BIRTH, INFANT MORTALITY, MATERNAL MORTALITY, AND REPRODUCTION RATES, QUEENSLAND AND AUSTRALIA.

	Crude Birth Rate.		Infant Mortality Rate.		Maternal Mortality Rate.		Gross Reproduction Rate.		Net Reproduction Rate.		True Replacement Rate.	
	Queensland.	Australia.	Queensland.	Australia.	Queensland.	Australia.	Queensland.	Australia.	Queensland.	Australia.	Queensland.	Australia.
1901	28.5	27.2	101.9	103.6	4.15a	3.77a	n	1.74	n	1.39	n	n
1911	27.6	27.2	65.4	68.5	5.77	5.03	n	1.71	n	1.42	n	n
1921	26.7	25.0	54.1	65.7	5.31	4.72	n	1.51	n	1.31	n	1.33
1931	19.3	18.2	36.6	42.1	5.07	5.49	n	1.14	n	1.03	n	1.06
1934	18.2	16.4	40.6	43.6	4.61	5.76	n	1.03	n	0.94	n	0.96
1939	20.0	17.7	35.5	38.2	5.21	4.09	1.28	1.08	1.16	1.00	1.18	0.95
1940	19.9	18.0	35.3	38.4	4.70	4.08	1.25	1.10	1.15	1.02	1.14	0.94
1941	20.8	18.9	39.1	39.7	4.28	3.64	1.30	1.15	1.19	1.07	1.15	0.96
1942	20.4	19.1	34.8	39.5	3.97	3.59	1.26	1.16	1.16	1.07	1.09	0.94
1943	22.2	20.7	37.8	36.3	3.83	3.33	1.39	1.26	1.25	1.16	1.15	1.00
1944	23.1	21.0	31.3	31.3	3.02	2.85	1.45	1.29	1.32	1.20	1.19	1.03
1945	24.8	21.8	29.8	29.4	2.47	2.15	1.53	1.34	1.39	1.24	1.26	1.07
1946	24.8	23.7	29.3	29.0	2.26	1.85	1.55	1.46	1.42	1.33	1.25	n
1947	25.7	24.1	30.8	28.5	1.62	1.87	1.64	1.49	1.54	1.36	1.26	n
1948	24.7	23.1	28.0	27.8	1.47	n	1.60	1.45	1.51	1.33	1.23	n
1949	24.2	22.9	24.7	25.3	1.44	n	1.58b	n	1.50b	n	1.22b	n

a Figures for 1901 not available. Figures shown are for 1902.

b Provisional.

n Not available.

COMMUNICABLE DISEASES.

Communicable disease tables VII., VIII., and IX. show the incidence of communicable and notifiable diseases in Queensland for the calendar year 1949, and for the fiscal year 1949-50,

dissected into Metropolitan and Extra-metropolitan figures.

Generally speaking, there is little significant change in the notifications from previous years. Attention is drawn to the following notifiable diseases :

TABLE VII.

COMMUNICABLE DISEASES (EXCLUSIVE OF VENEREAL DISEASES) 1ST JULY, 1949, TO 30TH JUNE, 1950.
METROPOLITAN AREA (POPULATION AT 1ST JULY, 1949—424,000).

Diseases.	Months.												Total 1949- 1950.
	1949.						1950.						
	July.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April.	May.	June.	
Anchylostomiasis ..	..	1	..	..	..	..	..	1	..	..	1	..	3
Anthrax	..	..	..	..	..	..	..	..	..	..	..	..	..
Bilharziasis	..	..	..	..	..	..	..	..	..	..	..	..	..
Cholera	..	..	..	..	..	..	..	..	..	..	..	..	..
Coastal Fever	..	..	..	..	..	..	..	..	..	..	..	..	..
Diarrhoea (Infantile)*	14	57	20	9	16	13	38	16	11	16	1	2	213
Diphtheria	..	..	2	3	6	12	13	3	13	10	13	7	82
Dysentery, Amoebic ..	..	..	..	..	..	..	..	..	..	..	1	..	1
Dysentery, Bacillary ..	..	1	11	3	2	23	36	38	60	20	12	19	225
Encephalitis Lethar- gica	..	..	..	..	..	..	..	..	..	..	..	..	..
Filariasis	..	..	..	..	..	..	..	..	..	..	..	..	..
Lead Poisoning	..	1	..	..	1	..	..	..	..	..	..	..	2
Leprosy	..	..	..	..	..	..	..	..	..	..	..	..	..
Leptospirosis (Weil's Disease, Paraweil's Disease, Seven-day Fever)	..	..	..	..	..	..	..	..	..	..	..	..	..
Malaria	..	..	1	1	..	1	1	1	..	2	3	1	11
Meningitis, Cerebro- spinal	2	1	2	1	1	..	..	..	..	..	..	1	8
Mossman Fever	..	..	..	..	..	..	..	..	..	..	..	..	..
Plague, Bubonic or Oriental	..	..	..	..	..	..	..	..	..	..	..	..	..
Poliomyelitis, Acute Anterior	2	1	..	..	1	..	..	..	1	1	..	..	6
Puerperal Fever	..	..	1	..	..	..	..	..	..	..	..	..	1
Puerperal Pyrexia	3	2	1	1	..	..	..	..	..	..	3	..	10
Relapsing Fever	..	..	..	..	..	..	..	..	..	..	..	..	..
Rubella†	..	..	8	27	13	5	1	1	..	..	..	..	55
Sarina Fever	..	..	..	..	..	..	..	..	..	..	..	..	..
Scarlet Fever or Scarlatina	13	12	18	6	15	15	8	7	7	2	9	7	119
Smallpox (including Amaas or Alastrim)	..	..	..	..	..	..	..	..	..	..	..	..	..
Tuberculosis (all forms)	14	19	33	22	23	18	29	47	34	33	35	19	326
Tetanus	3	2	1	1	1	..	2	1	..	1	2	4	18
Typhoid Fever (in- cluding Paratyphoid Fevers) ..	..	2	..	..	1	2	..	2	..	..	..	..	7
Typhus Fever (in- cluding Rural and Urban Forms and Japanese River Fever)	..	1	2	2	1	..	..	..	1	2	..	1	10
Undulant (Malta) Fever	..	..	..	..	..	..	..	..	..	..	..	..	..
Yellow Fever	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals	51	100	100	76	81	89	128	117	127	87	80	61	1,097

* Diarrhoea for more than 48 hours' duration in children under 2 years of age was declared a notifiable disease with respect to the whole of the State of Queensland on the 24th March, 1949, (*vide Government Gazette*, 20-3-49, page 1066).

† Rubella (German Measles) in females over the age of 14 years was declared to be a notifiable disease under the said Acts with respect to the whole of the State of Queensland in the *Government Gazette* of September 17th, 1949.

TABLE VIII.
COMMUNICABLE DISEASES (EXCLUSIVE OF VENEREAL DISEASES) 1ST JULY, 1949, TO 30TH JUNE, 1950.
EXTRA-METROPOLITAN AREA (POPULATION AT 1ST JULY, 1949—726,771).

Diseases.	Months.												Total 1949- 1950.
	1949.						1950.						
	July.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April.	May.	June.	
Anchylostomiasis ..	3	2	2	5	..	1	2	1	..	2	1	9	28
Anthrax	..	..	..	..	..	..	..	..	..	..	..	..	..
Bilharziasis	..	..	..	..	..	..	..	..	..	..	..	..	..
Cholera	..	..	..	..	..	..	..	..	..	..	..	..	..
Coastal Fever	..	..	..	..	..	..	..	..	..	..	..	..	..
Diarrhoea (Infantile)*	3	6	7	7	4	3	6	..	1	3	8	..	48
Diphtheria	18	15	8	4	6	5	10	7	3	10	11	7	104
Dysentery, Amoebic ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dysentery, Bacillary ..	..	..	..	4	..	2	3	2	3	3	1	4	22
Encephalitis Lethargica	..	..	..	1	..	1	..	1	..	..	2	..	5
Filariasis	..	..	..	1	..	..	..	..	..	..	..	1	2
Lead Poisoning	..	..	..	..	..	..	..	..	..	..	..	..	..
Leprosy	..	..	..	..	..	..	..	..	1	..	..	..	1
Leptospirosis (Weil's Disease, Paraweil's Disease, Seven-day Fever)	4	1	..	1	1	..	..	..	..	..	7	4	18
Malaria	2	2	2	..	3	1	..	1	..	..	..	1	12
Meningitis, Cerebro-spinal	2	..	1	..	..	3	3	1	3	2	..	6	21
Mossman Fever	1	..	..	..	..	..	..	1	..	1	..	..	3
Plague, Bubonic or Oriental	..	..	..	..	..	..	..	..	..	..	..	..	..
Poliomyelitis, Acute Anterior	..	..	..	2	..	1	1	..	2	..	..	2	8
Puerperal Fever	..	..	..	..	..	..	..	..	1	..	..	..	1
Puerperal Pyrexia	..	1	..	..	..	..	..	..	2	2	2	..	7
Relapsing Fever	..	..	..	..	..	..	..	..	..	..	..	..	..
Rubella †	..	..	5	8	4	6	4	..	..	..	..	..	27
Sarina Fever	..	..	..	..	..	..	..	..	..	..	..	..	..
Scarlet Fever or Scarlatina	12	22	27	12	10	13	13	21	13	10	9	12	174
Smallpox (including Amaas or Alastrim)	..	..	..	..	..	..	..	..	..	..	..	..	..
Tuberculosis (all forms)	18	18	22	12	12	9	11	34	16	11	12	12	187
Tetanus	1	6	1	..	1	3	1	..	1	1	..	2	17
Typhoid Fever (including Paratyphoid Fevers)	..	2	..	..	2	..	..	..	1	..	..	..	5
Typhus Fever (including Rural and Urban Forms and Japanese River Fever)	2	9	5	3	4	3	7	1	10	..	..	3	47
Undulant (Malta) Fever	..	..	..	1	1	..	1	..	..	1	..	2	6
Yellow Fever	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals	66	84	80	61	48	51	62	70	57	46	53	65	743

* Diarrhoea for more than 48 hours' duration in children under 2 years of age was declared a notifiable disease with respect to the whole of the State of Queensland on the 24th March, 1949, (*vide Government Gazette*, 26-3-49, page 1066).

† Rubella (German Measles) in females over the age of 14 years was declared to be a notifiable disease under the said Acts with respect to the whole of the State of Queensland in the *Government Gazette* of September 17th, 1949.

TABLE IX.

NOTIFIED INCIDENCE OF COMMUNICABLE DISEASES IN QUEENSLAND (EXCLUSIVE OF VENEREAL DISEASES),
SECTION 29 OF "THE HEALTH ACTS, 1937-1949," DURING THE CALENDAR YEAR 1949.

Disease.	Cases Reported on Prescribed Form.			
	Metropolis.	Outside Areas.	Total Whole State, 1949.	Total Whole State, 1948.
Anchylostomiasis	2	20	22	23
Anthrax	..	..	..	..
Bilharziasis	..	..	..	..
Coastal Fever	..	3	3	5
Cholera	..	..	..	..
Diphtheria	39	130	169	153
Diarrhoea (Infantile)*	159	41	200	..
Dysentery, Amœbic	..	..	..	7
Dysentery, Bacillary	53	26	79	34
Encephalitis Lethargica	..	5	5	1
Filariasis	..	1	1	..
Lead Poisoning	2	1	3	10
Leprosy	..	4	4	9
Leptospirosis (including Weil's Disease, Paraweil's Disease, Seven-day Fever)	..	11	11	19
Malaria	15	18	33	74
Meningitis, Cerebro-spinal	10	10	20	21
Mossman Fever	..	3	3	5
Plague, Bubonic or Oriental	..	..	..	..
Poliomyelitis, Acute Anterior	4	16	20	37
Puerperal Fever	1	4	5	1
Puerperal Pyrexia	15	9	24	51
Relapsing Fever	..	..	..	..
Rubella †	53	23	76	..
Sarina Fever	..	..	..	..
Scarlet Fever or Scarletina	170	197	367	370
Smallpox (including Amaas or Alastrim)	..	..	..	..
Tetanus	15	17	32	28
Tuberculosis (all forms)	263	171	434	452
Typhoid Fever (including Paratyphoid Fevers)	8	14	22	15
Typhus Fever (including Rural and Urban Forms, and Japanese River Fevers)	10	59	69	64
Undulant (Malta) Fever	2	3	5	1
Yellow Fever	..	..	..	..
Totals	821	786	1,607	1,380

* Diarrhoea for more than 48 hours' duration in children under 2 years of age was declared a notifiable disease with respect to the whole of the State of Queensland on the 24th March, 1949, (*vide Government Gazette*, 26-3-49, page 1066).

† Rubella (German Measles) in females over the age of 14 years was declared to be a notifiable disease under the said Acts with respect to the whole of the State of Queensland in the *Government Gazette* of September 17th, 1949.

Enthetic Diseases.—A further decrease in the number of venereal disease notifications received is recorded, but I find it difficult to believe that they represent a true picture of the incidence of such diseases in Queensland. It would appear medical practitioners do not appreciate the value of notification of communicable diseases.

In venereal disease, on receipt of a notification, every endeavour is made to trace the source of infection as one case might be responsible for infecting many other persons. The Council of the British Medical Association have co-operated with the Department by pointing out the value of notification to its members, and it is hoped that any practitioners who have not appreciated their obligations will now give the department their co-operation.

Smallpox.—Because of the danger of smallpox entering Australia, the National Health and Medical Research Council recommended that children under the age of two, and selected groups such as doctors, nurses, wharf labourers, and others who are likely to come into contact with persons who might be infected with the smallpox virus should be vaccinated. The main danger is from a passenger who enters Australia by air, and therefore a vaccination certificate is required from him.

A person who travels by sea may arrive in Australia from India or Indonesia within the incubation period of the disease, and thus pass unrecognised as suffering from smallpox. I am of the opinion that they also should produce a vaccination certificate, or, if this is not practicable, as far as Queensland is concerned, the first port of call should be Brisbane.

Hansen's Disease.—Last year I visited the leprosaria at Carville, La., Kalaupapa (Molokai) and Hale Mohalu (Honolulu) and was accorded the privilege of residing at Carville, where I was attached to the resident medical staff for duty. I received instruction in the administration of the leprosarium and the treatment given to the patients. The Carville leprosarium is under the control of the Federal Government. As in Australia, the control of Hansen's disease in the United States is the responsibility of the individual States, but as only isolated cases occur in some States and the legislation varies in different States, particularly as regards compulsory isolation, the Federal Government provides a leprosarium for the treatment of all patients in the United States. As the Federal Government has no power to isolate these patients compulsorily, they are to all intents and purposes voluntary patients though, if they refused to go to Carville, they would be compulsorily isolated in their own State.

As a result of recommendations made approval has been given for the removal of the

leprosarium at Peel Island to the mainland and a suitable site is now under discussion. The period during which the patient gives clean smears before release has been decreased; patients are allowed visitors daily; a visiting orthopaedic surgeon, plastic surgeon, and physician have been appointed to the visiting staff, in addition to an ophthalmologist, and, as requested by the patients here, the name of the disease is now known as Hansen's disease.

The main, if not the only, grievances held by the patients are that they are kept in isolation and are not allowed holidays at home for a month twice a year as is allowed at Carville. I have given much thought to this matter and am strongly of the opinion that until such time as our knowledge of the epidemiology of this disease, especially in relation to spread, is increased, patients who give positive smears for Hansen's disease should be kept in isolation until they become negative.

Hansen's disease is not notifiable in England. It is interesting to read in the medical journals that the numbers there are steadily increasing, and that consideration was to be given to making it a notifiable disease.

Much has been said of Carville but I would point out that patients at that institution do not receive free tobacco and other such amenities as are given to the patients at Peel Island; if they have a wireless it is not given to them by the governing authority; nor do they receive pensions and State allowances for their dependants.

Throughout the world, efforts are being made to educate the public to the fact that Hansen's disease is a communicable disease like any other communicable disease, and not a disease of the unclean or of immorality. Action has been taken by the Queensland Health Education Council in this regard, and Hansen's disease was the subject of "Dr. Day discusses" in the "Brisbane Telegraph." Other articles will follow.

Tetanus.—Although tetanus never assumes epidemic proportions, its distressing clinical features and high mortality make it a disease which is associated with a good deal of fear in the public mind. Tetanus strikes sporadically, and death can occur from infection following injuries that would otherwise be trivial.

In spite of the advent of antibiotic and anti-convulsant drugs, the mortality from tetanus has shown little change and still approximates 50 per cent. For prevention we rely chiefly on

a prophylactic injection of anti-tetanic serum after likely injuries, but the immunity conferred by serum lasts only a few weeks. Tetanus toxoid, used in the active immunisation against

tetanus, has proved its worth, and will be referred to later, but in the meantime much useful information on the incidence of this disease can be gained from a study of Table X.

TABLE X.
SHOWING NOTIFICATIONS FROM TETANUS IN QUEENSLAND FOR FIVE YEARS (1945-46 TO 1949-50) DISSECTED INTO AGE GROUPS.

Age-Group.	1945-46.			1946-47.			1947-48.			1948-49.			1949-50.			Totals.		
	*M.	*E.	*S.	*M.	*E.	*S.	*M.	*E.	*S.	*M.	*E.	*S.	*M.	*E.	*S.	*M.	*E.	*S.
Under 1 year	0	0	0	1	1	2	1	0	1	1	0	1	1	1	2	4	2	6
1 to 14 years	8	7	15	9	6	15	5	6	11	4	5	9	7	6	13	33	30	63
15 to 29 years	4	1	5	7	3	10	4	1	5	4	3	7	4	4	8	23	12	35
Over 30 years	8	6	14	4	3	7	5	7	12	6	5	11	6	6	12	29	27	56
Totals	20	14	34	21	13	34	15	14	29	15	13	28	18	17	35	89	71	160

* M. Metropolitan.

* E. Extra-Metropolitan.

* S. Whole of State.

This table shows the following points of interest:—

- (1) The metropolitan area, containing 40 per cent. of the total population of the State, contributes over 55 per cent. of the cases. Probably the principal source of infection in the Greater Brisbane area is the home garden, and observers have been surprised to note the high proportion of Brisbane citizens who tend their gardens in bare feet. In view of the possibility of contracting tetanus from a punctured wound, they are surely taking an unjustified risk unless they have recently been immunised.
- (2) All cases of tetanus in children under the age of one year were neo-natal, and could not have been prevented by immunisation.
- (3) The age-group 1-14, which contains only 25 per cent. of the population, contributes about 40 per cent. of the cases of tetanus. Here, again, children have a tendency to discard footwear when not at school, but this is also an age when physical activity is high and injuries are consequently extremely common.

The Government Statistician has supplied an analysis of deaths due to tetanus over the last five calendar years (1945 to 1949) which contain the following features:—

- (1) Deaths totalled 89.
- (2) Deaths according to age-groups were:—

Under 1 year	6
1-4 years	10
5-9 years	16
10-14 years	6
15-19 years	9
20-29 years	4
30-39 years	5
40-49 years	8
50-59 years	9
60 years and over	16
	89

- (3) Occupations chiefly represented were:

	Deaths.
Infants under 5 years	16
School children (5-14 years)	26
Farm workers	8
Home duties	7
Labourers	5
Drivers	2
Miscellaneous occupations	24
Unstated occupation	1
	89

Here, again, it can be seen that 36 per cent. of deaths from tetanus in Queensland during the last five years occurred in children under the age of 15 years, who comprise less than 28 per cent. of the population. This may be a chance distribution, or it may mean that the disease is more fatal in this age group.

The figures quoted underline the need for better preventive measures. Tetanus prophylaxis by regular doses of tetanus toxoid has been shown to be highly effective. In the 1914-18 war the total number of British wounded on all fronts was 2,032,142; of these 2,385 soldiers developed tetanus, in spite of the fact that anti-tetanic serum was in general use after 1914. The incidence of tetanus was 1.7 per 1,000 wounded. In the British Expeditionary Force in 1940, fighting over the same territory as in the 1914-18 war, not one case of tetanus occurred in 16,000 immunised men, yet 8 cases occurred amongst 1,600 men who had not been immunised.

Experience in the United States army in the recent war was also striking—of 500,000 battle casualties only 12 cases of tetanus (including 6 in unimmunised personnel) occurred during the period 1942-45.

In the Services primary immunisation was followed by "booster" doses of toxoid every year. If a serviceman was wounded, the American and Australian practice was to give him a further injection of toxoid, and only if the wound was severe was he given anti-tetanic serum. It is not certain that these emergency measures are really necessary in a person recently immunised, but in the present state of knowledge they should not be withheld.

There is a distinct public demand for tetanus immunisation, and when we consider that in the five years 1945-49, 89 persons died from tetanus as compared with 73 deaths from diphtheria, it is clear that the problem merits the serious attention of public health administrators.

As indicated earlier, 40 per cent. of the cases notified during the last five fiscal years have been in children over twelve months, but less than fifteen years, of age. If the incidence in this age group can be reduced by active immunisation, an important advance will have been made. This Department has always favoured immunisation of children by private doctors or by Local Authorities, provided parents are warned that primary immunisation does not confer permanent immunity, and that "booster" doses will be required. No Local Authority has yet offered free tetanus immunisation to children, but several are considering schemes. The Commonwealth Government, under the Pharmaceutical Benefits Act, will pay for the cost of tetanus toxoid on prescription by a doctor, and it is logical to believe that free tetanus toxoid will soon be available to Local Authorities. This would give a valuable impetus to any anti-tetanus campaign that may be developed in the next few years.

Acute Anterior Poliomyelitis.—Despite the fact that every State in the Commonwealth experienced an epidemic during the year, Queensland was fortunate in having a total of only 14 cases compared with 28 in the previous year.

Little progress has been made in regard to determining whether the spread is from the nose and throat or bowel. The virus has been isolated from flies. Whatever the method of spread, it is a reasonable precaution to dispose of night-soil in such a way that flies will not have access to it. I would therefore urge all Local Authorities to accept this as an added reason why serious consideration should be given to the installation of a sewerage system, particularly as such a scheme receives Government subsidy.

In anticipation of an epidemic, a meeting of the Advisory Committee on Poliomyelitis was held. Existing facilities for treatment were surveyed, and precautions that might be taken when an outbreak of poliomyelitis does occur in this State, discussed.

Infantile Diarrhoea.—In March, 1949, infantile diarrhoea of more than 48 hours' duration in children under two years of age was made a notifiable disease in Queensland. During the year 202 notifications were received, 159 of these being in the metropolitan area, where diagnostic facilities are more freely available than in the country.

Gastro-intestinal disorders in infants are extremely common, and the opinion is expressed that the notifications are not unduly large. One feature worthy of mention is that, during the spring of 1949, gastro-intestinal infection due to *Shigella sonnei* was diagnosed for the first time in this State.

This organism proved to be of low virulence, but was found to spread remarkably quickly in close communities such as orphanages and

infants' homes. It is extremely difficult to control, once it enters an institution. The incidence is declining. The research being carried out by the Queensland Institute of Medical Research is a factor in the control of this disease, particularly in hospitals.

Bacillary Dysentery.—During the year 1949-50, 247 cases of bacillary dysentery were notified. Many of these were in children over the age of two, and the majority of cases were not of severe type.

The increases in notifications (65 in 1948-49) is partly due to better diagnosis and to increased consciousness of the disease by the medical profession.

Rubella.—On 17th September, 1949, rubella (German measles) was made a notifiable disease in females over the age of 14 years. The object of notification was to endeavour to determine the incidence of congenital defects in the offspring of women who were pregnant at the time of infection. Notifications were entered in a special register, and where the information was not contained in the notification form, the attending medical practitioner was communicated with to see whether or not the patient was pregnant.

Up to 30th June, 1950, 82 notifications were received, 27 being from the Greater Brisbane area. Of these 8 patients were pregnant—the duration of pregnancy being as follows:—

Less than 3 months	..	..	..	3
Three to six months	..	..	..	1
Over six months	..	..	..	4

The infants are being followed up, through their medical attendants, but insufficient time has elapsed to quote the findings from this small series of cases.

Diphtheria.—During the fiscal year 1949-50 the total number of cases of diphtheria notified was 196, compared with 145 for the previous year. Attention is invited to the increase of 56 in the metropolitan area, while there has been a fall in the country notifications. No reason can be given for this increase.

Table IV. shows that deaths from this disease increased from 5 in 1948 to 18 in 1949, and every death occurred in an unimmunised child. Generally speaking, immunisation campaigns throughout the State were prosecuted with vigour by Local Authorities, but a few Local Authorities appear to be rather reluctant to visit out-of-the-way settlements to offer children the benefits of immunisation.

The Commonwealth Serum Laboratories have made available to the Brisbane City Council trial supplies of a new diphtheria prophylactic called APAT which promises to confer a higher degree of immunity than any existing prophylactic. It is expected that APAT will be available to other Local Authorities in Queensland during the coming year.

The earliest age at which infants should be immunised has received further consideration during the year, and analysis of notifications in

children under one year of age for the seven years, 1943 to 1949, show that of the 97 cases of diphtheria notified for that age group only 10 cases were notified in infants under the age of 6 months. Between the age of 6 months and 9 months, 27 cases were notified, while from the end of the ninth month notifications totalled 60. It was apparent that the incidence of diphtheria increases after the sixth month of life. This is probably due to the fact that diphtheria is becoming a relatively rare disease, and mothers are transferring less immunity to their infants than they were in the days when diphtheria was one of the commonest of diseases.

In view of these figures, it has been decided to advocate that the first injections of diphtheria prophylactic should be given at the age of six months, and that the course should be completed before the child attains its first birthday. A "booster" dose should be given when the child commences school.

Leptospirosis.—Late in June, 1950, an outbreak of leptospirosis occurred in the cane fields of North Queensland and approximately 70 cases of the disease were admitted to hospital. This outbreak is still under investigation, but it would appear that it occurred because rain fell shortly after the cane-cutting season opened. Cane burns were incomplete, and the ground and cane plants were not properly dry when the cane was cut.

Tuberculosis.—It will be seen from Tables VII and VIII, that there has been an increase of 55 cases of tuberculosis notified in the metropolitan area and an increase of 14 in the country, for the year ended 30th June, the increase being in the January-June period. There has, however, been a decrease for the calendar year 1949. This is quite understandable as the statistics for tuberculosis are now showing the results of the activities of the Director of Tuberculosis. The public are becoming more conscious of the disease and contacts of cases have presented themselves for examination. It is anticipated that, with improved diagnosis by mass radiography, for the first few years the incidence will show a rise.

The progress made in the tuberculosis campaign is not as advanced as was hoped, because of delays in obtaining equipment and buildings. A request was made to the Commonwealth Government for a portion of a temporary building in Ann street to establish a chest clinic, but no decision has as yet been given. Such a clinic is the keystone of any tuberculosis campaign for it is here that mass radiography and Mantoux testing will be carried out. Procedures such as pneumothorax refills will be performed here as well as physical examination of any person who cares to present himself. However, action has been taken to discover persons suffering from the disease, the first step in the prevention of any communicable disease,

and in this regard Mantoux testing is carried out by the Director of Tuberculosis at his office in the Department and positive reactors are X-rayed at the Brisbane General Hospital.

X-ray equipment has been ordered for the clinic as well as for the railway carriage which will visit country towns and for the Brisbane Hospital. It is intended to X-ray every patient reporting for in-patient and out-patient treatment. Fortunately, accommodation is available for these plants.

A camera which can be attached to an X-ray machine will be installed at the Toowoomba Hospital, and mass X-ray will be available to all persons who present themselves at the hospital. It should be functioning within two months. If it is successful a similar service will be given by hospitals in all the large towns in Queensland. This will bring mass radiography more quickly to the country than waiting for a unit mounted in a railway carriage. Mantoux testing is available at all larger country hospitals.

The unit to carry out surveys of aboriginal settlements and missions has been established, and is functioning at the present time at Cherbourg. During the year Mantoux testing was carried out by Dr. F. M. Macken, who examined clinically all positive Mantoux reactors. All negative Mantoux aboriginals were inoculated with B.C.G. (*Bacillus Calmette Guérin*) vaccine so as to increase their resistance to the tubercle bacillus. These settlements will be revisited and all the aboriginals will be X-rayed. Despite further representations they are not entitled to social benefits such as pensions. I am of the opinion that where aboriginals are under control they should receive benefits at least equal to the Torres Straits islanders, and as far as tuberculosis allowances are concerned I am supported in this by the National Health and Medical Research Council. They are taxpayers and contribute to the social service fund, but do not participate in its benefits.

Progress in building the Chermide Sanatorium has held up by materials. Approval has now been given for the erection of pre-fabricated structures which will be used until the permanent building is erected.

DECLINE IN INFECTIOUS DISEASES.

In commenting on causes of death in Queensland, mention was made of the decline in deaths from infectious diseases. To illustrate this trend in more detail, Table XI, showing the average annual number of notifications and deaths from tuberculosis, diphtheria, and typhoid fever, in five-year periods since 1910, has been prepared.

Tuberculosis.—The reporting of tuberculosis is still unsatisfactory, and for some periods the number of deaths has exceeded the number of notifications. However, it is pleasing to record that notifications have exceeded deaths for the last two five-year periods. There has been a substantial fall in the death rate from tuberculosis (from 59 per 100,000 population to 26 in thirty-five years). This is due chiefly to fewer people being infected; partly to better standards of living and nutrition and to improved diagnostic and therapeutic procedures. This trend will continue in the future.

Diphtheria.—This has shown a dramatic and sustained fall in notifications and in mortality. It should be noted that there was no appreciable decline in incidence until after 1934, when mass immunisation began to show its worth.

Typhoid Fever.—As the figures show, in the first twenty years of this century, typhoid fever was an extremely common disease. The marked decline in notifications and in deaths since 1920 is a measure of the improved methods of sanitation (particularly of water supply and of disposal of nightsoil) which have operated over the last thirty years.

TABLE XI.
SHOWING NOTIFICATIONS AND DEATHS FOR TUBERCULOSIS, DIPHTHERIA AND TYPHOID FEVER
BY QUINQUENNIAL PERIODS SINCE 1910.

Quinquennial Period.	Mean Population.	Notifications.						Deaths.					
		Average Annual Number.			Rate per 100,000 Population.			Average Annual Number.			Rate per 100,000 Population.		
		*Tb.	*D.	*T.F.	*Tb.	*D.	*T.F.	*Tb.	*D.	*T.F.	*Tb.	*D.	*T.F.
(a)													
1910-14 ..	634,686	301	1,267	1,058	47.41	199.55	166.64	375	88	118	59.06	13.86	18.59
1915-19 ..	696,101	437	1,954	994	62.78	280.71	142.80	384	77	99	55.16	11.06	14.22
1920-24 ..	778,801	436	1,755	508	55.98	225.33	65.23	359	78	52	46.10	10.02	6.68
1925-29 ..	869,188	368	1,667	194	42.34	191.79	22.32	369	69	32	42.45	7.94	3.68
1930-34 ..	934,402	250	1,911	115	26.76	204.52	12.31	355	55	17	37.99	5.89	1.82
(b)													
1935-39 ..	990,727	265	1,096	83	26.75	110.63	8.38	314	42	13	31.69	4.24	1.31
1940-44 ..	1,041,599	538	593	62	51.65	56.93	5.95	311	29	7	29.86	2.78	0.67
1945-49 ..	1,108,629	453	348	20	40.86	31.39	1.80	290	14	1	26.16	1.26	0.09

* Tb. Tuberculosis. * D. Diphtheria. * T.F. Typhoid Fever.
(a.) Notifications prior to 1930 recorded for fiscal years only.

(b) 4 year period for notifications only.

DIVISION OF TUBERCULOSIS.

E. W. ABRAHAM, M.B., B.S. (Melb.), M.D. (Melb), M.R.C.P. (Lond.), Director of Tuberculosis.

The Division of Tuberculosis of the Department of Health and Home Affairs was formed during 1949, the Director taking up his appointment in November of that year.

This was done as Queensland's part of the Australia-wide attack on tuberculosis, whereby the States are to undertake the work of controlling this disease and the Commonwealth Government provides the finance.

Though progress has so far been slow, the basis of an organisation to cope with the prevention of new cases, treatment of established cases, and the discovery of unknown cases has been set up and has commenced work on a small scale.

Much has been achieved in commencing control of the contacts of known cases of the disease. This is a most important step in case finding, as the highest incidence of new cases is usually to be found in the intimate contacts—particularly family contacts—of cases of pulmonary tuberculosis, particularly where a patient may have had the disease for some time before its discovery.

Cases notified during the past eighteen months have been contacted by Miss Craig, the visiting nurse attached to the division, the position explained to them or to their families, and their co-operation invited. In almost every case there has been a ready acceptance of the help offered, and appreciation of the investigation has often been expressed.

Contacts are skin tested by the Mantoux test with 1-1000 Old Tuberculin, and positive reactors—that is, those in whom infection with the germ of tuberculosis has occurred—are X-rayed to see if active disease has resulted from this infection. This, fortunately, is rarely the case, but a small number of early cases of active tuberculosis disease have been found in this way and are now under treatment at a stage of their disease when they would not otherwise have come to medical notice.

B.C.G. Vaccine.—Contacts who are Mantoux negative have been offered vaccination with B.C.G. vaccine, and a gratifyingly large number have accepted this opportunity of obtaining the protection which this harmless attenuated strain of the tubercle bacillus can give.

Contacts—Total, 1,013.

Positive	Negative (Vaccinated)	Negative (Not Vaccinated)
564	375	74

Case-finding in Children.—With the co-operation of the Brisbane Children's Hospital, a similar method of investigation is being undertaken, as a case-finding measure. All new admissions to hospital are Mantoux-tested, and, if positive, X-rayed. A small number so X-rayed have a previously undetected tuberculous lesion.

The homes from which positively reacting children come are visited and, as with contacts, the family are invited to attend for Mantoux-testing and X-ray. In this way it is hoped to discover the source of the infection which resulted in the child becoming positive. This line of approach is a very useful one, particularly where the number of cases in the community is not expected to be large, as it provides a method of pin-pointing likely foci of infection. It also provides information regarding the epidemiology of tuberculosis in the Brisbane district, which will be a guide in the other methods of investigation.

Survey in Aborigines.—An epidemiological survey of great importance has been commenced among the aboriginal population of the State, including the islands of the Torres Strait. This is being undertaken by Dr. Faith Macken, who has Mantoux-tested the populations of Cherbourg, Woorabinda, Palm Island, and Fantome Island Aboriginal Settlements, and also at Yarrabah, Mona Mona, Mitchell River, Cowal Creek, and Red Island Point.

This survey is to be extended to the Gulf of Carpentaria region, where, in company with other officers of the Department, the Director made a preliminary survey of the problems involved, visiting Mapoon, Weipa, Aurukun, Mitchell River, Mornington Island, and Doomadgee Missions.

The primary object of this survey is to discover to what extent the aborigines of the State are infected with tuberculosis, by Mantoux-testing and X-raying of positive reactors, and by the widespread use of B.C.G. vaccine to protect against infection those not already infected. In addition, much useful data is being accumulated about the general health of the aborigines.

Results so far obtained are as follows:—

—	Examined	Positive to Mantoux Test	Per. Cent.
Cherbourg	947	492	54.0
Woorabinda	696	409	57.0
Palm Island	1,160	662	57.5
Fantome Island	73	44	60.3
Yarrabah	625	371	59.0
Mona Mona	259	111	43.0
Mitchell River	265	112	45.0
Cowal Creek	152	102	67.0
Muttee Head (Saibai Islanders)	115	48	41.7
Red Island Point	57	32	57.0
Moa Island	212	135	62.9
Thursday Island—(Children)—			
Coloured	115	53	45.0
White	113	34	30.0

N.B.—The Mantoux Test is an indication of Tuberculosis infection, not disease.

The distribution of positive reactors in all of these stations follows a similar pattern, in that the adults are more heavily infected than children, and adults who have been employed away from the station on cattle stations or in other work are more heavily infected than those who have not been away from the reservations. Children are positive largely in family groups, suggesting the presence of an open case in the family causing infection, the probability of such infection occurring being made greater by the generally crowded housing conditions under which the aboriginals live.

X-ray examination of positively reacting aboriginals will commence at Cherbourg Aboriginal Settlement in July, 1950, and during that year be extended to the Gulf Mission stations before the next wet season.

Treatment of Tuberculosis.—Some alterations have been made in the treatment of known cases of tuberculosis in the Brisbane area, which it is hoped will make for more efficient management of patients. The Brisbane and South Coast Hospitals Board has created several new positions during this year. At the South Brisbane Auxiliary Hospital 150 beds have been made available for the treatment of tuberculous cases, including early cases of tuberculosis. This has made it possible to transfer from the wards of the Brisbane General Hospital most of the cases of tuberculosis which have previously been treated at the General Hospital. This makes it possible for tuberculous patients to be treated on sanatorium lines—that is, to have regular rest hours, to avoid the distraction of being in busy general wards, and as all cases are being treated along similar lines, special treatment procedures and techniques of nursing can be developed.

Dr. Karl Uhd, who has had much experience with tuberculous patients, has been appointed Medical Superintendent at the South Brisbane Auxiliary Hospital. The Hospitals Board has created a position of visiting medical officer to the South Brisbane Auxiliary Hospital, to which Dr. Harold Love has been appointed. The Board has also created a position of thoracic surgeon, and thereby recognises the importance of surgery in the treatment of diseases of the chest, including tuberculosis. Dr. Morgan Windsor

has been appointed to this position and has already taken up his duties. The Director of Tuberculosis has been appointed to the position of consulting physician in charge of tuberculous patients at the Brisbane General Hospital. These four appointments make it possible to integrate the treatment of all tuberculous patients under the Board's care, and the four doctors concerned meet regularly as a consultant panel, to consider the management of the cases under their care. This brings the treatment of tuberculosis into line with general world practice, where this panel system has become very widely used and of great benefit to both doctors and patients.

The chemotherapy of tuberculosis, which has become increasingly important during the post-war period, made important advances during the past year. The most interesting discovery has been that the combination of two chemotherapeutic drugs has been of great value in treating suitable patients. These two drugs—streptomycin and para-amino-salicylic acid—when given together have a better effect than each separately, and the use of P.A.S. with streptomycin delays the tuberculous organisms becoming resistant to the action of streptomycin, a feature which had seriously interfered with the use of streptomycin alone. Unfortunately, these drugs are not capable of curing all cases of tuberculosis, but they provide a very useful new weapon in the attack on established cases of the disease, and are particularly useful in avoiding complications of surgical or collapse therapy and in permitting these measures to be used in cases otherwise unsuitable.

Distribution of these drugs throughout Queensland has been carried out with the co-operation of the Dispensary of the Brisbane General Hospital, and many cases have been successfully treated outside the Brisbane area. Requests for advice on the treatment of tuberculous patients have also been received by the Division of Tuberculosis from country hospitals, and it is hoped that an increasing number of doctors throughout Queensland will present their problems in the management of tubercular patients to the Director during the coming year.

Outside of the Brisbane area, the Westwood Sanatorium is the only institution in Queensland wholly devoted to treating cases of tuberculosis. This sanatorium is under the care of Dr. E. Silberstern, and treatment of patients is being thoroughly and energetically carried out. Unfortunately, 50 out of the possible 100 beds are not available, owing to the lack of accommodation for nursing and domestic staff, but it is hoped that this shortage will be overcome in the near future and the number of beds in use increased.

Two changes in organisation have been introduced by the Rockhampton Hospitals Board during the past year, which have improved the facilities available for treating patients. These have been the appointment of Dr. Windsor as thoracic surgeon to the Rockhampton Hospital, and the appointment of an occupational therapist to the sanatorium. Thoracic surgery can now be undertaken at Rockhampton, which

not only relieves pressure on beds in Brisbane, but enables patients at Westwood to have necessary treatment more speedily than has been the case in the past. The wider use of occupational and diversional therapy in the sanatorium wards has also made for contentment and better treatment for the patients concerned.

A close liaison has been established with the Rehabilitation Section of the Social Services Department, which will considerably assist in overcoming the difficulty of returning patients, after treatment, to their former or to suitable new employment.

In many cases much can be done while patients are still having treatment in a sanatorium, and in some cases this pre-vocational training has been commenced. After discharge from hospital more active training is possible, either at trade schools or at the Rehabilitation Centre, Perry Park. The number of patients undergoing rehabilitation as yet is small, but will increase when the Division of Tuberculosis increases its activities.

Other Aspects.—With the co-operation of Dr. Patrick, students undergoing training as teacher trainees have been skin-tested and X-rayed during the early part of 1950. A total of 312 were skin-tested, of whom 104 were positive and

208 negative reactors. One hundred and thirty-nine of the negative reactors were vaccinated with B.C.G. vaccine. Fortunately, no new cases of tuberculosis were found in this survey, but the incidence of positive reactors was surprisingly high in a group of healthy young adults. It is hoped to make this skin test a regular feature of physical examination of teaching recruits.

A small survey of patients and a complete survey of the staff at the Brisbane Mental Hospital, Goodna, was made with a view to determining the necessity of instituting protective procedures at the Brisbane Mental Hospital. 234 staff were examined, of whom 194 were positive and 40 negative reactors; 28 staff were vaccinated with B.C.G. vaccine. Of 85 patients tested, only 13 were negative reactors, of whom most had recently come into the institution. Proposals for the treatment of tuberculosis in the hospital have been put forward, and a large scale X-ray campaign to find active cases is being undertaken.

When the present difficulties of clinic space are overcome it is hoped that expansion of tuberculosis control in Queensland will be rapid, and that, in the foreseeable future, this disease may be as uncommon as is diphtheria in this community.

HANSEN'S DISEASE (LEPROSY).

VINCENT F. B. LENNON, M.B., B.S. (Adel.), Medical Officer in Charge.
F. MAHONY, Superintendent.

TABLE XII.

SHOWING POPULATION CHANGES IN PATIENTS AT PEEL ISLAND FOR LAST THREE YEARS.

	1947-48.			1948-49.			1949-50.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Population as at July 1 ..	41	14	55	42	10	52	46	13	59
Admitted	7	1	8	10	3	13	3	..	3
Discharged	5	3	8	2	0	2	2	2	4
Died	1	2	3	4	0	4	3	1	4
Population as at June 30 ..	42	10	52	46	13	59	44	10	54
Increase	1	..	..	4	3	7	..	..	..
Decrease	..	4	3	..	..	..	2	3	5

It is noted that there were only three admissions, one being a new case and two re-admissions.

It is anticipated that, as time goes on, the number of discharges will increase. It is accepted overseas that it requires three to four years of sulphone therapy before the majority of patients who have been positive for some time become negative. Sulphone therapy was commenced in this State in 1947 and its benefits bacteriologically are now becoming apparent. A clinical improvement usually takes place before the bacteriological.

Details of the causes of death are shown in the following table:—

TABLE XIII.

SHOWING DETAILS OF PATIENTS WHO DIED AT PEEL ISLAND LAZARET, 1949-50.

Sex.	Age.	Cause of Death.	Autopsy performed.
Male ..	79	Pneumonia, pulmonary tuberculosis, anemia, Hansen's disease ..	Yes
Male ..	76	Uraemia, chronic nephritis, Hansen's disease ..	Yes
Male ..	43	Hansen's disease, paraphrenia ..	No
Female ..	49	Secondary carcinoma of breasts, Hansen's disease ..	Yes

Treatment.—The use of sulphone drugs has been continued with the good results obtained in previous years. Promin was the drug first used and this was followed by diasone. Discussion has taken place about the relative value of these

drugs. It is generally accepted that these two sulphones, together with sulphetrone, produce equally good results, but promin has been discarded, firstly as it is necessary to give it intravenously, but chiefly because it is more toxic than the other two. While sulphetrone in tablet form has been given for some time, the drug in the form of an aqueous solution given subcutaneously was only recently introduced, seven patients having volunteered to be treated with it. Its main virtue is that it is only given twice weekly, and if the results obtained are comparable with diasone it will be recommended as the drug of choice.

Specialist Visits.—Dr. E. O. Marks, ophthalmologist, visited the leprosarium and, following his recommendations, some patients were ordered to be sent to the Brisbane Hospital for surgical treatment, while an optometrist was sent to the Island to test a number of patients for glasses.

Dr. T. V. Stubbs Brown, orthopaedic surgeon, examined all patients whom the medical officer referred to him as likely to benefit by surgery or other treatment, and a number of patients have already been sent to the Brisbane Hospital, while the remainder will be sent in due course.

Dr. P. Macindoe, a plastic surgeon, accompanied Dr. Stubbs Brown, and one patient has benefited by a plastic operation.

In all, 34 patients were transferred to the Brisbane Hospital for investigation or specialist treatment.

In addition to the above a visit was made by a dentist who carried out any necessary treatment.

Laboratory.—The position of laboratory technician has again been advertised, and it is hoped there will be a response to the advertisement on this occasion. At the present time all laboratory tests are sent to the Laboratory of Micro-Biology and Pathology. These comprised 980 haematological examinations, 524 smears for *M. leprae*, and 588 microscopical urine tests.

Staff.—The shortage of nursing staff still continues, but by hard work and devotion to duty Matron and the nurses have carried on under difficult conditions. Their effort is deserving of the highest commendation.

Conditions of Discharge.—The practice in the past was to isolate a patient until he gave eleven consecutive negative smears over a period of fifteen months. It has been observed elsewhere that, with the advent of the sulphone drugs, the number of re-admissions has decreased. It is for this reason that the period of isolation has been reduced. The present requirement for release is that a patient will give twelve consecutive negative smears taken at monthly intervals. He is required to report for observation at least once yearly during the next six years, during which time he is encouraged to continue treatment, the Department supplying all necessary drugs. If the patient so desires he may apply for release at the end of six consecutive negative smears on condition that he promises to continue treatment for a further six months, reporting at monthly intervals during this period for blood examinations and smears. At the end of this period he is required to report at least at yearly intervals.

Welfare of Patients.—There is now no limit to the number of visitors whom a patient might have, provided they apply for a pass—nor are the visiting days fixed. Motion pictures continue to be shown twice weekly and regular visits are paid by teams who engage the patients in billiards and tennis. During the year the Grand Lodge of the Royal Antediluvian Order of Buffaloes consecrated a lodge for the patients, and this meets regularly now.

Every effort is made to make the patients contented, all reasonable requests being granted by the Department. During the year Dr. Charles Jackson, a member of the State Council of the R.S.S.&A.I.L.A. (Queensland Branch) visited the leprosarium in the interests of four returned soldier patients. The unbiased report furnished to the League by him was a source of satisfaction to all associated with the administration. Reporters from the Brisbane "*Telegraph*" and Brisbane "*Truth*" also visited the Island, and were shown around by a party consisting of staff and two patients. These gentlemen questioned both patients and staff, and the reports which appeared in their respective papers were fair comment of what was seen and said.

The method of spread of Hansen's disease is not known, therefore the spread of infectious material to a healthy person cannot be prevented and, as the organism has not been grown, an immunising agent has not been found. If the child of a leprosy mother is taken from her at birth, that child does not develop Hansen's disease and, when this has not been done, the percentage of children developing Hansen's

disease is significant. It is also of interest that a person who marries someone suffering from Hansen's disease does not commonly contract the disease. I discussed this with Professor Aycock of Harvard University, who expressed the opinion that there is a percentage of persons in the community who are susceptible to Hansen's disease, that this susceptibility is inherited, but there is no method of determining who are susceptible. It has frequently been argued that, because tuberculosis is more communicable than Hansen's disease, patients suffering from the latter condition should not be isolated. The method of transmission of tuberculosis is known, therefore once a case is diagnosed it should not be responsible for the spread to susceptibles. As the method of spread of Hansen's disease has yet to be discovered, and because it is limited, it should be able to be eradicated with isolation of infected persons and adequate follow-up of contacts. I am prepared to agree that certain persons suffering from tuberculosis should be isolated, and this has been provided for in the draft Tuberculosis Regulations. I am of the opinion that our only hope of eradicating Hansen's disease is by isolating patients and by sulphone drugs, and until such time as the method of spread of the disease is known I cannot recommend any alteration in the present policy of discharge.

HANSEN'S DISEASE AMONG ABORIGINES.

The following table shows the population changes that have taken place at Fantome Island during the past year:—

TABLE XIV.
SHOWING POPULATION CHANGES AT FANTOME ISLAND
LAZARET FOR YEAR 1949-50.

	Males.	Females.	Total.
In Lazaret, 1st July, 1949..	40	33	73
Admitted	9	1	10
Discharged	..	..	..
Died	1	4	5
In Lazaret, 30th June, 1950	48	30	78
Increase	8	..	5
Decrease	..	3	..

The table below sets out particulars of the age and cause of death of the five patients who died during the year.

TABLE XV.

Sex.	Age.	Cause of Death.
Male ..	19	Acute nephritis, Hansen's disease
Female ..	39	Toxaemia, Hansen's disease, cardiac failure
Female ..	55	Cerebral haemorrhage, hypertension, Hansen's disease
Female ..	24	Acute pulmonary oedema, ovarian carcinoma, Hansen's disease
Female ..	60	Generalised Hansen's disease, asthenia

A visit was made during the year by the Deputy Director-General to the Fantome Island leprosarium.

Buildings.—The buildings show some signs of deterioration, but they can be placed in reasonable order by the Superintendent at Palm Island, and this work will be carried out as soon as materials come to hand. The Superintendent, Palm Island, is making concrete bricks and considers that it will be possible to replace gradually the existing patients' huts with concrete huts.

Action is being taken to improve the ancillary buildings, but it is considered that a new central kitchen and common dining room are urgently required.

The installation of electric light has already been approved and a contract for wiring has been let.

Staff.—Treatment is carried out by six members of the Franciscan Order. These Sisters are enthusiastic, co-operative, and uncomplaining, and they cannot do enough for the patients.

Records of treatment and of progress are well kept.

Medical Equipment.—This is adequate, and no additional major equipment is required at present.

Diet.—I mention this to show the excellent work being done by the Administration of Palm Island Group in keeping up supplies of food to such an isolated community. Each patient consumes 3.5 lb. meat, 6 eggs, 12 oz. butter, 2 oz. cheese, and 2.3 gallons of milk per week, as well as fruit and vegetables in season. This is, of course, in addition to such things as potatoes, oatmeal, &c.

Treatment.—Sulphetrone treatment commenced in 1948. Difficulty was experienced in regard to dosage, but this has now been cut down and as a result the number of reactions and complications has lessened. This has led to greater co-operation by the patients. It is pleasing to note that the results obtained at Peel Island are paralleled at Fantome, and it is anticipated in the next few weeks seven patients will be discharged.

SECTION OF ENTHETIC DISEASES.

GEOFFREY HAYES, M.B., Ch.M. (Sydney), Medical Officer in Charge.

BEATRICE WARNER, M.B., B.S. (Melb.), Medical Officer.

During the year 731 persons were notified (anonymously) as suffering from venereal disease, as compared with 846 for the previous year.

Of these 155 were females and 576 males, as compared with 183 and 663 respectively in the previous year.

Of the cases 506 had gonorrhoea and 207 syphilis, as compared with 593 and 237 respectively for the previous year.

Last year it was claimed that it was the first time that the total for the State (846) had fallen below four figures since notification commenced

in 1914. This year there has been a further reduction. However, it might be wise not to accept these figures too hastily at their face value, as an analysis suggests that there are possibly a number of private cases not being notified. In 1929-30 30 per cent. of notifications came from the Department's own clinic in Brisbane. In 1939-40 the figure was 41 per cent. and in 1949-50, 70 per cent.—a complete reversal as compared with 20 years ago.

The following table dissects the incidence of notified venereal disease in Queensland for the past year:—

TABLE XVI.
INCIDENCE OF NOTIFIED VENEREAL DISEASE, QUEENSLAND, 1949-50.

	Metropolitan.		Outside Centres.		Whole State.		Total.
	Males.	Females.	Males.	Females.	Males.	Females.	
Gonorrhoea—							
Unspecified	6	7	20	7	26	14	40
Acute	327	51	57	6	384	57	441
Sub-acute	1	6	2	2	3	8	11
Chronic	2	3	0	2	2	5	7
Ophthalmia (Gonorrhoeal) ..	..	..	..	1	..	1	1
Vulvo Vaginitis	..	2	..	..	..	2	2
Syphilis—							
Unspecified	1	12	1	0	2	12	14
Primary	55	4	22	2	77	6	83
Secondary	8	9	9	16	17	25	42
Tertiary	10	2	5	4	15	6	21
Latent	14	6	2	4	16	10	26
Neuro	1	2	2	3	3	5	8
Congenital or Heredo (pre-natal) syphilis	4	0	3	2	7	2	9
Soft Sore	3	..	..	..	3	..	3
Venereal Warts	19	..	..	..	19	..	19
Ulcerative Granuloma	..	..	..	..	..	..	..
Syphilis and Gonorrhoea	1	1	1	1	2	2	4
Gonorrhoea and Venereal Warts ..	..	..	..	..	..	..	..
	452	105	124	50	576	155	731
Grand Totals	557		174		731		

It will be seen from this table that 557 cases came from Brisbane, and of these 512 were notified from the Department's ad hoc clinics in Brisbane (70 per cent. of the total for the State). The following table shows the spread of incidence for the rest of the State, totalling 174 cases.

Cairns shows a significant increase from 10 in 1948-49 to 24 this year while the notifications received from Mackay have fallen from 32 to 12.

TABLE XVII.
CENTRES OF NOTIFICATION OF VENEREAL DISEASES
OUTSIDE THE METROPOLIS.

	Males.	Females.	Total.
Atherton	1	1	2
Ayr	3	2	5
Bundaberg	2	2	4
Cairns	18	6	24
Caboolture	1	..	1
Chinchilla	1	..	1
Coolangatta	..	1	1
Cunnamulla	2	..	2
Dalby	..	1	1
Emerald	6	..	6
Gladstone	4	2	6
Gayndah	..	1	1
Gympie	3	..	3
Hughenden	2	2	4
Innisfail	2	1	3
Ipswich	2	..	2
Julia Creek	..	1	1
Kilcoy	1	..	1
Mackay	8	4	12
Mareeba	1	..	1
Maryborough	7	1	8
Mossman	..	1	1
Mount Isa	2	..	2
Proserpine	..	1	1
Rockhampton	15	6	21
Roma	3	..	3
Stanthorpe	4	1	5
Southport	1	..	1
Tambo	2	..	2
Toowoomba	11	4	15
Townsville	15	5	20
Tully	2	3	5
Warwick	2	3	5
Winton	2	1	3
Yeppoon	1	..	1
	124	50	174

Table XVIII. gives the alleged sources of the 731 infections—the professional prostitute, as usual, accounting for only a very small percentage of cases.

TABLE XVIII.
SOURCES OF INFECTION IN 731 CASES OF
VENEREAL DISEASE.

Non-professional	397
Unknown	263
Professionals	29
Wives	19
Husbands	7
Mothers	5
Occupational	4
Aboriginal	2
Parents	2
Congenital	1
Criminal Assault	1
Extra-genital	1
	731

The following table (XIX.) gives the sources of notification:—

TABLE XIX.
SOURCES OF NOTIFICATION.

Private practitioners	71
Clinics	569
Hospitals	91
	731

Ratio of Private Cases to Public Cases—1 : 9.3

These figures suggest that rather less than 10 per cent. of all cases of venereal disease are treated by private practitioners—an estimate which should be accepted with caution.

CONTACT CASE FINDING.

Where possible the source of a patient's infection or any immediate contact is sought. This work is mostly carried out at the ad hoc clinics, and during the year particulars regarding some 49 persons were obtained. The results of this work are summarised as follows:—

Consort interviewed with patient's co-operation	35
Consort reported to outside areas	3
Particulars forwarded to investigating officer and consort subsequently interviewed and examined	11
	49

Results:

Found infected	44
Found non-infected	2
Found doubtful	3
	49

TABLE XX.
SHOWING THE AGE DISTRIBUTION OF 731 CASES OF
VENEREAL DISEASE.

Age Group	Males.	Females.	Total.
Unknown	22	13	35
Under 1 year	..	4	4
1-5 years	..	2	2
6-10 years	..	1	1
11-15 years	1	2	3
16-20 years	61	23	84
21-25 years	151	43	194
26-30 years	152	27	179
31-35 years	72	14	86
36-40 years	56	11	67
41-45 years	17	9	26
46-50 years	14	2	16
51-55 years	11	3	14
56-60 years	10	..	10
61-65 years	6	1	7
Over 65 years	3	..	3
	576	155	731

TABLE XXI.
SHOWING THE MARITAL STATUS OF 731 CASES OF VENEREAL
DISEASE.

	Males.	Females.	Total.
Married	106	58	164
Separated	64	14	78
Single	396	58	454
Unknown	5	14	19
Widowed	4	7	11
Divorced	1	4	5
	576	155	731

DEPARTMENTAL CLINICS IN BRISBANE.

These are 113 Hope street, South Brisbane, for males, and William street, city, for females.

HOPE STREET CLINIC.

The following table summarises the main activities for the year:—

TABLE XXII.

New cases	1,007
Attendances	6,972
Notifications.—	
Syphilis, early	66
Syphilis, late	11
	77
Gonorrhoea	318
Venereal warts	19
Soft sore	3
	417
Bloods submitted for serological test (syphilis)	1,817
Bloods submitted for serological test (gonorrhoea)	931
Smears examined at Hope street	1,950
Smears submitted to Laboratory	373
Dark field examination at Hope street	211
Injections:	
Bismuth	1,286
Arsenic	571
Bismol	562
Action regarding Defaulters:	
Reminders sent	250
Returned Dead Letter Office	63
Reported	122
Did not report	47
No results to date	11
Gone to other areas	7
	250
Police action in tracing:	
Reminders returned D.L.O.	63
Patients who did not report	47
	110
Results:	
Traced	36
Not traced	37
Action pending	37
	110

FEMALE CLINIC, WILLIAM STREET.

The staff of this clinic also attend to the examination rooms for prostitutes, and to cases in the female section of H.M. Prison.

The following is a tabulated summary of these activities:—

TABLE XXIII.

SHOWING NOTIFICATIONS FROM WOMEN'S CLINIC 1949-50.

Gonorrhoea—	
Acute	55
Sub-acute	2
Chronic	4
	61
Syphilis—	
Primary	3
Secondary	5
Latent	5
Treated	15
	28
Soft Sore	21
	90
	—

Of these 90 notifications—

A. Two cases suffered double infections, namely:—
Acute gonorrhoea and soft sore 1 case
Chronic gonorrhoea and latent syphilis 1 case

B. Nine notifications were those of professional prostitutes, namely:—

Acute gonorrhoea 7
Chronic gonorrhoea 1
Latent syphilis 1

NOTIFICATIONS FROM H.M. PRISON—

Gonorrhoea 3
Syphilis, treated 2
— 5

Notifications including Women's Clinic and H.M. Prison—Total 95.

Three contacts of male patients suffering from early syphilis were given prophylactic treatment during 1949-50.

Other activities in the female section are summarised as follows:—

Female Clinic—

Total Interviews	2,020
New Cases	158
Notifications	95
Injections—	
Penicillin	439
Arsenic	160
Bismuth	452
Vaccines	41

Serological Tests	439
Smears	1,053
Dark Ground	17
Trichomonas	20
Cases Cultured	348

Examination Rooms (Prostitutes)—

Interviews	1,331
Examinations	1,330
Bloods taken	209
Smears taken	3,755
Cases cultured	11

H.M. Prison—

Examinations	84
Smears	280
Bloods	65
Cultures	189
Positive cases (notified)	5

GENERAL.

Two important events in the medical world recently cannot be ignored by anyone concerned in the control of venereal diseases.

Firstly, the publication of the Kinsey report on "Sexual Behaviour in the Human Male." To many the findings in this very sound piece of work have come as a surprise and a shock.

To anyone who has had much to do with the interviewing and treatment of venereal disease cases in British communities, the Kinsey report only serves to confirm and give statistical body to the very definite impressions gained by personal experience. Certainly, many of the case histories quoted could be paralleled in this country.

Secondly, the psychological approach to the venereal disease problem. The more recent works on psychological medicine devote considerable space to this aspect, and investigations on these lines have been carried out and results published in both psychological and venereal disease journals.

In the past the attitude of those seeking to control venereal disease incidence has been either (a) one of acceptance and condonation—involving the provision of prophylactic measures and the existence of tolerated houses; or (b) one of moralising and condemnation with punitive measures—as in certain of the armed services (no pay, half pay, &c.—the attitude to a self-inflicted wound).

More recently the psychological investigation of the motivating factors in promiscuity has received attention.

It is the indiscriminate and habitually promiscuous individual who is the real menace in spreading infection, and a consideration of psycho-pathological and psycho-social factors would suggest that, with a wider development of youth clubs and recreational activities, this group may be reduced.

To quote Vonderlehr and Heller in "The Control of Venereal Disease": "... more individual and community action must be directed against the moral, social, and economic roots of prostitution and promiscuity. Research into the psychological causes is needed also, no less than in diagnosis and therapeutics."

The new antibiotics are simplifying still further the therapeutic attack upon these diseases. With the free supply of these preparations under the Pharmaceutical Benefits Act and their ease of administration, it would seem that many cases will be treated privately.

SECTION OF PUBLIC HEALTH SUPERVISION.

Deputy Director-General of Health and Medical Services: D. W. JOHNSON, M.B., B.S., D.T.M. & H.
 Chief Inspector of Food and Drugs: C. M. CATO.

Chief Sanitary Inspector: W. McNEIL.

Clerical and Statistical Branches: T. O'SHEA, M.R.San.I.

Welfare Officer: Mrs. V. WILLS.

FOOD AND DRUGS.

During the fiscal year ended 30th June, 1950, all aspects of food and drugs inspection have been carried out by officers of the headquarters staff and by inspectors in charge of sub-offices in country areas.

The work has included enforcement of Part IV. of the Health Acts (Pure Food and Drugs), Milk-sellers' Regulations, Food and Drug Regulations, Health (Food Supply) Regulations, Health (Insecticide) Regulations, and the Poisons Regulations.

FISH SUPPLY.

Sales at the State Fish Market have been supervised by two inspectors, and, as a result of the efforts of these officers, some 82 tons of fish were condemned and destroyed as being unfit for human consumption.

TABLE XXIV.

FISH CONDEMNED AND DESTROYED AT THE FISH BOARD MARKET, SOUTH BRISBANE, FOR YEAR ENDING 30TH JUNE, 1950.

Class of Fish.	Weight.			
	T.	C.	Q.	L.
Barramundi	0	9	2	9
Bloaters	1	6	0	9
Bonito	0	1	1	27
Bream	3	10	3	15
Black Bream	0	0	0	16
Coral Bream	0	0	3	7
Drummer	0	0	2	24
Flathead	0	5	0	23
Garfish	0	3	2	21
Herrings	1	4	1	20
Jew	0	1	3	15
Jobfish	0	0	0	12
John Dory	0	2	1	22
Kippers	0	14	1	0
Leather Jackets	0	18	0	5
Long Tom	0	1	2	1
Mackerel	2	15	2	19
Mauri Cod	0	0	0	25
Mixed Fish	0	15	0	19
Morwong	0	0	0	4
Mullet	64	3	3	8
Nanagai	0	0	1	2
Old Maid	0	0	0	18
Parrot	0	0	2	20
Perch	0	0	3	4
Pike	0	2	2	18
Pilot Fish	0	0	0	5
Ray	0	0	0	20
Red Emperor	0	1	1	1
Shark	0	2	3	15
Squire	0	3	1	20
Sweetlip	0	6	3	14
Tailer	4	0	2	5
Trevalli	0	4	0	27
Trout	0	2	1	17
Tuna	0	0	0	7
Turram	0	0	2	24
Yellowtail	0	3	2	16
Total	82	7	0	2

also:—

Oysters	1 sack and 52 lb.
Crabs	16
Turtles	5
Prawns	2 tons 8 cwt. 0 qr. 8 lb.

MILK.

Supervision of the quality of milk sold to the public continues to be a major activity of the headquarters staff.

Control is exercised by—

- Sampling for both bacteriological examination and chemical analysis at the point of production, at milk factories, and during delivery to the consumer, which includes supervision of the handling of milk by wholesalers and retailers.
- Inspection of milk utensils and milk delivery vehicles.
- Special investigations, including enquiry into complaints made by householders and other consumers.

During the year samples of milk were secured and successful prosecutions for adulteration of supplies by dairymen and retailers were launched within the headquarters area.

Steps have been taken to overcome the objectionable practice of dumping cans and crates of bottled milk on footpaths and in other open places which developed during the war period, and wholesale companies concerned are being required to provide suitable depots in the suburbs at which milk will be handled by the wholesaler and the retailer.

The protection of milk during transport by vendors has also received attention, and, in a drive to bring vehicles up to a standard in keeping with the requirements of "The Milk-sellers Regulations, 1946," licenses are being withheld until the applicants can satisfy the conditions.

Several investigations into dirty and chipped milk bottles and of foreign bodies in these containers were carried out. Whilst insufficient evidence was available to support legal proceedings, no doubt exists that the action taken has resulted in a greater degree of care being exercised by the factory managements. It is pleasing to note that these offences, which tend to bring the bottled milk supply into public disrepute, have been reduced to a minimum.

TABLE XXV.
PROSECUTIONS FOR MILK ADULTERATION (ADDED WATER) FOR THE YEAR 1949-1950. (HEADQUARTERS).

Date.	Place.	Percentage of Added Water.	Fines.	Costs.
1949—		Per Cent.	£ s. d.	£ s. d.
19th July	Southport	11-0	11 0 0	1 7 0
20th July	Caboolture	6-0	6 0 0	1 7 0
20th July	Caboolture	10-0	10 0 0	1 7 0
20th July	Caboolture	21-0	20 0 0	3 9 0
18th August	Gympie	13-0	13 0 0	1 7 0
23rd August	Brisbane	10-0	10 0 0	1 7 0
10th October	Brisbane	6-0	6 0 0	1 7 0
3rd November	Brisbane	64-0	20 0 0	1 10 0
1st December	Cunnamulla	18-0	18 0 0	1 7 0
5th December	Brisbane	9-0	9 0 0	3 9 0
5th December	Brisbane	11-0	11 0 0	1 7 0
14th December	Brisbane	19-0	19 0 0	1 7 0
20th December	Brisbane	11-0	11 0 0	1 7 0
20th December	Brisbane	8-0	8 0 0	3 9 0
1950—				
13th January	Brisbane	7-0	7 0 0	1 7 0
18th January	Brisbane	8-0	8 0 0	1 10 0
22nd February	Woombye	4-0	4 0 0	3 9 0
24th February	Brisbane	16-0	16 0 0	1 7 0
3rd March	Brisbane	5-0	5 0 0	1 7 0
18th May	Kingaroy	9-0	9 0 0	3 9 0
29th May	Maryborough	18-0	18 0 0	1 7 0
29th May	Maryborough	9-0	10 0 0	1 7 0
26th June	Yandina	16-0	16 0 0	1 7 0
Totals			£265 0 0	£41 17 0

TABLE XXVI.
MILK PROSECUTIONS FOR FAT DEFICIENCY (HEADQUARTERS).

Date.	Place.	Basis of Prosecution.	Fines.	Costs.
1949—			£ s. d.	£ s. d.
14th September	Brisbane	30-3 per cent. deficient in fat	3 0 0	1 7 0
1950—				
17th February	Brisbane	39-3 per cent deficiency in fat	5 0 0	1 7 0
Totals			£8 0 0	£2 14 0

TABLE XXVII.
MISCELLANEOUS MILK PROSECUTIONS (HEADQUARTERS).

Date.	Place.	Basis of Prosecution.	Fines.	Costs.
1949—			£ s. d.	£ s. d.
7th July	Gayndah	Milk vessels without lids	4 0 0	0 6 0
7th July	Gayndah	Milk taps not protected from dust	4 0 0	0 6 0
7th July	Gayndah	Milk taps not protected from dust	4 0 0	0 6 0
7th July	Gayndah	Milk vessels without lids	4 0 0	0 6 0
23rd August	Sandgate	Milk taps not protected from dust	5 0 0	0 6 0
14th December	Brisbane	Milk taps not protected from dust	3 0 0	0 6 0
1950—				
18th January	Brisbane	Name, address and license number not on vehicle	2 0 0	0 6 0
18th January	Brisbane	No milk license	2 0 0	0 6 0
1st February	Brisbane	Name, address and license number not on vehicle	3 0 0	0 6 0
17th February	Sandgate	No milk license	1 0 0	2 8 0
24th February	Brisbane	Name, address and license number not on vehicle	Nil	1 10 0
24th February	Brisbane	Milk tap not protected from dust	Nil	1 10 0
26th May	Brisbane	Unsuitable milk vehicle	7 10 0	0 6 0
Totals			£39 10 0	£8 8 0

SPIRITUOUS LIQUORS.

Hotel bars and other licensed premises were periodically visited and the liquors dispensed tested for their alcoholic strength. Waste beer was required to be denatured by means of an approved emulsifying oil or methyl violet colouring.

The use of approved mechanical glass-washing machines in hotel bars has been insisted upon, and these appliances have now been installed in all licensed premises in the city of Brisbane and larger towns.

Prosecution of hotelkeepers for the offence of selling adulterated spirits are shown in the following list:—

TABLE XXVIII.
LIQUOR PROSECUTIONS FOR YEAR 1949-50 (HEADQUARTERS).

Date.	Place.	Basis of Prosecution.	Fines.	Costs.
1949—			£ s. d.	£ s. d.
19th September ..	Laidley ..	Gin adulterated with 12.4 per cent. added water	10 0 0	2 8 0
19th September ..	Laidley ..	Rum adulterated with 7.7 per cent. added water	10 0 0	1 7 0
12th September ..	Beenleigh ..	Rum adulterated with 5.2 per cent. added water	15 10 0	4 10 0
Totals			£35 10 0	£8 5 0

MEAT.

The Food and Drug Regulations prohibit the addition to minced meat of any preservative substance, whilst in the case of sausages and sausage meat the quantity of preservative (sulphur dioxide) that may be added is limited to $3\frac{1}{2}$ grains to the pound. Notwithstanding

previous prosecutions launched against butchers for breaches of these provisions, 20 individual butchers were successfully proceeded against during the year. Results of these cases are given in the following table:—

TABLE XXIX.
PROSECUTIONS FOR ADULTERATED MINCEMEAT, SAUSAGE MEAT, AND SAUSAGES FOR YEAR 1949-50—(HEADQUARTERS).

Date.	Place.	Name of Article and Quantity of Preservative (Sulphur Dioxide) Present.	Fines.	Costs.
1949—			£ s. d.	£ s. d.
16th November ..	Brisbane ..	Minced meat, 2 grains per lb.	2 0 0	1 7 0
16th November ..	Brisbane ..	Minced meat, 4.4 grains per lb.	4 0 0	1 7 0
23rd November ..	Brisbane ..	Minced meat, 5.0 grains per lb.	5 0 0	1 7 0
23rd November ..	Brisbane ..	Minced meat, 2.3 grains per lb.	2 0 0	1 7 0
23rd November ..	Brisbane ..	Minced meat, 10.0 grains per lb.	5 0 0	1 10 0
2nd December ..	Redcliffe ..	Minced meat, 5.3 grains per lb.	8 13 0	1 7 0
2nd December ..	Redcliffe ..	Minced meat, 3.8 grains per lb.	8 13 0	1 7 0
2nd December ..	Redcliffe ..	Minced meat, 3.4 grains per lb.	8 13 0	1 7 0
7th December ..	Bundaberg ..	Minced meat, 6.4 grains per lb.	3 0 0	1 7 0
7th December ..	Bundaberg ..	Minced meat, 2.5 grains per lb.	4 0 0	2 8 0
7th December ..	Bundaberg ..	Minced meat, 6.1 grains per lb.	3 0 0	1 7 0
7th December ..	Brisbane ..	Minced meat, 6.1 grains per lb.	5 0 0	1 7 0
7th December ..	Brisbane ..	Minced meat, 7.5 grains per lb.	5 0 0	1 10 0
7th December ..	Brisbane ..	Minced meat, 6.4 grains per lb.	5 0 0	1 7 0
1950—				
4th April	Brisbane ..	Sausage meat, 6.5 grains per lb.	3 0 0	1 7 0
4th April	Brisbane ..	Sausages, 5.7 grains per lb.	3 0 0	1 7 0
8th May	Goodna ..	Sausages, 6.0 grains per lb.	3 0 0	1 7 0
8th May	Goodna ..	Sausages, 7.6 grains per lb.	3 0 0	1 7 0
18th May	Brisbane ..	Sausages, 5.0 grains per lb.	3 0 0	1 7 0
18th May	Brisbane ..	Sausages, 8.7 grains per lb.	5 0 0	3 9 0
Totals			£88 19 0	£30 9 0

CAFES AND RESTAURANTS.

Supervision of cafes and restaurants has been continued and a fairly satisfactory standard at these establishments has been maintained. There is still room for improvement, however, in the methods employed by a few proprietors in the

cleansing of eating utensils, and it is proposed to amend the Food and Drug Regulations to make compulsory the installation of proper sinks and the use of hot water and approved detergents for this purpose.

BREAD.

The weight of bread was checked at numerous bakehouses, and only in a few instances were loaves found to be slightly deficient in their due weight.

Wholemeal bread is required to be made from flour containing at least 80 per cent. of whole-

meal, whilst brown bread consists of a flour mixture containing not less than 60 per cent. of wholemeal. The addition to bread of caramel or other colouring substance is prohibited. The following table gives details of the prosecution of bakers for breaches of the Regulations:—

TABLE XXX.
BREAD PROSECUTIONS FOR THE YEAR 1949-50—(HEADQUARTERS).

Date.	Place.	Basis of Prosecution.	Fines.	Costs.
1949—			£ s. d.	£ s. d.
2nd November ..	Brisbane ..	Adulterated bread (containing portion of cigarette)	3 0 0	0 6 0
16th November ..	Caboolture ..	Brown bread deficient in wholemeal flour and coloured with caramel	2 0 0	1 7 0
16th November ..	Caboolture ..	Wholemeal bread deficient in wholemeal flour and coloured with caramel	2 0 0	1 7 0
1950—				
5th May ..	Goodna ..	Brown bread deficient in wholemeal flour content	2 10 0	1 7 0
Totals ..	..	..	£9 10 0	£4 7 0

UN SOUND AND DETERIORATED FOODS.

Inspection by the headquarters staff resulted in the removal from sale and the destruction of some 4 tons 16 cwt. 3 qr. 21½ lb. of unsound and deteriorated foods and drugs. Details of these articles are given in the following table:—

TABLE XXXI.
UN SOUND FOOD DESTROYED FOR YEAR 1949-50
(HEADQUARTERS).

Article.	Quantity.	Weight.			
		T.	C.	Q.	L.
Bicarbonate of Soda	1 packet	0	0	0	0½
Cakes	1 package	0	0	0	20
Cereals	12 packages	0	13	2	0
Corn Flour ..	1 package	0	0	0	1
Curry Powder ..	1 package	0	0	0	0½
Fish (tinned, dried, smoked) ..	4,560 tins	0	17	3	4
Fish	6 packages	0	0	3	0
Flour	1 package	0	0	0	2
Fruit, fresh ..	12 packages	0	5	0	0
Fruit (tinned, packed, preserved)	237 packages	0	21	2	13
Jams and Preserves	6 packages	0	0	0	9
Jams, Jelly Crystals, Junkets	2 packages	0	0	0	1
Meat, tinned ..	6 packages	0	0	0	6
Macaroni	2 packets	0	0	0	4
Milk (condensed and preserved) ..	28 packages	0	0	1	4½
Pastes and Spreads	26 packets	0	0	0	10
Pickles	31 bottles	0	0	1	22
Puddings and Pies	28 packets	0	0	0	9
Rice	2 packets	0	0	0	8
Sauces	31 packets	0	0	0	16
Soups (tinned and packeted) ..	249 articles	0	2	1	0
Spices	209 packets	0	0	0	13
Tapioca	6 packets	0	9	3	0
Tea	167 packets	0	0	3	8
Vegetables and Vegetable Extracts ..	26 packages	0	2	2	12
Whisky, Wines, Spirits	1,464 bottles	1	1	0	27
Total ..	..	4	16	3	21½

Also:—

- 100 bottles of cordials and other beverages.
- 25 lb. of confectionery.
- 1 qr. 8 lb. of patent medicines.
- 51 dozen packets of A.P.C. Powders.
- 117,215 cigarettes.
- 321 cigars.
- 1 ton 17 cwt. 18 lb. of tobacco.

SAMPLING.

A total of 3,939 samples of food and drugs was obtained by officers and submitted to the Government Chemical Laboratory for examination. The samples include:—Beverages, bread, butter, cereals, condiments, confectionery, cosmetics, cream, disinfectants, drugs, essences, fish, food colours, fruit, fruit juices, hydrometers, ice cream, jam, meat, medicines, milk, paints, popcorn, soap, spirituous liquor, tobacco, toothpastes, toys, vegetables and walnuts.

BACTERIOLOGICAL SAMPLING.

Four hundred and twelve specimens, including the following articles, were collected and submitted to the Director of Laboratory of Microbiology and Pathology for examination, viz:—Antiseptics, bananas (canned), bread, cigarettes, cream, disinfectants, drugs, fish, gelatine, glasses, horehound (beverage), ice cream, ice cream scoop rinse water, icing sugar, milk, molasses, mutton, olives, oysters, pineapple juice, preservative solution, rinse water, sardines (canned), sausages, spirituous liquor, and tobacco.

GENERAL INSPECTIONS.

Premises inspected by the headquarters staff include food factories and warehouses, in addition to retail stores and shops. Food offered for sale in auction rooms from time to time has been inspected and stocks salvaged from fires supervised before their sale was permitted.

Considerable time and attention has been given to the conditions under which food for sale was prepared and served to the public at the annual exhibition of the Royal National Association, and as a result it is anticipated that the Association will secure considerable improvement in the general construction of food premises and in the supply of washing facilities for refreshment rooms.

The examination prior to auction of smoking tobacco, cigarettes, cigars, and food at His Majesty's Trade and Customs warehouse resulted in the destruction of large quantities of unsalable articles.

TABLE XXXII.

PROSECUTIONS FOR MISCELLANEOUS BREACHES OF THE HEALTH ACTS AND REGULATIONS FOR THE YEAR 1949-50—(HEADQUARTERS).

Date.	Place.	Basis of Prosecution.	Fines.	Costs.
1949—			£ s. d.	£ s. d.
31st October ..	Brisbane ..	Food not protected from flies and dust ..	5 0 0	0 6 0
1950—				
24th May ..	Bundaberg ..	Food prepared under insanitary conditions ..	3 0 0	1 7 0
8th June ..	Brisbane ..	Soft drinks containing cockroaches ..	3 0 0	0 6 0
Totals ..			£11 0 0	£1 19 0

POISONS AND DANGEROUS DRUGS.

The packing and sale of poisons and dangerous drugs has been maintained by the enforcement of "The Poisons Regulations of 1947." This law was amended during the year by the addition to the restricted drug schedule of the drug known under the names C.B. 11, phenadoxone and heptalgin, which restricts its sale to the prescription of a medical practitioner.

Whilst no prosecution was launched for a breach of these Regulations, a number of pharmacists were warned in connection with their failure to correctly endorse cancelled prescriptions for dangerous drugs and with having failed to forward such prescriptions promptly to the Director-General.

Storekeepers licensed to sell poisons were in some instances found not to be observing the conditions of their license, and these persons received written notices requiring immediate compliance with such conditions.

PAINT.

With a view to ascertaining whether the provisions of the Health Acts relating to the use of lead paint were being complied with, 33 samples of paint were taken from persons engaged in the painting of house steps, veranda rails, fences, &c. In four instances the paint was found to contain soluble lead in excess of 5 per cent. In lieu of taking legal proceedings, these cases were satisfactorily dealt with by requiring that the operator remove all the offending paint.

Samples of prepared paints and paint preparations submitted to the Government Analyst during the year revealed in a number of instances that the labels declaring the constituent parts of the paint were false or misleading. The use of trade names for various pigments, which do not correctly describe the nature of the pigment, conveys misleading information to the purchasing public, and corrective legislation is being considered.

VISITS TO COUNTRY CENTRES.

Officers of the Headquarters staff visited numerous country centres. A list of places so visited are set out in detail in the accompanying sanitation report.

TOOWOOMBA SUB-OFFICE.

Inspections were carried out under the Health Acts and the various Regulations at Toowoomba and the following country places:—Amiens, Applethorpe, Aubigny, Ballandean, Bell, Bowenville, Brookstead, Cabarlah, Cambooya, Cecil Plains, Clifton, Cottonvale, Crow's Nest, Dalby, Dalveen, East Greenmount, Emu Vale, Felton, Glen Aplin, Goondiwindi, Gowrie Junction, Greenmount, Hampton, Helidon, Highfields, Inglewood, Jandowae, Jimbour, Jondaryan, Kaimkillenbun, Karara, Killarney, Kingsthorpe, Kogan, Leyburn, Meringandan, Millmerran, Nobby, Oakey, Omanama, Peehey, Pittsworth, Pozieres, Roma, Sandy Creek, Southbrook, Stanthorpe, St. Ruth, Tannymorel, Tara, The Summit, Thulimbah, Texas, Wallangarra, Warra, Warwick, Westbrook, Witheott, Yanagan, and Yelarbon.

The number of miles travelled outside Toowoomba on these inspections was 5,483.

Food Premises Generally.—The appointment of an assistant inspector to the Sub-office during the year greatly increased the amount of supervision possible over food premises, particularly in Toowoomba, where, in previous years, much routine work had, of necessity, to be neglected in favour of more pressing duties. As a result there has been a general improvement in food handling, and indications are that this will be maintained. All activities throughout the district in the preparation, handling, and storage of foods for sale received attention and appropriate action was taken in all instances where breaches of the Acts or Regulations were encountered.

Hotels and Liquor Testing.—All hotels at Toowoomba and throughout the district were inspected. Particular attention was paid to the serving of liquors and the preparation and serving of meals, and numerous recommendations were made to the Licensing Commission for the rectification of faults or for the general improvement of the facilities available. These included, among other items, replacement of damaged crockery and glassware, flyproofing of kitchens and dining rooms, the provision of adequate washing facilities, and the proper equipment of dining rooms.

The general standard of hotel bars was satisfactory, and in only a few instances were recommendations concerning major alterations found necessary. The majority of the larger

city hotels throughout the district are now equipped with approved mechanical glass-washing machines.

Liquor testing was conducted at all hotels visited, and three samples of adulterated spirits were removed for analysis. As a result legal proceedings were instituted against two hotel-keepers, and fines and costs totalling £13 14s. were imposed.

Premises used for the manufacture and sale of wine at Cecil Plains were inspected, and improved glass and bottle-washing facilities have been ordered.

Milk.—A total of 118 official samples of milk was obtained and submitted for analysis from the following centres:—Toowoomba, 75; Roma, 12; Warwick, 14; Dalby, 8; Goondiwindi, 7; Wallangarra, 2.

Five samples were found, on examination, to contain added water, and four prosecutions launched in respect of them brought fines and costs totalling £44 10s. One vendor was prosecuted for selling milk below the standard in butter fat and was fined £1 with £1 7s. costs.

The usual inspections were made at the pasteurisation plant supplying Toowoomba and, apart from a few instances of dirty bottles, a satisfactory standard was maintained. Major alterations to the plant and buildings are still in progress, and the new bottle-washer, although on hand, is not yet in operation.

The pasteurising plant at Warwick is in much the same condition as previously reported and production has not yet commenced. The small plant at Stanthorpe engaged in the bottling of processed milk supplied from Toowoomba for local sale was well maintained.

Milk delivery vehicles were subjected to strict supervision. The wider range of suitable new motor vehicles now available and some easing of the materials position have resulted in considerable improvement during the year, and the standard of vehicles is now approaching normal.

Bread and Bakehouses.—Bakehouses were inspected regularly at Toowoomba and at all places visited. Where necessary notices were issued for the correction of faults, and in four instances notices were issued under the hand of the Director-General requiring extensive repairs and alterations to bakehouses which were considered unsuitable for the preparation of foods for sale. Extensive repairs and alterations are now being carried out at two Toowoomba cake bakehouses on representations from this office.

The quality of bread supplied in Toowoomba, where the pool delivery system is still operating, again came in for criticism during the year. Investigation showed that, as on other occasions, the general quality of bread at the various bakehouses was reasonable, but because of the practice of packing hot bread into the delivery vehicles deterioration took place in the course of delivery. Other factors, such as quality of flour, varied skill of operatives, and lack of competition, no doubt also have a detrimental effect on quality, but the conditions of delivery appear to be the chief contributing factor.

A survey of bread quality in the Jondaryan Shire was undertaken following complaints and a range of samples of bread submitted for analysis. Advice as to the results of analysis is not yet to hand.

Three instances of foreign matter in bread were investigated during the year, but because of the unwillingness of the complainants to become involved in Court proceedings insufficient evidence for prosecutions could be secured.

Attention was given to the delivery of bread to houses and the wrapping of bread sold at stores. A special visit was made to Roma, outside the district, in connection with the wrapping of bread, and the necessary action taken to ensure compliance with the provisions of the Regulations.

No outbreaks of rope in bread were reported in the district.

Cafes and Milk Bars.—Particular attention was given to cafes, milk bars, and other public eating places throughout the district, and the satisfactory standard of previous years was maintained. In several instances notices requiring major repairs or alterations have been issued, and one Warwick cafe, considered unsuitable for the purpose was made the subject of an order by the Director-General requiring reconstruction. Instructions issued for the correction of faults were readily complied with and no prosecutions were launched in respect of dirty premises.

During the year a survey was made at Toowoomba cafes and milk bars of the composition of so called "Pure Fruit Drinks," and as a result numerous advertisements and claims were modified to fit the preparations sold, and notices, as required by the Food and Drug Regulations showing the composition of the various drinks sold, were displayed.

All pie carts in the Toowoomba City area were inspected and found to be in good condition.

Grocery and Mixed Stores.—The usual supervision was exercised over these premises, and conditions generally were very satisfactory. Several instances of overcrowded or untidy premises were encountered and appropriate action taken. Stocks, on the whole, were found to be sound and well-protected from contamination. The increased staff at the Sub-office has permitted a complete survey of stores throughout Toowoomba, and a definite improvement in food handling in the city has resulted, particularly in suburban mixed stores where improved glass-washing facilities and increased food protection have been achieved.

Aerated Water Factories.—General improvement has been effected in the conduct of aerated water factories in the district. A number of notices have been issued requiring increased equipment or the correction of faults, and in one instance a factory is being almost completely rebuilt following an order issued by the Director-General to this effect.

A number of faulty labels have been brought to the notice of those concerned, and the necessary corrections made.

Fish Shops.—Regular inspections were made at fish shops in Toowoomba. Several notices requiring structural repairs or alterations for the better protection of the fish sold were issued.

No fresh fish was found to be unsound, but a quantity of ling fish—one case of 56 lb.—was certified as unfit for human consumption and was destroyed by mutual consent.

Action was taken to ensure the correct labelling of bottled oysters on sale in the city.

One fishcart was inspected prior to the issue of an itinerant vendor's license by the Police Department and was found to be satisfactory.

Unsound Foods.—Unsound foods totalling 2 cwt. and comprising miscellaneous foodstuffs, jams, and ling fish were certified as unfit for human consumption. These were withdrawn from sale and destroyed by mutual consent.

Unofficial Samples.—Twenty-five unofficial samples comprising flock, cordials, cheese spread, bread improver, bread, cabbage, jellies, pudding mixture, vanilla, and tea were submitted for analysis in the course of food inspections and as a result of complaints received.

Miscellaneous.—No lead toys were encountered in the course of inspections. Paint and footwear on sale were checked as opportunity offered and no major labelling faults were disclosed.

Local Authority Health Inspectors have assisted materially in the maintenance of safe conditions of food handling within their respective areas.

Poisons and Dangerous Drugs.—The usual supervision was exercised over the sale of poisons, and inspections were made at chemists' shops, stores, and licensed poisons dealers throughout the district. Chemists' shops were found to be well conducted, and the necessary records of transactions involving dangerous drugs and poisons were, with few exceptions, faithfully kept.

Some minor breaches of the Poisons Regulations were encountered among licensed poisons sellers, particularly in the recording of sales. This latter involves considerable detail in pastoral and agricultural districts, but, on the whole, it would appear that an effort is being made to observe the requirements of the Regulations.

In several instances stocks of Schedule I. and II. poisons were found at stores not licensed to sell poisons. These were withdrawn from sale and the necessary instructions issued to prevent future sales.

Several proprietary lines of packed poisons were found to be incorrectly labelled or packed and appropriate action was taken for the correction of these faults.

No major investigation into the supply and use of dangerous drugs was undertaken, but a number of minor faults in prescribing or dispensing were brought to the notice of those concerned for correction.

TABLE XXXIII.

SUMMARY OF PROSECUTIONS.

Date.	Place.	Charge.	Fines.	Analyst's Fee.	Costs.
			£ s. d.	£ s. d.	£ s. d.
1949—					
5th August ..	Toowoomba ..	Adulterated milk butter fat deficiency 45 per cent. ..	1 0 0	1 1 0	0 6 0
21st October ..	Toowoomba ..	Adulterated milk 6 per cent. ..	6 0 0	1 1 0	0 6 0
1st November ..	Stanthorpe ..	Adulterated milk 11 per cent. ..	11 0 0	1 1 0	0 6 0
1st November ..	Stanthorpe ..	Adulterated milk 12 per cent. ..	12 0 0	1 1 0	0 6 0
1950—					
23rd January ..	Toowoomba ..	Adulterated milk 8 per cent. ..	8 0 0	1 1 0	2 8 0
25th January ..	Oakey ..	Adulterated whisky 8.8 per cent. ..	4 0 0	1 1 0	0 6 0
5th April ..	Toowoomba ..	Adulterated whisky 26.1 per cent. ..	7 0 0	1 1 0	0 6 0
Totals ..	..	..	£49 0 0	£7 7 0	£4 4 0

Total fines and costs—£60 11s. 0d.

ROCKHAMPTON SUB-OFFICE.

The following places were visited for inspection purposes:—Alpha, Aramac, Baralaba, Barcal-dine, Biloela, Blackall, Blackwater, Blair Athol, Bluff, Bowman, Bracewell, Builyan, Callide, Capella, Clermont, Comet, Cracow, Dingo, Duaringa, Dululu, Emerald, Emu Park, Gladstone, Gogango, Goovigen, Gracemere, Ilfracombe, Isisford, Jambin, Jericho, Kabra, Kemp Beach, Keppel Sands, Kokotungo, Kooltandra, Longreach, Many Peaks, Marlborough, Mielere, Mount Lareom, Mount Morgan, Mulambin, Muttaburra, Nagoorin, Ogmoo, Rannes, Shoal Bay, Stanwell, Thangool, The Caves, Theodore, Ubobo, Westwood, Wowan, Yarwun, and Yeppoon.

Although considerable time was spent on inspection visits to country centres, and this not without consequent detriment to the extensive

headquarters area, some 20 towns could not be visited. Lack of staff remained the chief obstacle to effective supervision and control. The recent appointment of an assistant health inspector will overcome this difficulty.

Notices served by the inspector requiring renovations, repairs, or alterations to food premises were as follows:—At Rockhampton, 3; Alpha, 2; Aramac, 1; Baralaba, 1; Barcal-dine, 3; Biloela, 2; Blackall, 3; Bluff, 1; Capella, 5; Clermont, 1; Dululu, 1; Gladstone, 3; Jambin, 1; Jericho, 1; Longreach, 4; Ubobo, 1; Wowan, 2; Yarwun, 1; Yeppoon, 1; total, 37. In addition notices under the hand of the Director-General were served on owners requiring reconstruction of food premises at Rockhampton, 4; Aramac, 2; Barcal-dine, 1; and Many Peaks, 1; total, 8.

Steady progress was maintained in having structural and other improvements effected to food premises. Where owners or occupiers were prone to rely on the excuse of shortages of materials it was the practice to have them place orders for the requirements and for this Office to keep in contact with the suppliers so as to ensure delivery as soon as possible. Those anxious to carry out improvements were assisted in similar manner.

Milk Supply.—One hundred official samples of milk were secured and submitted to chemical analysis. These were obtained from distributors at the following centres:—Rockhampton, 72; Barcaldine, 2; Biloela, 3; Blackall, 4; Clermont, 4; Longreach, 4; Mount Morgan, 3; Yeppoon, 8.

The lesser number of samples secured during this year was due partly to the absence of any protracted dry weather spell, when adulteration with water becomes more prevalent, and otherwise to the demand for attention to other duties.

Legal proceedings instituted against one retail vendor of Blackall in respect to a sample of milk which contained only 1.7 per centum of fat resulted in a conviction, with fine and costs amounting to £8 17s. Fine and costs totalling £10 6s. were imposed on a Rockhampton vendor for having carried water on a milk delivery vehicle.

An important factor in aiming at a safe milk supply is the protection from contamination during the course of delivery by ensuring that suitable vehicles, cans, and other receptacles are used, and that these are kept in proper condition. Fewer sampling visits have meant fewer inspections of deliveries, and the less conscientious distributor tends to become apathetic to the observance of regulations if not subject to constant supervision. A tightening of control will be implemented during the coming year following on an increase in staff.

Two retail distributors operating at Gladstone who failed to heed warnings were proceeded against in the Court for having used milk delivery vehicles which were not fitted with the prescribed enclosed compartments. Convictions were recorded, with fine and costs amounting to £2 6s. being imposed in each case. One of these vendors was further convicted and similarly fined for having used milk utensils which were not fitted with lids.

Pasteurised Milk.—Four official and 31 unofficial samples of pasteurised milk were secured for testing. Of the former, which were submitted to the Departmental laboratory in Brisbane, two were reported to conform to standard. Of the 31 unofficial samples which were examined by the Commonwealth Health Laboratory locally, four failed to conform to standard as regards both plate count and presence of *Escherichia coli*. One failed on plate count only and nine on coli only.

The company producing the pasteurised milk continued to operate under unsatisfactory conditions. The plant of varying reliability and insufficient capacity is housed in cramped space in a butter factory. Regarded as only

temporary premises from the inception, their unsuitability has increased in proportion to the expansion of the undertaking.

During the year the company applied to the Bureau of Industry for a permit to construct new premises. On the application being referred to this Office for an opinion the necessity for new premises was both confirmed and strongly supported. A permit was granted and preliminary steps towards the provision of a new factory have already been taken.

On each occasion of a sample secured not conforming to standard the premises were visited for the purpose of ascertaining the cause and having the trouble corrected. In one instance, when a test disclosed a greatly excessive plate count, it was found that through a fault developing in the cooling system some five and a-half hours elapsed before the treated milk was reduced to the prescribed temperature of below 40 deg. F.

When supplies of milk from the more local radius fall off in quantity the company draws on supplies delivered to and cooled at its Bracewell factory, which normally produces cheese. Incorporation of this supply which is transported by road some sixty miles to Rockhampton mainly during the hotter hours of the day usually coincides with the pasteurised product yielding unsatisfactory results from samples tested.

An inspection visit to the Bracewell factory disclosed the need for certain improvements, and a number of defects were brought under the notice of the company for attention.

Aerated Waters, Cordials.—Factories in Rockhampton and in country towns visited were inspected. Premises, plant, appurtenances, and products were checked. Labelling was examined and adjustments ordered where regulations were being infringed. Samples of drinks concerning which compliance with prescribed standards was in doubt were secured and submitted to analysis.

Improvements to and extensions of premises are being undertaken in both the city and country towns.

In one country town a hotel proprietor was found to be operating a small cordial factory under very unsuitable conditions. He was instructed to cease operations.

Bread.—Attention was paid to conditions under which bread was produced and handled for sale. With few exceptions bakehouses in the area now conform to reasonable standards. Action is being taken to have the remainder suitably improved.

Occasional complaints regarding the quality of bread were received. Investigations showed that troubles were due to some temporary disability at the particular bakehouse, the practice of loading bread into enclosed vehicles while still hot, or the customer not receiving the type of bread asked for. In the latter category discontinuance of production of a loaf complying with the "wholemeal" or "wheatmeal" bread standard remained the chief cause of dissatisfaction.

Vehicles used for retail distribution in the city area were kept up to a good standard, as were those in most other localities. Corrective measures were taken in the few instances where bread was not effectively protected during transit.

In some centres bakers deliver bread to shops only, to which customers must go in order to obtain their requirements. Supervision regarding the proper wrapping of bread sold over the counter is far from adequate. This condition applies generally, and especially in the areas of Local Authorities without the services of inspectors who normally render some service in this connection in the public interest.

Legal proceedings instituted against two bakers in respect of quantities of bread found to be short of the due weight led to convictions and the imposition of fines and costs amounting to £30 15s.

Cafes, Milk Bars, Restaurants.—The majority of these was found to be maintaining a good standard as regards premises, equipment, and cleanliness. Of the minority, improvements to premises and equipment have been requisitioned, but provision for more regular supervision is desirable in the interests of public health. Two cafes in different country towns were threatened with closure after the owners had failed to comply with orders to reconstruct the premises. The desired result is now being achieved.

Fish, Fish Shops.—Fish offered for sale in shops was of sound quality. Cooked fish shops were inspected from time to time. Repairs and improvements to shops and cutting-up rooms were made in accordance with instructions issued.

A large consignment of mackerel on consignment from the North to the metropolis, was examined on arrival at Rockhampton and condemned as unfit for human consumption. The fish was carried in a refrigerated railway van which caught fire a few miles from Rockhampton. Although a number of cases remained well iced and the fish were of good appearance it was found that they were heavily permeated with acrid smoke fumes which rendered them inedible.

Fruit and Vegetables.—No unsound fruit or vegetables was encountered on offer for sale during the course of inspection of shops. Strict supervision was exercised to preclude the displaying of these commodities in a manner exposing them to contamination, and particularly beyond the reach of animals in open shop fronts.

Grocers, Mixed Businesses.—Pressure to enforce reconstruction of or structural improvements to old unsuitable or otherwise defective premises was maintained. Although shortages of materials persists perseverance is meeting with worthwhile results.

Increased quantities of unsound food were found in a greater number of retail stores. The reason for this is probably that few manufacturers now credit wholesale distributors for food which becomes deteriorated. Wholesale houses, therefore, in turn are unable to credit retail sellers. Thus there exists a tendency for

the wholesalers to refrain from opening cased goods to ascertain their condition, whereby increased quantities of food are received by retailers in unsound condition. Whilst storekeepers in general insist that they do not sell any food which has deteriorated there are always the few who claim to know of someone who ate the contents of a "blown" can without ill-effects, or at least without fatal results. Again, a few are inclined to question unfitness for human consumption if deterioration is not visibly in an advanced state, and are convinced only when a container is opened and the condition of the contents disclosed. Added to this the fact that some shopkeepers obviously do place on their shelves food already unsound when removed from the cases, there are reasonable grounds for assuming that at least some of such food is passed on to customers. More frequent inspection is being provided for.

By contrast, a fine example is set by one firm which produces many lines of canned food. A representative from this firm visits retail stores, examines all of his firm's products, removes from stock any which appears to have deteriorated or of which containers or labels have been damaged, and arranges credit for same.

Hotels.—Spirits on sale in hotel bars in all country towns visited were tested. Similar testing was carried out at a number of hotels in the city area. Gin, adulterated to the extent of 24.6 per centum of added water, found in the bar of a country town hotel resulted in prosecution of the proprietor, his conviction, and imposition of fine and costs totalling £21 7s.

A small quantity of rum removed from the bar of another country hotel upon analysis proved to have 21.7 degrees of obscuration due to the spirit having been sweetened. The hotel proprietor concerned was informed that the addition constituted adulteration and was warned against any repetition of the offence.

A new line of whisky bottled in another State tested in a hotel bar gave a hydrometer reading of 34.0 degrees under proof. This test was confirmed when the wholesale supplier was visited. Analysis of a sample disclosed that there were 1.5 degrees of obscuration, which meant that the spirit was slightly deficient in its alcoholic content. The matter was brought to the notice of the merchant for attention.

Another line of whisky, likewise bottled in another State, yielded a hydrometer reading of 33.9 degrees under proof. In this case an obscuration of 2.5 degrees was proved, so that the spirit actually conformed to standard.

In these days there is a tendency by a number of bottling firms to take advantage of the degree/s of obscuration, whereas formerly it was rarely necessary to resort to analysis in order to establish compliance with prescribed standards or otherwise.

To date, it has not been possible to carry out a complete survey to ensure compliance with the Food and Drug Regulation whereby licensed victuallers are required to denature waste beer and to refrain from placing drip receiving

vessels on drip trays. However, it is intended to proceed further in pursuance of this regulation during the coming year.

Numerous improvements to hotels were made following Orders issued by the Licensing Commission, resulting from inspections carried out and reports submitted by the Sub-Office. Many others are in progress or the subject of Orders.

Warehouses.—Visits were paid to warehouses in connection with various lines of food encountered in retail shops. With new lines constantly coming on to the market, and especially those packed in other States, frequent checking as to qualities and labelling provisions is necessary.

Food Deliveries.—All classes of food deliveries were accorded attention as regards suitability and cleanliness of vehicles, means of protection and methods of handling of food, &c. Four retail vendors of ice in the city area were proceeded against in the Court for having carried ice in the bare hand when delivering for sale to customers. One of these cases constituted a second offence by the same person. He was convicted, fined £6, and ordered to pay 6s. costs of court. A fine of £3, plus 6s. costs, was imposed on each of the three other offenders upon conviction.

Racecourse Booths, Showgrounds.—These were visited for the purpose of securing proper care in protecting, preparing, and serving food and drink. Spirituous liquors on sale in booths were subjected to testing.

With one exception, a good standard of food hygiene was maintained at the city showgrounds during the period of the annual show and carnival. In the case of the exception legal proceedings against the offender are pending.

Further improvements were effected to the liquor booth at the Rockhampton racecourse.

Seaside Resorts.—Special attention was given to food hygiene requirements at the several resorts within the Shire of Livingstone during main holiday periods. One of the chief requirements on such occasions is the prevention of the carriage of several contaminable articles of food such as bread, ice, and meat under unsatisfactory conditions in the one vehicle by holiday-time distributors.

Paints.—Checking of labelling of packages of paint was carried out at numerous stores during the course of general inspections. The practice of some manufacturers in attaching to packages small sticker labels containing the prescribed declaration of ingredients is not entirely satisfactory, as a percentage of such labels invariably become detached and lost. Where this was encountered storekeepers were instructed to secure and attach new labels.

Poisons, Drugs.—Inspections under "The Poisons Regulations of 1947" were performed in the city area and in all country towns visited. These included checking regarding—the holding of prescribed licenses by wholesale and retail dealers; correct methods of packing, stor-

ing, and recording sales of poisons by licensed dealers and chemists; observance or otherwise by chemists of regulations relating to the keeping of dangerous and restricted drugs, and the dispensing of such drugs prescribed by medical practitioners and other qualified persons; similar checking at hospitals. Medical practitioners were interviewed in regard to dangerous drugs prescribed where it appeared that patients may be addicts, and in regard to other prescriptions which were written otherwise than in accordance with the Regulations. Legal proceedings were taken against a country storekeeper on three charges of having in possession for sale certain poisons, he not being the holder of the necessary license. A conviction was secured in each case. Fines and costs totalling £10 1s. were imposed.

TABLE XXXIV.

UNSOOUND FOOD DESTROYED FOR THE YEAR ENDED 30TH JUNE, 1950.

	C.	Q.	L.	O.
Bacon	0	0	17	8
Baking Powder ..	0	0	23	0
Biscuits	0	0	3	8
Breakfast Foods ..	0	0	24	8
Canned Fish	0	3	10	11
Canned Meat	2	2	0	2
Canned Soup	3	3	4	10
Canned Vegetables ..	1	1	24	3
Cheese	1	2	24	1
Chutney	1	2	23	3
Cocoa	0	0	0	8
Coffee Essence	0	0	0	12
Condensed Milk	0	0	24	6
Confectionery	0	2	17	13
Cordials	0	0	19	6
Cornflour	0	0	1	0
Curry Powder	0	0	0	12
Custard Powders	0	1	21	12
Dried Fruits	0	1	9	12
Fish	8	4	8	0
Flavouring Essences ..	0	0	0	14
Flavouring Syrup	0	0	6	0
Honey	0	0	2	0
Jams	11	2	5	8
Malt Extract	0	0	6	0
Meat Extract	0	1	13	0
Mustard	0	0	2	2
Olives	0	0	0	5
Pickles	1	2	6	10
Preserved Fruits	2	3	12	8
Puddings	0	0	12	12
Salad Dressing	0	0	1	6
Sandwich Spread	0	0	17	10
Sauces	0	0	14	8
Savoury Relish	0	0	5	0
Soup Mixtures	0	0	2	4
Spaghetti	0	1	2	12
Vermicelli	0	0	4	0

Total: T. C. Q. L. O.
2 0 3 10 10

In addition, 564 headache powders were destroyed.

TABLE XXXV.
PROSECUTIONS UNDER "THE HEALTH ACTS, 1937 TO 1949."

Date.	Place.	Nature of Offence.	Fines.	Costs.
1949—				
1st September	Gladstone	Unsuitable milk vehicle	£ s. d. 2 0 0	£ s. d. 0 6 0
1st September	Gladstone	Unsuitable milk vehicle	2 0 0	0 6 0
1st September	Gladstone	Milk measure without lid	2 0 0	0 6 0
3rd October	Rockhampton	Water carried on milk vehicle	10 0 0	0 6 0
15th November	Rockhampton	Food (confectionery) exposed	5 0 0	0 6 0
15th November	Rockhampton	Ice, delivered in bare hands	3 0 0	0 6 0
14th December	Blackall	Gin, adulterated	20 0 0	1 7 0
1950—				
2nd March	Blackall	Milk, deficient in fat	7 10 0	1 7 0
3rd March	Jericho	Poison, sold without license	2 0 0	1 7 0
3rd March	Jericho	Poison, sold without license	2 0 0	1 7 0
3rd March	Jericho	Poison, sold without license	2 0 0	1 7 0
31st May	Rockhampton	Ice, delivered in bare hands	6 0 0	0 6 0
31st May	Rockhampton	Ice, delivered in bare hands	3 0 0	0 6 0
31st May	Rockhampton	Ice, delivered in bare hands	3 0 0	0 6 0
31st May	Rockhampton	Ice, delivered in bare hands	3 0 0	0 6 0
30th June	Longreach	Bread, short weight	15 0 0	0 6 0
30th June	Longreach	Bread, short weight	7 10 0	0 4 6
30th June	Longreach	Bread, short weight	7 10 0	0 4 6
Totals			£102 10 0	£10 10 0

MACKAY SUB-OFFICE.

During the year general inspections under the Health Acts and Regulations were carried out within the City of Mackay, and visits were made to the following country centres:—Bowen, Calen, Carmila, Collinsville, Eimeo, Eton, Farleigh, Finch Hatton, Gargett, Habana, Koumala, Marian, Merinda, Mirani, Netherdale, Pinnacle, Proserpine, Queen's Beach, Sarina, Slade Point, St. Lawrence, and The Leaf.

Liquor testing in licensed bars, inspection of stores, cafes, bakehouses, and other food premises were conducted, and breaches of the Regulations corrected.

Some five tons of foodstuffs were certified to as being unfit for human consumption, and this food was duly destroyed.

Attention was given food vendors at the Annual Mackay Show, and an improvement secured in the conditions under which food for sale was prepared and displayed.

Milk supplies were supervised throughout the area. Two samples of milk obtained from a retail vendor at Proserpine were adulterated with 13 and 6 per cent. added water respectively. The milkman was convicted in the Summons Court and was fined in all £19 and ordered to pay costs amounting to £2 14s.

TOWNSVILLE SUB-OFFICE.

TABLE XXXVI.
SUMMARY OF INSPECTIONS.

Area.	In- spections.	Re-in- spections.	Official Calls.	Towns Visited.
City	777	48	304	20
Country	242	44	136	..
	1,019	92	440	..

Grand Total .. 1,551
Miles travelled—2,455.

TOWNSVILLE.

Throughout the year general supervision has been exercised over the manufacture, storage, handling, and sale of all classes of foods, drugs, and poisons.

It is pleasing to report that during the year many owners of cafes, stores, and hotels have installed new and modern equipment in order to provide better facilities and more hygienic conditions for the storage and dispensing of food for sale to the public. This was not possible over the previous eight or nine years owing to the shortage of materials and other conditions over which these people had no control. Items of interest which have been installed include hot-water systems, modern refrigeration plants, show cases, automatic hot-water glass-washers, hot-water automatic dish-washers, bottling machines, bottle-washing machines, &c.

Hotels.—Liquor testing has been carried out periodically, and in all instances the liquors tested were found to comply with the respective standards. Licensees continue to improve the conditions under which they handle their products by the construction of cold rooms, installation of hot-water automatic glass-washers, and remodelling of bars and bar counters. Kitchens in most instances are provided with refrigerators and the general cleanliness of kitchens, dining rooms, crockery, and kitchen utensils was found to be satisfactory.

All licensees have been instructed regarding the amended Food and Drugs Regulations dealing with the denaturing of waste beer and such regulation is being enforced.

Bakehouses.—Inspections from time to time of these premises revealed that they also are being conducted in accordance with the requirements of the regulations. Bread delivery vehicles have been subjected to inspections and notices issued in some instances to repaint, repair, and display name and address of owner thereon. In addition, action was taken in respect to bread being exposed to contamination during transit.

Milk.—Thirteen official samples of milk were purchased and submitted for analysis; one was found to contain 15 per cent. of added water, three were deficient in total solids and solids not fat; four were deficient in total solids and fat; and one deficient in total solids.

Legal proceedings were taken against the vendor whose sample contained 15 per cent. of added water and a conviction obtained. The defendant was fined £20 and ordered to pay £1 1s. analyst fee and 6s. costs of court.

Factories.—Two new food manufacturing premises worthy of recognition which were established were a smallgoods factory and an ice cream factory, both of which are constructed and conducted in accordance with the requirements of the regulations.

Cafes and Milk Bars.—With the arrival of modern equipment a marked improvement has been noticeable in respect to the conduct of the majority of cafes and milk bars within the city, and from information to hand still further improvements can be expected in the near future.

Warehouses.—Regular visits have been paid to all the local warehouses at frequent intervals in respect to the supervision of the various classes of foodstuffs handled. As a result of such visits the following is a list of foodstuffs found unsound and which were withdrawn from sale and destroyed by mutual consent, such goods being unfit for human consumption:—

50 packets jelly crystals;
2 casks olives;
5 lb. tea;
80 doz. 24-oz. tins melon and ginger jam;
9 doz. 24-oz. tins marmalade;
6 tins 24-oz. melon and pineapple;
82 2/12 doz. 24-oz. tins marmalade;
18 doz. 24-oz. tins marmalade;
8 cases each 14 lb. South African cod;
14 10/12 doz. tins frankfurts;
1 case Cape Town fillets;
1 case kippers (selected).

Samples submitted to the Government Analyst for examination included the following:—

1 fruit tin;
5 paint samples;
1 sample bubble gum;
11 samples cigarettes.

Upon receipt of the reports in respect to each of the above samples appropriate action was taken.

COUNTRY.

Towns visited within this sub-office district included:—Ayr, Balfe's Creek, Bambaroo, Bemerside, Brandon, Charters Towers, Cloncurry, Giru, Halifax, Home Hill, Hughenden, Ingham, Long Pocket, Lucinda Point, Macknade, Magnetic Island, Mount Isa, Prairie, Rollingstone, Stone River, Trebonne, and Torrens Creek.

Visits to the above towns were carried out for the purpose of general inspections. These inspections included all classes of business premises handling food, drugs, and poisons for sale. Reports of each inspection were submitted to headquarters, together with recommendations and information respecting action taken.

Ingham.—Five official samples of milk were purchased from vendors in this town and submitted to the Government Analyst. The analyst's report disclosed that three of the samples were deficient in fat, two of them to the extent of 51.5 per cent. and 57.5 per cent. respectively, and as a result legal proceedings were instituted. Both defendants pleaded guilty and the presiding magistrate inflicted a fine of £2 together with £1 1s. analyst fee and 6s. costs of court in each case.

CAIRNS SUB-OFFICE.

The Department's officer in charge of the Cairns Sub-Office reports that every phase of food manufacture, distribution, and sale received attention during the year, and this work has necessitated numerous inspections and much travelling. Staff limitations precluded a full coverage of the area but this has now been overcome by the appointment of an assistant inspector. Co-operation of traders throughout this area has been no small factor in the general satisfactory condition.

Milk control was not neglected and, where opportunity offered, checking of sales of milk was done. During the year 39 official samples of milk were submitted for analysis and the results obtained indicated a fairly high standard. Processing plants are in operation at three towns in this area and are responsible for a large proportion of the milk consumed not only in this area but also further south. A franchise for pasteurised milk was granted to a Cairns firm, while a new venture in raw milk supplies from the Tableland was also commenced. Check samples of the products of both suppliers revealed compliance with the standards demanded of their respective products.

Bread again engaged the attention of the staff. Bakeries were regularly inspected, whilst deliveries also came under supervision. An outbreak of "rope" in a country bakehouse was quickly dealt with, the carrying out of the instructions issued resulting in a rapid elimination of the trouble.

Testing of alcoholic liquors was carried out and licensees were found to be complying with the required standards. Practically all hotels have complied with the automatic hot-water glass-washing machine regulations in this area. Work is proceeding apace at the North Australian Brewery in Cairns in the provision of a building and apparatus for bottling and it is confidently expected that the product will be on the market in the near future. This will undoubtedly ease the position in regard to the bottling of draught beer by the individual licensee.

Cafes, grocers' stores, mixed businesses, &c., received their share of attention during the year, not only in regard to the condition of premises but also in regard to the quality of foodstuffs, whilst the central distribution centres, such as warehouses, were not neglected. It is pleasing to note that in practically all instances the desired improvement has been effected without the service of notices, which are left as a last resource for the few recalcitrants.

Among the 26 check samples of foods and appliances submitted for analytical test during the year was an interesting one of plastic hose, which had been used in the manufacture of food. The constitution of the plastic hose was such as to impart a distinct taste and smell to the foodstuff concerned and its use had to be discontinued.

During the year 1 ton 4 cwt. 2 qr. and 16 lb. of foodstuffs were rejected as unfit for human consumption and destroyed. This total included tea, dried fish, jams, potatoes, bacon, cooked prawns, and certain other tinned goods.

The above work necessitated the travelling of 9,709 miles by train, boat, and motor truck and caused visits to be paid to the following towns:—Almaden, Aloomba, Atherton, Babinda, Barron Crossing, Behana Creek, Bingil Bay, Bramspston Beach, Cardwell, Chillagoe, Clifton Beach, Cooktown, Dimbulah, Double Island, Edmonton, Einasleigh, El Arish, Ellis Beach, Euramo, Feluga, Fishery Falls, Flying Fish Point, Forsayth, Garradunga, Georgetown, Gordonvale, Hartley's Creek, Herberton, Holloway's Beach, Innisfail, Innot Hot Springs, Kairi, Kamma, Kulara, Kuranda, Kurramine, Little Mulgrave, Lower Tully, Machan's Beach, Malanda, Mareeba, Mena Creek, Meringa, Millaa Millaa, Mona Mona, Moresby, Mossman, Mossman Beach, Mt. Garnet, Mt. Molloy, Mt. Mulligan, Mt. Surprise, Mourilyan, North Mission Beach, Palm Cove, Pearamon, Port Douglas, Queerah, Ravenshoe, Redlynch, Silkwood, South Mission Beach, Stratford, Tolga, Tully, Yorkies Knob, and Yungaburra.

THURSDAY ISLAND SUB-OFFICE.

Mixed Food Businesses.—These were kept under regular supervision throughout the year and a satisfactory standard was maintained. Only one business failed to comply with verbal instructions issued where breaches of the Regulations were noted, and a Director-General's statutory notice was found necessary in this case to effect required improvements.

Aerated Water Factories.—The two aerated water factories on the island were conducted in compliance with the Regulations under the Health Acts.

Bakehouses.—Two bakehouses are now operating and both are conducted satisfactorily. One bakehouse during the year was found to be infected with "rope," and was closed for three days to allow full eradication methods to be carried out. Bread from this bakehouse has since been of very good standard.

Cafes and other Food Premises.—These were also kept under regular supervision and are conducted satisfactorily.

Liquor Testing.—Tests were made during the year of spirits sold in the four hotels, and it was found that all liquors complied with the standard.

Poisons.—Inspections were made of stores to ensure that no poisons were sold by unlicensed persons. No breaches in this respect were found.

Unsound Articles Destroyed.—Three and three-fifth tons of flour, 24 lb. of sausage meat, and 8 9-12 dozen 8-oz. tins of liver salts were certified to as being unfit for human consumption.

SANITATION SECTION.

LOCAL AUTHORITY ADMINISTRATION.

Reports submitted by inspecting departmental officers on the sanitary circumstances of large and small communities throughout the State indicate that the majority of Local Authorities are making every endeavour to meet the increasing demands for higher standards in sanitation and healthier environments.

There are, however, Local Authorities not yet imbued with the spirit of progress, and as a consequence no improvement has taken place in their areas. These councils do not accept their responsibilities to their communities in regard to the modern trend of thought and practice in public health administration. Even before the present shortage of health inspectors these authorities offered every objection to the splitting up of large areas to a size which could be efficiently supervised by one man. Effective administration can only be effected by the appointment of qualified and responsible officers to educate, supervise, instruct, and when necessary to enforce the execution of the law promulgated for the protection of public health.

Each Local Authority should aim at the appointment of a qualified health inspector for its own area, and shire councils should not divide their responsibility with other councils.

During the year four councils appointed their own health inspectors—viz., Wondai, Kilkivan, Gayndah, and Douglas.

Eighteen cities and towns and thirty shire councils have appointed inspectors for their respective areas, with six vacancies.

Twenty-five joint areas which embrace seventy-three shire council areas still exist. A number of these joint areas are much too extensive for one inspector. The others, which are smaller in area, and have no large communities, may be regarded as being effectively covered by one inspector.

Departmental reports reveal that the major works which have a direct bearing on public health such as water supply, sewerage, and drainage, are being given a high priority by many Local Authorities. In a number of cases the construction work has been held up by the continued shortage of materials and labour. These works being of a technical nature come under the jurisdiction of the Department of Local Government; and are directed and supervised by the engineering staff of that department.

Such schemes which have come within the knowledge of the Department are:—

Water Supply.—Biggenden, Boonah, Kalbar, Stanthorpe, Wallangarra.

Sewerage.—Barcaldine, Bowen, Blackall, Charters Towers, Cairns, Collinsville, Dalby, Hughenden, Innisfail, Gladstone, Kingaroy, Longreach, Monto, North Mackay, Winton, Redcliffe, Town of South Coast, and extensions to existing schemes at Bundaberg, Ipswich, Mackay, Maryborough, Rockhampton, Townsville, and Toowoomba.

TABLE XXXVII.

Local Authority.	Total Subsidies, 1943-50.							Subsidies for 1949-50.						
						s.	d.						s.	d.
Brisbane	3	7	0	2	9	6	4 1	..	8	6	3	1	5	..
Cairns	..	2	6	7	2	0	..	..	1	8	8	6	4	..
Townsville	..	2	5	3	0	4	14 0	..	..	4	4	9	0	..
Rockhampton	..	1	2	8	5	8	..	..	..	7	4	6	..	..
Ipawich	..	2	1	6	3	1	8 2	..	..	4	2	0	6	8 2
Gympie	..	..	2	5	4	0	..	..	..	2	0	0	0	..
Maryborough	..	1	1	6	1	7	6 6	..	..	8	3	9	..	..
Bundaberg	..	..	7	1	9	6	5 0	..	..	2	4	3	0	..
Charters Towers	..	..	..	8	1	2	..	..	..	5	0	0	..	..
Warwick	..	..	2	9	3	9	..	..	..	1	0	0	..	..
Mackay	..	..	9	9	2	5	..	..	..	4	0	0	..	..
Redcliffe	..	2	2	5	6	4	2 11	..	1	0	3	5	4	10 9
Charleville	..	..	2	3	5	6	..	..	..	..	..	..	..	..
Roma	..	..	9	9	2	..	..	..	..	..	..	..	..	..
Dalby	..	..	4	5	9	4	..	..	..	2	0	0	0	..
Town of South Coast	..	2	6	8	0	1	..	..	2	0	8	0	1	..
Gladstone	..	..	7	1	4	5	..	..	..	1	6	3	0	..
Goondiwindi	..	1	3	5	7	0	..	..	..	..	..	..	..	..
Bowen	..	..	2	7	9	0	..	..	..	..	..	..	..	..
Toowoomba	..	..	5	0	3	0	..	..	..	..	..	..	..	..
Aramac Shire	..	..	..	2	7	..	..	..	..	..	..	..	..	..
Albert Shire	..	..	1	0	0	0	..	..	..	1	0	0	0	..
Barcaldine Shire	..	..	..	4	8	5	..	..	..	..	..	5	0	..
Beaudesert Shire	..	..	3	3	0	0	..	..	..	8	0	0	..	..
Blackall Shire	..	..	..	8	5	7	..	..	..	..	..	..	..	..
Burrum Shire	..	..	1	7	5	5	..	..	..	..	..	..	..	..
Boonah Shire	..	..	2	2	8	0	15 0	..	..	..	1	3	5	..
Cardwell Shire	..	..	..	7	0	0	..	..	..	..	..	..	..	..
Chinchilla Shire	..	..	3	5	0	0	..	..	..	2	5	0	0	..
Caboolture Shire	..	..	1	0	6	8	..	..	..	..	..	..	..	..
Cloncurry Shire	..	..	5	0	0	0	..	..	..	8	0	0	0	..
Douglas Shire	..	..	2	4	0	0	..	..	..	2	4	0	0	..
Eak Shire	..	..	1	5	3	..	..	..	..	..	..	..	..	..
Emerald Shire	..	..	..	1	5	0	..	..	..	..	..	..	..	..
Eacham Shire	..	..	..	6	6	5	..	..	..	..	6	6	5	..
Herberton Shire	..	..	1	0	4	3	..	..	..	..	4	5	0	..
Hinchinbrook Shire	..	..	6	1	3	8	..	..	..	2	0	0	0	..
Inglewood Shire	..	..	2	4	1	3	10 0	..	..	..	6	6	5	..
Isis Shire	..	..	4	2	7	7	..	..	..	1	6	7	7	..
Johnstone Shire	..	..	5	0	3	2	9 2	..	..	4	4	0	4	..
Jondaryan Shire	..	..	..	1	1	1	10 0	..	..	..	..	..	..	..
Kingaroy Shire	..	..	..	3	2	3	..	..	..	..	..	..	..	..
Livingstone Shire	..	..	4	5	5	3	..	..	..	..	..	..	..	..
Longreach	..	..	9	2	0	0	..	..	..	..	1	7	5	..
Mareeba Shire	..	..	..	5	0	0	..	..	..	..	5	0	0	..
Mirani Shire	..	..	9	1	8	15 0	..	..	..	..	..	..	..	..
Milmeran Shire	..	..	..	8	5	..	..	..	..	..	..	..	..	..
Monto Shire	..	..	..	1	1	1	4 0	..	..	..	..	..	..	..
Munduberra Shire	..	..	..	3	5	7	..	..	..	..	..	..	..	..
Moreton Shire	..	..	2	6	0	2	..	..	..	..	6	0	0	..
Mulgrave Shire	..	1	8	2	6	0	..	..	..	3	6	3	0	..
Murgon Shire	..	..	1	5	0	0	..	..	..	1	0	0	0	..
Nerang Shire	..	..	1	9	2	2	10 0	..	..	..	..	..	..	..
Pioneer Shire	..	..	3	3	2	9	..	..	..	..	4	3	5	..
Pioneer-Mackay Shire	..	..	1	0	0	0	..	..	..	1	0	0	0	..
Paroo Shire	..	..	6	0	0	0	..	..	..	2	0	0	0	..
Proserpine Shire	..	..	1	9	2	5	..	..	..	..	..	..	..	..
Rosewood Shire	..	..	3	2	0	5	..	..	..	..	6	0	0	..
Redland Shire	..	..	..	4	5	0	..	..	..	..	4	5	0	..
Sarina Shire	..	..	1	7	6	0	..	..	..	..	..	..	..	..
Stanthorpe Shire	..	..	6	5	0	0	..	..	..	6	5	0	0	..
Tara Shire	..	..	..	2	4	..	..	..	..	..	..	..	..	..
Tingalpa Shire	..	..	..	6	2	5	..	..	..	..	..	..	..	..
Widgee Shire	..	..	1	3	6	1	..	..	..	..	..	..	..	..
Woongarra Shire	..	..	..	7	5	0	..	..	..	..	..	..	..	..
Woothakata Shire	..	..	..	1	0	7	16 5	..	..	..	..	..	..	..
Wambo Shire	..	..	..	2	9	1	10 0	..	..	..	2	9	1	10 0

	£	d.
Subsidies granted, 1949-50	202,041	8 11
Subsidies granted prior to 1949-50	500,142	1 2
Total Subsidies granted, 1943-50	£792,183	10 1

Drainage.—Aramac, Bundaberg, Blackall, Cairns, Esk, Edmonton, Finch Hatton, Gatton, Gordonvale, Innisfail, Kingaroy, Kilkivan, Mundubbera, Monto, Malanda, Millaa Millaa, Mitchell, Wondai, Winton, Yungaburra. Other drainage schemes are being carried out under the Government 50 per cent. subsidy on mosquito eradication works.

In Brisbane an extensive programme of water supply, sewerage, drainage, and works under the 50 per cent. subsidy is in continuous progress.

Nightsoil collection and disposal services are with some exceptions rendering satisfactory service in their respective areas throughout the State. The exceptions, are, unfortunately, in the main centres of population where such an organisation should be of a high standard, and efficiently equipped to operate on modern lines. Inefficiency is encouraged because of the failure of some councils to take disciplinary action against the contractor for breaches of the "Sanitary Conveniences and Nightsoil Disposal Regulations 1946" and the contract. An inefficient nightsoil removal service is a menace to public health. The Department is taking action to have these services brought up to the requirements of a modern service.

Refuse removal and disposal services are generally below the required standard; the refuse bin, which is a very important link in such a service, is conspicuous by its absence. The provision and maintenance of standard receptacles for the storage of refuse on premises is of great importance and must be accepted by Local Authorities as essential plant and stock-in-trade of the service.

Attention of Local Authorities is again directed to "The Plague Prevention Regulations 1944," Regulation 7 (f), where it is laid down that "The Local Authority shall make provision for the supply and delivery to the occupier of every premises . . . a tightly covered metal weatherproof cylindrical container or containers . . . The cost of such container/s may be recovered from the occupier . . ."

Disposal of refuse is done at tips, except at Cairns, Ipswich, and Toowoomba, where incinerators are established. More controlled tipping is being carried out than in previous years, and in this section of the service much improvement has been reported. Many of the cities and towns are reclaiming low-lying or swampy areas, and the conduct and control are of a high standard.

Mosquito destruction and eradication is now accepted by many councils as an important measure for the protection of public health. Drainage works, spraying and oiling, and house to house visitations were carried out in a number of cities and towns. The Government has continued its 50 per cent. subsidy for mosquito eradication works, and the table hereunder is a list of Local Authorities to whom subsidies have been granted since the subsidy was first granted in February, 1943.

Plague precautions at all shipping and other near centres continued throughout the year. In the Port of Brisbane an intensive drive for the destruction of rats by 50 men and dogs (together with poisoning measures in which the

poisons used were 1,080, 105, and zinc phosphide) was carried out in a mapped area known as the "danger zone," and which covers the whole of the shipping front and all premises within the defined area. The campaign lasted for two months, during which period 4,933 rats and 603 mice were caught and destroyed.

The total rats and mice caught and destroyed in the following nine cities were:—

	Rats.	Mice.
Brisbane	43,463	5,877
Bundaberg	793	..
Cairns	2,039	254
Gympie	143	..
Ipswich	1,818	67
Mackay	1,653	843
Maryborough	847	..
Rockhampton	3,581	..
Townsville	3,722	..
Totals	58,059	7,041
Grand Total	65,100	

The total (65,100) shows a decrease of 11,344 when compared with the 1948-9 total of 76,444.

Rat smears were submitted to the department's laboratory, Brisbane, for examination from—

Metropolitan Area—			
Sandgate	..	..	650
Wynnum	..	..	657
Mentworks	..	..	272
Total	..	..	1,579
Ex-Metropolitan Area—			
Bundaberg	..	..	739
Gympie	..	..	166
Ipswich	..	..	592
Mackay	..	..	1,599
Maryborough	..	..	430
Total	..	..	3,526

Rat smears submitted to and examined at Commonwealth Laboratories at—

Cairns	..	..	2,262
Townsville Council	..	..	2,515
Townsville Harbour Board	..	..	230
Rockhampton	..	..	3,792
Total	..	..	8,799

The following loans to Local Authorities were approved during the year:—

TABLE XXXVIII.

Local Authority.	Loan.	Works.
Charters Towers	£ 3,000	Sewerage, Survey plans, &c.
Chinchilla ..	1,000	Improvements Sanitary Depot
Dalrymple ..	140	Vehicle Sanitary Service
Ipswich ..	3,000	Sanitary Vehicles and Plant
Gladstone ..	850	Improvements Sanitary Depot
Inglewood ..	5,000	Septic Tanks Inglewood
Mirani ..	750	Improvements Sanitary Depot
Murilla ..	2,000	Purchase of land Sanitary Depot
Mulgrave ..	4,000	New Sanitary Vehicles
Proserpine ..	2,000	New Sanitary Depot
Thursday Island	150	Further Loan Sanitary Vehicles

The following loans were approved and subsidies granted to Local Authorities:—

TABLE XXXIX.

Local Authority.	Amount.	Subsidy.	Purpose.
	£	Per cent.	
Ayr ..	5,000	25	Kerbing and Channelling
Albert ..	1,350	33½	Public Accommodation
Biggenden ..	500	33½	Public Accommodation
Beaudesert ..	1,572	33½	Public Accommodation
Belyando ..	800	33½	Public Accommodation
Bundaberg ..	16,700	50	Sewerage extensions
Brisbane ..	8,400	33½	Public Accommodation
Cairns ..	4,228	20	Reclamation Works
Cairns ..	500,000	50	Sewerage Scheme
Cairns ..	2,500	33½	Public Accommodation
Caboolture ..	1,250	33½	Public Accommodation
Caboolture ..	1,500	33½	Public Accommodation
Charters Towers	3,000	50	Sewerage survey, plans, &c.
Chinchilla ..	240	25	Water Supply Sanitary Depot
Crows' Nest	700	33½	Public Accommodation
Dalby ..	10,000	50	Sewerage Scheme
Gladstone ..	3,000	50	Sewerage Survey and Plans
Hughenden ..	50,000	50	Sewerage Scheme
Inglewood ..	1,000	33½	Public Accommodation
Johnstone ..	5,000	..	Drainage Works
Kilkivan ..	1,500	33½	Public Accommodation
Kilkivan ..	625	33½	Public Accommodation
Kolan ..	475	33½	Public Accommodation
Kilcoy ..	1,750	33½	Public Accommodation
Landsborough	1,000	33½	Camp Improvements
Longreach ..	15,000	50	Sewerage Scheme
Laidley ..	850	33½	Public Accommodation
Milmeran ..	710	33½	Public Accommodation
Mackay ..	3,000	50	Sewerage Survey and Plans
Mackay ..	5,000	50	Sewerage extensions
Mackay ..	2,500	50	Sewerage extensions
Mackay ..	5,000	50	Sewerage—New Area
Mackay ..	9,000	50	Reconditioning Sewers
Mirani ..	8,500	25	Kerb and Channelling
Murgon ..	1,000	33½	Public Accommodation
Mulgrave ..	330	33½	Public Accommodation
Mulgrave ..	1,000	20	Gordonvale Nightsoil Plant
Noosa ..	253	33½	Camp Accommodation
Noosa ..	400	33½	Camp Accommodation
Noosa ..	500	33½	Camp Accommodation
Pioneer ..	1,833	33½	Beach Accommodation
Pioneer ..	1,600	33½	Beach Accommodation
Pioneer ..	900	33½	Beach Accommodation
Pioneer ..	5,000	25	Drainage Kerb and Channelling
Paroo ..	1,000	10	Investigations Sewerage Wyandra
Rosalie ..	650	33½	Public Accommodation
Redcliffe ..	30,000	50	Sewerage Scheme
Redcliffe ..	5,800	25	Kerb and Channelling
Redcliffe ..	1,050	33½	Camp Accommodation
Redland ..	1,500	33½	Public Accommodation
Stanthorpe ..	1,700	33½	Public Accommodation
Town of Sth. Coast	1,300	33½	Camp Accommodation, &c.
Town of Sth. Coast	20,000	33½	Public and Camp Accommodation
Toowoomba ..	5,329	33½	Public Accommodation
Toowoomba ..	10,000	50	Sewerage extensions
Wangaratta ..	1,000	33½	Public Accommodation
Warwick ..	5,000	25	Kerb and Channelling
Warwick ..	3,000	33½	Public Accommodation

TOTAL 771,795

Local Authority administration at and supervision of seaside holiday resorts and camping areas was very satisfactory, and the sanitary conditions were maintained at a high standard during the holiday period at Christmas-New Year. Departmental officers reported that councils had responded well to the recommendations submitted prior to the commencement of the season. Progressive work in regard to accommodation and amenities was noted by the visiting officers, and reference to the list of loans and

subsidies will show that this progressive programme will be continued throughout 1950-51.

DEPARTMENTAL SUPERVISION.

Analysis of inspections made by the headquarters staff is:—

Area.	First Inspections.	Re-Inspections.	Official Calls.
Metropolitan ..	3,027	781	615
Country ..	2,927	..	296
Totals ..	5,954	781	911
Grand Total ..	..	7,646	..

The first inspections included:—Barbers' shops 275, common lanes and yards 154, drainage and sewerage 229, mosquito eradication schemes 215, public accommodation 359, rat infestation 99, refuse tips 486, sanitary conveniences 692, sanitary depots 125, housing camps 291, mosquito subsidy 110, Royal National Show 92, seaside resorts and camps 774. *See also* theatres, swimming pools, bedding and upholstery, licensed premises, and theatre tables.

In the country districts sanitary surveys and inspections for special purposes were carried out, and reports submitted by departmental officers on the sanitary conditions found, and where improvements were called for, the Local Authorities concerned were notified accordingly. The cities, towns, and townships visited were:—Aratula, Amity Point, Avondale, Advancetown, Alberton (2), Beaudesert (3), Beerwah, Blackbutt, Biggenden, Burleigh (4), Byrnestown, Bilinga (3), Boonah (2), Burpengary, Beechmere, Beenleigh (3), Bingera, Bishop Island, Bundaberg (3), Burnett Heads (2), Bucca, Bundall, Brooloo, Caloundra (5), Coolangatta (5), Currumbin (3), Caboolture (4), Coominya, Crossdale, Cleveland (3), Cunnamulla, Charleville, Condamine, Childers (2), Capalaba (2), Dugandan, Dayboro', Deception Bay, Dunwich, Esk, Elliot Heads, Fairymead, Gayndah, Gatakers Bay, Gooroolba, Granville, Goomeri, Glamorganvale, Grandchester, Gin Gin, Goodwood, Goodna, Howard, Haigslea, Harrisville, Harlin, Ipswich, Imbil, Jimboomba, Kalbar, Kilcoy (2), Kingaroy, Kilkivan, Kandanga, Landsborough, Laidley, Lowood, Lawnton, Loganholme, Logan Village, Maryborough (3), Mooloolaba (3), Munduberra, Marburg, Mount Alford, Maleny, Maroochydore (3), Murgon (2), Morven, Mitchell, Muckadilla, Miles, Mount Perry, Miriam Vale, Munna Point (2), Miami (3), Mudgeeraba, Nambour (2), Noosa (3), Nanango, Noosa Heads (2), Ormeau, Oxenford, Pinalba, Point Vernon, Peak Crossing, Proston, Petrie, Palm Beach (3), Pimpama, Quilpie, Redcliffe (9), Roadvale, Rosewood, Redland Bay (3), Roma, Raby Bay, Rathdowney, Southport (8), Searness, South Kolan, Slacks Creek, Stapleton, Surfers' Paradise, Tinana, Torbanlea, Torquay, Tallebudgera, Toogoolawah, Thorneside, Tamborine Mountain, Tamborine Village, Tugan (2), Tincan Bay, Tewantin (3), Urangan, Upper Coomera, Victoria Point, Walloon, Woodford (3), Wondai, Wellington Point, Wallaville, Woodgate, Waterford, West Burleigh, Yarraman, Yeulba, Yandaran, Yatala.

A survey of the sanitary and other accommodation of parks and recreation grounds within the metropolitan area was carried out during the year, particulars of which were as follows:—

No. Inspections.	W.C's.		E.C's.			Urinals.		
	Satisfactory.	Unsatisfactory.	Satisfactory.	Unsatisfactory.	No Accommodation.	Satisfactory.	Unsatisfactory.	No Accommodation.
49	9	7	4	26	3	5	22	22

No. Inspections.	Dressing Sheds.			Showers.			Grounds.	
	Satisfactory.	Unsatisfactory.	No Accommodation.	Satisfactory.	Unsatisfactory.	No Accommodation.	Satisfactory.	Unsatisfactory.
49	22	7	20	9	11	29	37	12

The causes of the unsatisfactory conditions are chiefly due to lack of regular cleansing and maintenance. It is recognised that public accommodation is always open to misuse and vandalism, but this lack of civic responsibility of a small section of irresponsible youth must

not be accepted as an excuse for neglect on the part of the authorities concerned.

Theatres within the metropolitan area were inspected; 44 theatres were visited, particulars of the conditions found were as follows:—

TABLE XL.

Sanitary Accommodation.						Ventilation.			Rodent Control.		Vermin Control.								
W.C's.		E.C's.		Urinals.		Air Conditioned.	Mechanical.	Natural. (Some with fans)	Satisfactory.	Not Satisfactory.	Treatment with				Periods of Treatment.				
Satisfactory.	Not Satisfactory.	Satisfactory.	Not Satisfactory.	Satisfactory.	Not Satisfactory.						Insecticide D.D.T. Base.	Insecticide Phenol Base.	Miscellaneous Insecticides.	Nil.	Daily.	Tri-weekly.	Bi-weekly.	Weekly.	Fortnightly.
36	1	6	1	40	4	5	2	37	44	..	35	1	5	3	13	1	5	22	3

Municipal and school swimming pools were subjected to periodic tests with "chlorotex" reagent. Municipal pools are provided with continuous chlorination plants, while at the State Schools manual methods are resorted to, but each school is provided with a testing outfit, and the purity of the water is checked at regular intervals by the teacher in charge. In four instances samples of the chlorinating substance were obtained and analysed for available chlorine.

The results of the tests carried out by a departmental officer as shown in tables below show that the swimming waters are kept at a high standard of purity.

TABLE XLI.
STATE SCHOOLS (METROPOLITAN).

MUNICIPAL POOLS.					Swimming Pool.			
Swimming Pool.	Chemical.		Bacteriological.		Chemical.		Bacteriological.	
	No. of Tests.	No. Satisfactory.	No. of Tests.	No. Satisfactory.	No. of Tests.	No. Satisfactory.	No. of Tests.	No. Satisfactory.
Booroodabin ..	4	4	..	..	Ascot ..	3	3	..
Davies Park ..	5	5	..	..	Buranda ..	2	2	..
Ithaca ..	5	5	..	..	Blind, Deaf, and Dumb ..	1	1	..
Spring Hill ..	4	4	..	..	Cannon Hill ..	2	2	..
Toowong ..	4	4	..	..	Coorparoo ..	4	3	..
Ipswich ..	1	1	..	..	Greenlanes† ..	5	3	1
					Greenslopes ..	3	3	..
					Junction Park ..	2	2	..
					Milton ..	2	2	..
					Wilston ..	1	1	..
					Windsor ..	1	1	..
					Wooloowin ..	4	4	..

† Private pool used by State Schools.

Under "The Bedding and Upholstery Regulations 1948" samples of various filling materials were procured and submitted to the Govern-

ment Analyst for examination. The Analyst's findings are as follows:—

TABLE XLII.

Materials.	Number of Samples.	Chlorine Standard.		NH ₃ Standard.		Turbidity Standard.	
		Passed.	Failed.	Passed.	Failed.	Passed.	Failed.
New Filling Materials—							
Australian—							
Flock	9	9	..	8	1	7	2
White Flock	2	2	..	2	..	1	1
Wadding	1	..	1	..	1	1	..
Cotton	6	6	..	6	..	6	..
Cotton waste	1	1	..	1	..	1	..
Garnetted wool	3	3	..	3	..	3	..
Quilted Kapok	1	1	..	*	..	1	..
Imported—							
Java kapok	3	3	..	*	..	3	..
Indian kapok	1	1	..	*	..	1	..
Kapok (unknown)	1	1	..	*	..	1	..
Ceylon fibre	11	10	1	11	..	11	..
Indian fibre	1	..	1	1	..	1	..
Fibre (unknown)	9	8	1	8	1	9	..
Totals	49	45	4	40	3	46	3
Per cent. passed 1949-50	..	91.8%		90.0%		93.8%	
Per cent. passed 1948-49	..	75.0%		79.7%		79.7%	
Per cent. passed 1947-48	..	73.0%		73.0%		74.9%	
Previously Used Materials—							
Fibre	7	6	1	1	6	5	2
Flock	1	1	..	1	..	1	..
	8	7	1	2	6	6	2
Per cent. pass 1949-50	..	87.0%		25.0%		75.0%	

* No standard.

Seaside resorts and camping areas were inspected prior to the Christmas-New Year holiday season by departmental officers, and where improvements in the public accommodation were found necessary recommendations were forwarded to the Local Authorities concerned for action.

The following resorts were policed during the summer rush holiday period:—Town of South Coast, Landsborough, Redcliffe, Redland, Caboolture, Noosa, Maroochy, Burrum, Widgee, Woongarra, Livingstone, Bowen, Pioneer, Mulgrave, Douglas, Johnstone, Cardwell.

The inspecting officers reported that the standard of sanitation was maintained at a high level, and that the essential services were regular and conducted in a satisfactory manner.

The annual inspections of licensed premises were carried out during the year, and reports submitted to the Licensing Commission. In the metropolitan area, 141 annual inspections were made, and in the country areas 331 inspections were carried out by inspectors while on tours of inspection.

TOOWOOMBA SUB-OFFICE.

Places Visited.—During the year inspections were carried out in the Toowoomba district as set out in the Food and Drug Report.

Local Authority Supervision.—The summary of work carried out under this heading is as follows:—

TABLE XLIII.

Area.	First Inspection.	Re-Inspection.	Official Calls.	Reports.	Towns.
Headquarters ..	819	54	250	99	..
Country ..	961	..	66	222	60
Totals ..	1,780	54	316	321	60
Grand Total of Inspections ..			2,150	..	

These inspections comprised abattoir site 1, aerated water factories 21, bakers 92, barbers 150, cafes, stores 644, chemists 26, drainage 16, entertainment areas 1, flies 1, flock factory 1, food factories 52, hotels 123, hospitals 3, incinerators 2, laneways 9, markets 2, mosquitoes 26, noxious trades 2, poultry 1, piggeries 2, rats 60, refuse tips 42, saleyards 1, sanitary conveniences 279, sanitary depots 36, sanitary surveys 4, sewerage treatment works 4, showgrounds inspections 141, stables 14, subsidies 9, tannery site 1, theatre 1, swimming pools 6, water supply 7, wine factory 1.

Licensed Premises.—Inspections, annual and general, were carried out on behalf of the

Licensing Commission at all hotels and wine shops in Toowoomba and at the country centres visited as follows:—

—	Hotels.	Wine Shops.	Billiards.	Reports.
Toowoomba ..	51	3	..	50
Country ..	112	2	1	95
Total..	163	5	1	145

The survey shows that while the general standard of accommodation has improved on that pertaining in recent years there are few hotels in the district measuring up to first-class standards. Little can be done at present in the way of major structural alterations and additions, but a vigorous effort should be made to implement those recommendations not involving great outlay of materials and labour so that the available accommodation can be brought to the best standard possible. The demand for accommodation and the high cost of staff maintenance have developed a general tendency to overcrowding, and a number of aggravated instances of this were brought to the notice of the Commission.

Plans and specifications of proposed alterations and additions to hotels in the district were examined and reported upon and inspections made of work in progress. A septic system has been approved and is in course of installation at a Killarney hotel and premises at Gowrie Junction have been similarly equipped. Work is proceeding on sewerage connections at the few remaining Warwick hotels not already connected and some improvement in sanitary and bathroom facilities have also been secured at this centre.

Appointment of Assistant Inspector.—An assistant inspector was appointed to the Sub-Office in October, relieving somewhat the acute staff disabilities of recent years. As a result, work in many phases of Departmental activity, formerly barely touched because of matters claiming prior attention, has been intensified. Inspections made during the year are a record, and, coupled with the intensive campaigns made possible in connection with barbers' shops and mixed stores, clearly indicate the wisdom of such an appointment.

Barbers' Shops.—The increase in staff mentioned above has allowed a greater amount of time to be allotted to the hairdressing premises in Toowoomba and country centres, and this attention has resulted in stricter compliance with the Barbers' Shop Regulations.

A complete survey of ladies' and gents' barbers' shops in the Toowoomba City area revealed that many of the operatives paid very little heed to the Regulations, and that certain premises were badly in need of renovation. A campaign along educational lines was followed by the distribution of copies of the Regulations among all barbers. Where necessary, re-inspections of premises were made and notices requiring correction of faults were issued. A number of premises have been renovated and barbers in general are now complying reasonably well with the requirements of the Regulations. However, if this reasonable standard is to be maintained

constant visiting is necessary. In two cases premises are still below standard—in one arrangements have been made for complete rebuilding, and the other shop is to be closed at an early date.

In country centres the standard of conduct of barbers' shops is reasonable except in a few cases which are receiving special attention.

Throughout this district the ladies' salons are, on the average, conducted at a higher standard than the men's barbers' shops and the premises are usually much better appointed.

In Toowoomba 98 visits were paid to hairdressing premises, and in the country 52 inspections were made.

SANITARY SURVEYS.

Toowoomba City Council.—The Greater Toowoomba area now embraces the major part of the old Drayton Shire and small portions of the Highfields and Jondaryan Shires. The general standard of sanitation throughout the area has been good and calls for no special comment.

The sewerage system serving the inner portion of the city has functioned efficiently, but no new reticulation has been undertaken, and connections of unsewered premises within the area, apart from new dwellings, have not come up to expectations. The nightsoil and refuse removal services have been conducted satisfactorily on the whole and the incinerator and various dry refuse tips have been properly maintained. A proposed strike of sanitary workers, which threatened essential services at one period during the year, was fortunately averted.

The city water supply has again been the subject of numerous complaints, principally concerning discolouration and foreign matter in suspension, and it cannot be classed as satisfactory. A start has been made on the cement lining of a number of old mains *in situ*, and some new and larger mains are planned in an attempt to eradicate these objectionable features which occur frequently in various parts of the city. This work is long overdue, and until it has been completed the installation of filtration plant at the reservoir, where the water is normally clear, would be of little practical use.

Mosquitoes, of which the city has been reasonably free in the past, assumed nuisance proportions in some of the outer suburbs during the year. Major cause of this infestation is attributable to the phenomenal rains experienced and the outbreak of numerous springs and soakages, but the fact must not be overlooked that the areas concerned rely principally on sub-surface irrigation for disposal of waste waters and thorough and frequent house-to-house inspection, with strict supervision of sumps, is essential if the former comparative immunity is to be regained.

The present City Council entered office with a promise to eliminate the fly from Toowoomba. This is a task of some magnitude, but if all domestic breeding places are eliminated much good will be achieved. To this end plans have been formulated for strict control of stables and the removal and disposal by the Council of all stable manure. A by-law has been prepared limiting the number of cattle which can be

housed within certain areas, and a campaign of spraying and other preventative work has been organised for the coming summer months.

Work on Gowrie Creek under the mosquito subsidy scheme for which a loan and subsidy of £17,000 has been approved, has now been accelerated, and application has been made for a further amount of £4,000 to extend the works.

The lack of modern public conveniences in the city has been the subject of adverse criticism for many years. The City Council has been handicapped in this matter by the lack of a suitable central site, but indications are that this difficulty has now been overcome and an application for loan and subsidy of £10,000 for part of the cost has been made. Modern public conveniences have been erected at Picnic Point, and a further loan and subsidy of £1,000 has been sought for the construction of conveniences at Griffith Park.

During the year the proposed sites of the new Toowoomba Public Abattoir and of a proposed tannery were investigated and reports embodying recommendations were submitted to Head Office. The usual inspections were carried out at the Showgrounds during the Toowoomba Show, and a satisfactory standard of hygiene was maintained.

A range of flock samples from a local factory was submitted for examination, and action was subsequently taken to ensure an improvement in quality.

Warwick City Council.—The general sanitary condition of the city was satisfactory, and progress has been maintained in the eradication of mosquito-breeding grounds within the area. For this purpose, a further loan and subsidy of £200 was granted in connection with the de-snagging of the city reaches of the Condamine River—a work which has proved of great value in decreasing infestation.

A survey of the city resulted in some recommendations for the improvement of accommodation at the swimming pool, improvement in the water supply, and for the better conduct of the sanitary depot used for the small portion of the city not within the sewered area.

Dalby Town Council.—The Town of Dalby was maintained in a safe sanitary condition but, as has always been the case, the lack of suitable drainage has greatly hampered real progress. Dalby is built on extremely flat country not lending itself to sub-surface disposal of waste and storm waters, and many problems of mosquito and nuisance control arise. The proposed sewerage reticulation, for which all plans have been prepared, appears to be as far from commencement as ever, but it is pleasing to report that, following representations from this Office, the Town Council has had its engineers draw up a comprehensive plan for the disposal of storm waters in the town area. This embraces storm water drains, street water channels, etc., forming a complete system, and will be constructed in sections as opportunity offers over a period of years.

A loan of £3,000 has been obtained by the Council for the purpose of drilling test bores with a view to improving the town water supply. The modern swimming pool was maintained, as usual, in excellent condition.

An investigation was made of waste water disposal at the Dalby Hospital, and recommendations made.

Goondiwindi Town Council.—Conditions at Goondiwindi were found to be reasonable, but the prevalence of rats in the business area and the untidy condition of rear yards were features calling for rectification. Following persistent representations from this Office, the Town Council has now approved of a modern filtration plant for the town water supply, and an early start on the work of installation is expected. Drawn from the town reaches of the MacIntyre River and reticulated without treatment of any kind, the supply has long been the source of complaints because of its turbidity and has never been a safe source for domestic purposes.

A special survey of stables in the town area was made following complaints of excessive fly infestation in their vicinity and a report containing recommendations was submitted.

Some improvements have been effected in the conduct of the town refuse tip, but further work is necessary before controlled tipping can be achieved.

The sewerage system functioned efficiently during the year, and the treatment works were satisfactorily maintained.

Stanthorpe Shire Council.—Good progress has been maintained throughout this Shire. The Wallangarra town water supply is now in operation and preliminary work is being carried out on the Stanthorpe scheme. Application has been made for a loan and subsidy to cover the cost of concrete water channelling in Stanthorpe, and a drainage scheme is proposed for Wallangarra. Plans have been approved for the construction of public sanitary conveniences at Stanthorpe.

A special investigation was made into waste water disposal at the Stanthorpe Hospital following complaints from nearby residents, and as a result a new drainage system is to be installed.

Glengallan, Allora and Rosenthal Shires.—Conditions in these three Shires surrounding Warwick have maintained steady progress during the year. The Local Authority health inspector has been very active and house-to-house inspections have resulted in a marked improvement in sanitation. The refuse tip at Killarney, out of control for many years, remains a problem, but some consolidation has been effected and more will be attempted when heavy equipment is available.

A special visit was made to Killarney to inspect premises proposed to be used as a District Memorial Hospital, and a subsequent visit was made to inspect additions and alterations to the building recommended by the Director-General. The swimming pool at Killarney was inspected and found to be in a satisfactory condition.

Jondaryan Shire.—The new buildings and equipment approved for the sanitary depots at Oakey and Jondaryan have not yet been supplied, but an early start on the work is expected. Following adverse reports on the supply of buttermilk to a piggery at Oakey, a conference was held with representatives of the Butter Association and the Local Authority and

conditions under which the piggery was permitted to remain in operation were formulated. A loan of £18,000 has been obtained as part of the cost of a water supply scheme for the town of Oakey.

Pittsworth Shire Council.—General conditions in this Shire showed improvement. Matters brought to notice during a survey of Pittsworth were defects in the equipment at the sanitary depot, lack of control at the public dry refuse tip, several easily-eradicated mosquito-breeding grounds, and the general disrepair of buildings and lack of supervision at the creek swimming pool. All these matters were taken up with the Council and the parties concerned and satisfactory replies have been received.

Public sanitary conveniences are under construction at Pittsworth at present, and the work should be completed at an early date.

The matter of a town water supply for Pittsworth is still under investigation.

Millmerran Shire.—Sanitary surveys at Millmerran and Cecil Plains revealed no major faults. Some recommendations concerning improvements at sanitary and refuse depots at both centres have been adopted by the Council. Work under the mosquito subsidy scheme has been approved at Kooroongarra, where a lagoon in the centre of the settlement is being drained and filled.

Clifton Shire.—At the Clifton sanitary depot recommendations have been made for the improvement of buildings and equipment, the more effective disposal of waste waters, and the levelling and marking out of a new piece of land for disposal of nightsoil. The attention of the Council was also drawn to the lack of regulation garbage bins at business premises in the town.

Crow's Nest Shire.—Conditions in the Shire were generally satisfactory, but the survey revealed a shortage of sanitary pans at Crow's Nest township, some minor faults at the sanitary depot, and lack of covering and consolidation at the refuse tip.

New public conveniences are to be erected in Crow's Nest at a cost of £1,000 under the loan and subsidy scheme.

A special visit was made to Crow's Nest to inspect a building proposed to be converted into a temporary hospital, and recommendations concerning it were submitted to the Director-General.

Inglewood Shire.—Improvements were requested in the conduct of the refuse tip at Inglewood, and the attention of the Council was drawn to the unsatisfactory practice of burning rubbish in the rear yards of business premises. At Texas the transfer of the sanitary depot to a more suitable site was urged and the shortage of sanitary pans brought to notice.

Both Inglewood and Texas have reticulated water supplies.

Waggamba Shire.—The necessity for consolidation and covering of the refuse tip at Yelarbon was brought to the notice of the Council, and a reply has been received that the work will be completed when heavy equipment is secured in the Shire.

Wambo Shire.—Good progress has been maintained in this Shire. The new sanitary service, which combines all the former services of the individual towns, is now in operation with headquarters in Jandowae. New buildings have been constructed at the sanitary depot and new plant has been secured. House-to-house inspections have resulted in a marked improvement in general sanitation throughout the Shire.

Balonne Shire.—This Shire now has the services of a qualified health inspector, and considerable improvement in sanitary conditions is expected. The new town water supply at St. George (cold) duplicating the hot water service already installed is now in operation.

Queensland Health Education Council.—The various Local Authorities are taking increased advantage of the facilities and literature made available by the Queensland Health Education Council, and several have conducted Health Weeks and displays at country shows with the material supplied. A comprehensive exhibit by the Council in association with the Toowoomba City Council attracted large crowds at the Toowoomba Show and was the subject of much favourable comment. During the year this Office arranged the distribution of pamphlets to State Schools in the City on behalf of the Council.

General.—For the first time in many years all of the various Local Authority joint health areas in the district have been fully staffed with inspectors, and a general improvement in sanitation has necessarily resulted. Full co-operation has been received from the councils and their officers in all matters brought to their notice.

ROCKHAMPTON SUB-OFFICE.

DETAILS OF INSPECTION.

TABLE XLIV.

Area.	Number of First Inspections.	Number of Re-inspections.	Official Calls.	Number of Reports Submitted.	Number of Towns Visited.
Headquarters	353	38	175	13	..
Country ..	1,979	..	51	90	56 (124)
Totals ..	2,332	38	226	103	56
Grand Total ..	2,596				

The above inspections were made in connection with: Barbers' shops 46, camps 26, drainage 119, hotels 106, keeping of animals 1, mosquitoes 249, nightsoil disposal depots 43, refuse removal services 689, refuse tips 51, registered clubs 1, sanitary conveniences 934, septic systems 4, sewerage 10, stream pollution 5, swimming pools 20, water samples 7, water supplies 21, wharves (re shipping) 31, wine seller's premises 1.

In the performance of duties under "The Health Acts, 1937 to 1949," and Regulations made under "The Liquor Acts, 1912 to 1948," 10,458 miles were travelled by the official motor vehicle, train, and car services. Of this mileage, 7,142 miles were accounted for in visits to country centres.

General.—Inspections were performed and supervision exercised in the sanitation sphere of Local Authority functions. Other duties included inspections, reports, checking and commenting on plans and specifications in connection with hotel sanitation for the purposes of the Liquor Act and Regulations.

Most Local Authorities are now undertaking works destined to bring about better standards of health and to provide public amenities. Such accomplishments are made possible mainly by the aid of Government loans and free subsidy grants, of which increased advantage is being taken.

However, a few Local Authorities continued to neglect basic features of sanitation, despite the fact that such requirements are made mandatory by the Health Acts, and that neglect in regard thereto has been repeatedly brought to their notice by this Department.

Orders placed for supplies of sanitary materials such as nightsoil pans and fittings and refuse containers were in every instance kept under notice by this office, and in spite of general shortages of materials deliveries were assured without undue delay. Although Local Authorities were unable to secure supplies of galvanised iron for the specific purpose of manufacturing refuse containers, trade manufacturers were able to supply such containers within reasonable time of receipt of orders. Rockhampton City remained the only important centre which failed to make provision for the supply of refuse bins to occupiers of premises as required by "The Plague Prevention Regulations of 1944." By comparison many country Local Authorities have set a much better example in this respect.

Several Local Authorities were again without the services of health inspectors. Deterioration in sanitation soon becomes apparent when supervision ceases. Unfortunately, the number of qualified inspectors available is not equal to the demand for their services.

HEADQUARTERS AREA (CITY OF ROCKHAMPTON).

During part of the year the City Council employed only two health inspectors. The eventual appointment of a third man enabled systematic inspection work to be extended. However, a staff of only three inspectors is obviously inadequate to cover the whole of the area which includes some 11,000 occupied premises. Numerically the staff compares unfavourably with that of other cities with like populations and is less than requirements indicated by this Department.

Sewerage.—The sewerage system was extended by 19,498 lineal feet, equal to 3.69 miles, bringing the total to date to 164.7 miles. New connections of premises to the sewers numbered 167, making the total to date 7,172. Several instances of prohibited discharges from hand basins and sinks to street water channels in the sewered area remained unattended to.

Storm Water Drainage.—No work on the scheme to cover a further section of the main drain was undertaken because of the shortage of materials. Once again it is necessary to mention the need for storm water drainage in the Queen's Park, Park avenue, and contiguous

areas, and also for renewal of street water channels in city lanes where existing ones are in a bad state.

Nightsoil, Refuse.—The services operated smoothly. One motor vehicle was incorporated in the refuse collection service.

The Council considered the advisability of having these services performed by contract as a possibility of effecting economies. Tenders were invited with only one response. Figures quoted were deemed to be too high to warrant a change being made. It has now been decided to re-organise the services using motor vehicles to replace horse-drawn transport.

Reclamation of a large depression in Victoria Park with dry refuse was proceeded with, including surface dressing with earth. Similar work is proceeding at a visitors' car parking reserve on the north side of the Fitzroy River, although at a slower rate.

Rats.—Rat destruction measures were continued through the year by the gang with the use of dogs and traps and laying of poisonous baits. Rat-proofing requirements were enforced in all new buildings, and a number of existing structures were dealt with. There remains a good deal of such work to be done at old buildings in the business sections of the city. However, conditions in the building industry are not yet such as to accomplish a great deal in this direction.

Flies.—Prevalence of *Musca domestica* was at times in excess of normal incidence, due to frequent falls of rain enhancing breeding conditions. The north side, where many stables are located, was generally the worse affected. A survey of these stables has been completed by a City health inspector, and if proper action is endorsed a noticeable improvement should result.

Mosquitoes.—Measures adopted were confined mainly to the spraying of surface collections of water and street gullies. The only works of permanent nature, of minor extent, were restricted to the Town Commonage where drainage of some pools was assisted and tidal valves placed to lessen flooding of mosquito breeding areas.

Abnormal falls of rain at frequent intervals provided ideal conditions for mosquito breeding. Consequently they were more numerous at times, although not to the extent of former years, when no major control operations were undertaken. From observation the order of prevalence would be *Aedes aegypti*, *Culex fatigans*, *Aedes vigilax*, *Aedes vittiger*, *Anopheles annulipes*.

Rainwater tanks not effectively screened still constitute the chief potential danger locally because of their being the main breeding places for the vector of dengue fever—i.e., *A. aegypti*.

Showgrounds.—Despite promises to improve the sanitation nothing was accomplished in this regard, and every effort will again be made to have these promises of improved sanitation honoured.

Hotels.—Numerous improvements in hotel sanitation were effected, while others are in progress or the subject of Orders issued by the Licensing Commission, as the result of inspections made and reports and recommendations

submitted. Where alterations were of an extent to require the submission of plans and specifications, these were forwarded to the Sub-Office for checking, and amending where necessary.

State School Swimming Pools.—These were tested weekly and it was found that the water was at all times being adequately chlorinated.

COUNTRY.

Sanitary progress whilst marked in certain areas was noticeably less in others, and varied according to the interest displayed by Local Authorities and the employment or non-employment of trained inspection staff.

As in other years, it was not possible to pay an inspection visit to every town because of lack of staff, and to some extent restriction on the use of official motor transport, due to petrol rationing.

Aramac Shire.—Recommendations have been made in regard to the sanitation and refuse disposal at Aramac and Muttaborra. The attention of the proprietors of barbers' shops in both towns was drawn to breaches of the Barbers' Shops Regulations.

Banana Shire.—Visits of inspection were paid to the several townships in this area. The Council is to be commended in that it manages to conduct nightsoil and refuse removal services economically and with efficiency in ten of these townships although some of them have only a small number of services. Sanitation generally throughout the area is well controlled under regular supervision. A general improvement in the conduct of barbers' shops was noted. Instructions were given in respect to remaining details at variance with the Regulations.

Barcaldine Shire.—The sanitary conditions of premises in the town of Barcaldine was found to be uniformly good. About five per cent. only of sanitary conveniences were defective and these were receiving attention. New water channelling was provided in the main street. Mosquito reduction measures were continued. The Council is still considering the undertaking of a complete sewerage scheme for the town.

Belyando Shire.—The nightsoil and refuse disposal services at Blair Athol and Clermont leave much to be desired and action should be taken by the Belyando Shire to have defects which have been brought to attention remedied.

Blackall Shire.—This area was unable to secure the services of a health inspector, and sanitary conditions in the town of Blackall deteriorated. Sanitary conveniences were becoming defective and refuse was seen to be accumulating on a number of premises. In the absence of an inspector mosquito control was confined to a little spraying. Preparations were in hand to carry out a small drainage-mosquito eradication scheme for which a Government subsidy had been approved.

Preliminary work on a complete sewerage scheme for the town was commenced and in this respect the Council has moved with commendable promptitude. It was suggested to the Council that public sanitary conveniences should be provided in or adjacent to the main street.

This suggestion will be given further consideration when the sewerage system is at a more advanced stage.

Barbers' shops in the town were found to be conducted in a satisfactory manner.

Calliope Shire.—Sanitary surveys of the townships of Mount Larcom, Calliope, Nagoorin, Ubobo, Builyan, and Many Peaks were made. Conditions were improving as the result of action taken, following systematic inspection work by the Local Authority's health inspector. A new site for disposal of nightsoil is being sought to replace that at present in use at Calliope, where the soil is of a heavy nature and not well suited to proper trenching and humification of nightsoil. Proposed sites for nightsoil disposal grounds at Many Peaks and Builyan were inspected. The former was found to be suitable and the latter unsuitable. A barber's shop at Mount Larcom was found to be conducted in a proper manner.

Duaringa Shire.—This area was without the services of a health inspector. However, the shire clerk had evidently taken particular interest in health matters. Nightsoil and refuse removal services were extended to the townships of Dingo and Blackwater, the former being incorporated with those of Duaringa and the latter with Bluff.

Fitzroy Shire.—No health inspector was employed by the Shire Council during the year. Inauguration of nightsoil and refuse removal services for certain townships as required by this Department remained in abeyance.

Gladstone.—A comprehensive inspection of this town disclosed that most of the bad sanitary features mentioned in previous reports remained uncorrected, and it was therefore again necessary to submit a long list of recommendations. Most of the concrete street water channels receiving sewage had been repaired and this work was being continued. Further steps had been taken towards the undertaking of a sewerage scheme for the town. A site which the Council had in mind for use as a new nightsoil disposal depot was found to be unsuitable. Two drainage mosquito eradication proposals investigated and reported on earlier were approved for Government loan and subsidies.

Ilfracombe Shire.—Since the previous inspection of the township of Ilfracombe a general improvement in sanitation has been effected as the result of systematic inspection of premises. The refuse tip was 'dozed to a consolidated heap. In contrast to former years fly prevalence was low due to constant attention to control with D.D.T. at the local woolscour.

The Council had had constructed a dam of 32,000,000 gallons capacity for water supply. At the time of inspection a good body of water was impounded and reticulation would be undertaken during the forthcoming year.

Isisford Shire.—This area was without the services of a local health inspector, and time was not available for this Department's officer to complete a sanitary survey. However, a brief visit was made to investigate a drainage/mosquito eradication proposal within the town of Isisford, for which the Shire Council sought Government loan and subsidy. The proposal

was found to be a beneficial one and loan and subsidy were recommended for approval.

Jericho Shire.—No local health inspector has been engaged in this area for several years and this lack of supervision was reflected by a deterioration in sanitation when the townships of Jericho and Alpha were inspected.

Longreach Shire.—Great improvement in the cleansing service has been noticed since the last visit. It is pleasing to receive the co-operation so necessary in public health work. Mosquito infestation was heavy at the time of inspection, accounted for by excessive surface waters brought about by flood conditions. Besides control from inspection work mosquito reduction is normally effected by clearing earth-formed drainage channels, spraying such channels and other surface waters, street manholes, and "covered places" in which household waste waters are collected on private premises.

Regarding the complete sewerage scheme decided upon, the Council is endeavouring to arrange with a metropolitan firm to set up plant and manufacture pipes at Longreach.

Barbers' shops in the town on this occasion proved to be conducted in a very satisfactory manner, resulting from observance of instructions given during previous visits of inspection.

Livingstone Shire.—Sanitation of this Shire has shown marked improvement during the past year. Complaints to hand regarding prevalence of flies in the vicinity of the nightsoil disposal depot at Yeppoon led to this Department being consulted concerning control of breeding with D.D.T. The Council has decided to make provision in the 1950-51 budget for regular treatment at each of the disposal grounds in the area with D.D.T. Arrangements for combining the Ogmoo and Marlborough nightsoil and refuse removal services are nearing completion. These will be operated from Ogmoo and intermediate settlements will be included. The required motor vehicle has been purchased. Spraying of surface collections of water at Yeppoon and Emu Park was carried out to reduce mosquito breeding. The Hill street (Yeppoon) drainage/mosquito eradication works reached an advanced stage, but shortage of steel delayed covering-in of the sewer section. This is now to hand and the work will be proceeded with. The Council is now favourably considering a scheme to undertake connection of premises to the sewer. Another loan and subsidy drainage/mosquito eradication scheme centering along Arthur street, Yeppoon, is nearing completion. Work is progressing on the reticulated water supply for Yeppoon although frequent abnormal rains have been a troublesome factor.

The several seaside resorts and holiday camps extending from Yeppoon to Emu Park, and including Coocoo Bay, Kemp Beach, Mulambin Beach and Shoal Bay, and also Keppel Sands further south, were regularly visited and patrolled throughout the summer season. Good sanitation was maintained, aided by improvements effected since the previous similar season. Co-operation of the Local Authority's own inspectorial officer was readily forthcoming at all relevant times. The camps at Yeppoon and Emu Park had on this occasion the benefit of reticulated water supplies. Three sets of conveniences at the Yeppoon (Farnborough road)

camping area are now in process of being converted to septic, the three tanks having been completed. Showers will be provided in conjunction with a dressing shed erected for campers at Emu Park (Phillip street). A proposed second camping area at Emu Park, located in Bell Park, was inspected and found to be suitable for the purpose. Plans to include water reticulation and septic sanitary conveniences for this new camp are being drawn up and when complete loan and subsidy will be applied for. A suitable water supply for reticulating to the township of Keppel Sands and the camping area there is available, and loan and subsidy have been applied for to that end.

During the year the Council took steps to define the camping areas, and also submitted to the Department plans showing such areas, location of sanitary conveniences, and other facilities. These were reported on favourably when referred to this Sub-Office. Loans and subsidies have been approved to carry out reticulation of water supplies and provision of septic conveniences to the several existing camp areas, and their completion is dependent only on receipt of required materials which have been ordered.

Mt. Morgan Shire.—Sanitation in this Shire still leaves much to be desired and in many respects this Local Authority can be numbered among the most backward in the State.

Stream Pollution.—From time to time over a number of years complaints have been received concerning chemical pollution of the Dee River due to discharge thereto of effluents containing copper and other chemical substances from the Mount Morgan mine, and also to seepage entering the river after passing through vast and ever-increasing deposits of overburden and low-grade ore removed from the mine. The company has largely restricted voluntary discharges of effluents to the river by impounding them and pumping them back to the mine for re-use. However, the natural seepages are not controllable and pollution results with every fall of rain which filters through the deposits of oxidising ore on its way to the river.

Recently a more general complaint which included creeks in the vicinity was received. An investigation was made and seven samples of water taken were submitted to analysis. One sample was from Dairy Creek where it runs parallel to the mine before joining the river. Although this creek is fairly close to mine deposits pollution from that source appeared to be improbable because of a raised bank on the side nearest the mine and also an intercepting intermittent small creek between it and the mine. One was taken from the Dee River just above probable commencement of pollution, one from the creek referred to, and four from different parts of the river between and beyond weirs. In these last five pollution appeared to be probable. Results of the analysis showed that the five (pollution probable) contained copper to the extent of 2.3, 1.54, 1.61, 4.76, and 3.78 grains per gallon, also manganese, and iron and aluminium sulphates. They were unsuitable for human consumption and stock. The other two (pollution from the mine improbable) contained 0.35 and 0.37 grains of copper respectively. These samples were alkaline and this, together with the absence of manganese, iron

and aluminium salts, indicated that they were unconnected with the polluting sources of the five.

However, as a check on their copper content which was a little in excess of the 3 parts per million limit considered as reasonable for potable waters, further samples taken closer to the sources of these streams were secured for analysis. On this occasion two other samples were taken, one from a small creek along which mine deposits were encroaching in the direction of the flow, and the other from a well close to the creek, both of which have in the past been relied upon for domestic water supply during dry periods. When results of these analyses are to hand consideration will be given to the taking of any action deemed necessary and practicable.

Peak Downs Shire.—Sanitation in this area may be considered fair. An investigation was made of the Queensland British Food Corporation's camp and recommendations were made in regard to new quarters for single men.

Theodore.—The standard of sanitation in this Shire may be considered as good, and apart from minor breaches the disposal services are well conducted.

Licensed Premises.—Forty complete inspections of hotels in country centres were made. Individual reports were prepared and submitted together with numerous recommendations for repairs, alterations, and other improvements. In addition, hotels in the town of Blackall were inspected for the purpose of determining the numbers of sanitary conveniences, bathrooms, &c., required and the most suitable locations for these. Sketch plans were prepared and submitted for forwarding to the Licensing Commission. This work was in preparation for connections to the town sewerage system on which work has commenced.

Plans and specifications for alterations and additions to hotels and for one new hotel in country centres were referred to the Sub-Office for checking and amendment where necessary.

MACKAY SUB-OFFICE.

For the year ending 30th June, 1950, sanitary and licensing inspections were carried out in the following areas:—

MACKAY.

Routine inspections were carried out during the year. Licensing inspections of all the hotels in the Mackay District were also completed. Trouble is being experienced here with long delays in the completion of necessary repairs and alterations due to shortages of building materials. However, it is hoped that the more essential items will be completed shortly.

Rat Control.—The City Council are experimenting with Compound "1080," and should this new bait prove effective the rat problem should be brought under stricter control. Results to date look very hopeful.

Mosquito Subsidies.—A start has been made on the drainage scheme at Holland street, and once this scheme is completed great benefit

should be felt by the residents in West Mackay. The spraying of breeding grounds in Mackay and Pioneer Shires was carried out as a joint scheme throughout the year.

A.P. and I. Association.—The annual show was held from 27th to 29th June last. As was hoped sewerage was installed in one block of twelve w.c.'s and two urinals for males and one block of six w.c.'s for females. The remaining structures were renovated and conditions were much better than in previous years. The possibility of an early move of the Association to new grounds prevents a complete sewerage and drainage scheme being carried out at present. It is hoped that this position will be clarified in the near future.

COUNTRY AREAS.

Pioneer.—Licensing inspections, inspections of sanitary depots, tips, &c., were carried out in this Shire for the year, together with mosquito subsidy work.

Beach Sanitation.—Camping grounds at Eimeo, Slade Point, and Seaforth were inspected before and during the Christmas period.

Proserpine.—Work has commenced on the new depot; licensing inspections also carried out. Five visits outside of the two official tours were made to this town to attend official complaints.

Sarina.—Routine inspections of the sanitary depot and tip were carried out, together with visits to beach resorts at Sarina Beach, Campwyn, and Grasstree during the Christmas period.

Oonooie.—Regular inspections of the pipe line and the disposal area were made, but little nuisance found existing.

Koumala.—An attempt was made to include this area in the sanitary service operating at Sarina some 16 miles away. Prohibitive costs and poor roads, particularly in the wet season, decided the Council that the scheme was not workable. A contractor could not be found at Koumala. Similar problems exist at Carmila, St. Lawrence, and Nebo.

Bowen.—This town was inspected twice during the year. Visits were made to the depot, tip, &c. Licensing of hotels in the district was completed. Two visits apart from the tours were also made.

Wangaratta.—Routine inspections of depots, tips, &c., were made and licensing inspections carried out at Queen's Beach, Merinda, and Collinsville. Inspections of beach resorts were also made prior to Christmas, 1949.

TABLE XLV.

TOTAL INSPECTIONS FOR THE YEAR.

Headquarter Area.			Country Areas.			Miles travelled.
Inspections.	License.	Official Calls.	Inspections.	License.	Official Calls.	
51	30	21	128	37	25	3,407 Country only

TOWNSVILLE SUB-OFFICE.

TABLE XLVI.

SUMMARY OF INSPECTIONS.

Area.	Inspections.	Re-inspections.	Official Calls.	Towns Visited.
City	827	85	339	..
Country	435	63	146	20
	1,262	148	485	..
Grand Total	1,895			
Miles Travelled	2,455			

Towns Visited.—Ayr, Brandon, Cloncurry, Home Hill, Hughenden, Ingham and Mount Isa.

City inspections covered barbers, drainage, hospitals, hotels, mosquito eradication schemes, refuse tips, and water supply.

Country inspections covered barbers, boarding-houses, dairy, drainage and sewerage, general sanitation, Government premises, hotels, public conveniences, refuse tips, sanitary depots, swimming pools and theatre.

Reports and sanitary surveys were made out and submitted together with recommendations to headquarters.

Total number of miles travelled—1509.

TOWNSVILLE.

Matters of general sanitation within the city area received attention during the year in conjunction with other duties. The City Council has steadily continued with the construction of new thoroughfares, concrete street channels, stormwater drains and sewerage installations, all of which assist greatly towards maintaining a reasonably good standard of sanitation. Many new residences have been erected in the various suburbs during the year, but unfortunately most of them in unsewered areas necessitating the continuance of the sanitary removal service.

Business premises within the main portion of the city received visits of inspection from time to time and when defects were observed suitable action was taken to have them rectified.

Mosquito Subsidy Schemes.—Recently the Townsville City Council made application to the Government Treasury Department for a further loan of £52,000 under the loan and subsidy scheme for the purpose of mosquito eradication. This is in addition to loans already approved and being in operation and includes nine different drainage projects in various localities throughout the city.

The low-lying nature of large areas of land within this city calls for extensive drainage works involving large expenditure if these potential breeding grounds are to be eliminated successfully.

Recently officers of the School of Public Health and Tropical Medicine made a complete mosquito survey of the city area at the request of the Townsville City Council and the report is awaited.

Sewerage.—These installations are being continued as materials come to hand. The area known as North Ward although mostly reticulated is not yet connected to the scheme owing to the necessity to await the erection of pumping plants.

Rat Control.—House-to-house visits by the Council rat gang continued throughout the year.

An inspection and survey of the Townsville Harbour Board wharves and river walls was made during the year and conditions found to be satisfactory in most instances. The absence of rats under the wharves and in the sheds was very gratifying and a tribute to the staff engaged by the Harbour Board for the sole purpose of rat destruction and control. Methods adopted for destruction are baiting, shooting and trapping.

The river retaining walls under the wharves were mostly in good repair.

A full report of the above survey was subsequently submitted to the Harbour Board together with certain recommendations.

Sanitary and Refuse Depots.—Periodical inspections were made of these services and conditions generally were satisfactory. Good progress is being made in the reclamation of the low-lying area in Dean street, South Townsville, where the city refuse is received and deposited under the controlled tipping system. All refuse is tipped to a face, levelled and covered regularly with ashes.

Hotel Licensing.—Annual hotel licensing inspections were resumed during the year and all hotels within the Townsville City area were reported on and recommendations forwarded for the purpose of having the necessary orders issued to owners and licensees.

It was found that there are still a few hotels not yet connected to the sewerage system although they are within the defined sewered area, but as other additional and extensive improvements are involved in some instances sewerage connections cannot yet be made.

Principal recommendations made respecting hotels included additional sanitary and bathroom facilities, sewerage connections, repairs, additional staff accommodation, general cleanliness and repainting.

COUNTRY.

Cloncurry.—As a result of a mild outbreak of scarlet fever a special visit was paid to this town for the purpose of investigation and report. House-to-house inspections were carried out in the locality from which the cases were reported and inspections made of the water supply, sanitary depot and milk supply in the company of the M.O.H.

Torrens Creek and Prairie.—The Flinders Shire Council acting on the advice of the Medical Officer of Health raised the question of providing septic tanks to each of the premises or as an alternative installing a sewerage scheme to suit the requirements.

An inspection was made and the matter discussed in each town. The soil was tested for absorption purposes and a report together with recommendations forwarded to headquarters.

Ayr Shire.—An annual inspection was carried out within the Shire during the year when general inspections were made in addition to hotel licensing inspections.

Charters Towers.—General inspections were also carried out in this city in addition to hotel licensing inspection duties.

Several plans and specifications dealing with improvements to the hotels have been perused and recommended for approval.

CAIRNS SUB-OFFICE.

During this year, an Assistant Inspector was posted to this sub-office and his appointment here will lead to a better coverage of health activities. With the augmented staff, much of the work, which could not be otherwise than neglected, can be undertaken, with obviously better protection for the public. With the passage of years, North Queensland has become increasingly important, not only from the State but also from the national viewpoint. It is therefore vitally essential that the North must be kept a safe place in which to work and live. As a tropical climate offers more health hazards than the more temperate climes, health work becomes of paramount importance in the necessary development of the North.

Generally, duties during the period were confined to the most important aspects of health work and included drainage inspections, inspections of the essential services of night-soil and garbage collection and disposal, beach and camp sanitation, vermin infestation and special investigations into the incidence and environmental and occupational aspects of typhus. An increased interest in the seeking of subsidies for anti-mosquito projects by local authorities has led to a great number of inspections and recommendations on these matters.

The annual conference of the Health Inspectors Association of Australia (Queensland Branch) was held in Cairns with much benefit to all parties concerned.

Cairns City.—Very little trouble was experienced in regard to the nightsoil and garbage collection, removal and disposal services, as the very few complaints received were promptly rectified on their being brought under the notice of the local authority. Inspections were made of the nightsoil incinerator and the rubbish tip as opportunity offered and no cause for complaint was found.

Mosquito prevention work has proceeded satisfactorily, the staff employed doing very good work in the maintenance of the drainage system and the control of the malaria vector. Their efforts are reflected by the absence of any notifications of malaria for quite a considerable time. It is but a short passage of years since 1942 when the cases ran into hundreds, and the pursuance of the good work commenced by the Services has been a job worthy of commendation. In addition to subsidising this work, the State makes available subsidy for drainage and reclamation works and the Cairns City Council has wisely taken advantage of this. With the completion of works projected and for which subsidy has been recommended, a decided step forward in the sanitation of the city will have been achieved.

Big works projected include the reclamation and drainage of a large area of land at the Showgrounds reserve, with the elimination of a large mosquito breeding area, which has always necessitated close attention and control. Another work of much importance is the

reclamation of Lily Creek from Spence street to the Inlet, a work being undertaken in conjunction with other authorities. This work, when completed, will not only remove a danger spot but will also make available much valuable space for railway yards, wharves and wharf storehouses.

The control of infectious diseases has not been neglected and the paucity of notifications reveals the merit of the work. Immunisation has not been forgotten and the percentage of non-immunised children in the city area is very small indeed.

A man employed full-time on rat destruction by the local authority does very good work, whilst valuable assistance is afforded by the Cairns Harbour Board and the Railway Department, which have staff available also for this work, so very necessary in a seaport and a large railway goods centre.

Definite progress is now being made with the Behana Creek Water Scheme in conjunction with the Mulgrave Shire Council and two years should see an ample water supply for all purposes available in Cairns. The local authority should then be in a position to implement its most desirable plan for the installation of a sewerage system in Cairns. In addition to an improved system for the collection and disposal of nightsoil, such a scheme will eliminate all drainage defects in the city area and will thus be of inestimable value in a coastal city in a tropical zone.

Mulgrave Shire.—This Shire, which surrounds the city of Cairns, has also worked hard in the carrying out of its obligations under the Health Acts.

Nightsoil and garbage collection, removal and disposal services have functioned well. During the year, the local authority took over the main sanitary contract and, with good waggons, good staff and supervision, this service continues to function well. The Simmonds Creek treatment and disposal works are well advanced and should be in operation in a couple of months. This will then cause the closure of the present unsatisfactory sanitary depot at Gordonvale.

Work is still proceeding with the big anti-mosquito drainage scheme at Babinda and is being very well done. The rapid and safe removal of flood waters, which previously spread themselves over a wide area to form a large mosquito-breeding swamp exemplified the value of this work. Other mosquito control work is not lost sight of by this local authority.

Infectious diseases are not ignored and the carrying out of immunisation and other preventive measures is reflected by the low incidence of infectious diseases. The incidence of typhus in coastal shires is of serious import to those shires and the Mulgrave Shire has been concerned in this regard. A serious outbreak in one beach area led to prompt action by this shire and, with the assistance of the local authority inspector, Dr. Mackerras of the Queensland Medical Research Institute, carried out a very thorough investigation. As a result of this investigation, preventive measures were suggested and implemented.

Beach sanitation is a big feature of this local authority's work and is very efficiently

carried out. A close watch on beach sanitation was kept over the holiday period and it is pleasing to report a minimum of trouble. This local authority is fast securing camping reserves at the various beaches and this will lead to the provision of more amenities and better control still. Meantime, it is pleasing to note that the control of the foreshores for health purposes has been vested in the shire and will assist materially in controlling both campers and day visitors.

Johnstone Shire.—Here the essential garbage and nightsoil services were again carried out with the usual regular efficiency of this local authority. Visits of inspection at intervals revealed a very effective service with a minimum of complaints. With the projected resumption of portion of the existing sanitary depot at Mundoo for aerodrome extensions, a site has been selected for a new depot and now awaits inspection and approval by this department.

Infectious diseases, apart from the leptospirosis group, were few and immunising and similar preventive campaigns are always functioning. This shire has always been very energetic in this regard.

There has been a big step-up in the seeking of subsidies for anti-mosquito works and the provision of drainage and reclamation thus undertaken will not only remove undesirable breeding places but also improve immeasurably the facilities and appearance of the town. Works already done indicate this in no small measure.

Beach sanitation has not been ignored and the completion during the year of a fine modern building, with all modern amenities, at Etty Bay, is the completion of the first step in the utilising of the loan secured for such purposes. The completion of the other two blocks planned for Kurramine and North Mission Beach will finalise the plan for the provision of modern amenity blocks at the main beaches in this shire.

A car park, with showers, laundry facilities and septic system is in operation on the South Johnstone Road, whilst a comfortable class of pensioners' huts is being provided.

A swimming pool of modern standards is projected and inquiries and discussions as to the best site for its location are now engaging the attention of the local authority.

The installation of a sewerage system, which is also projected by this local authority, depends of course on an augmented water supply and the provision of the necessary materials and these matters are being considered.

Cardwell Shire.—Inspections at various times indicated that the essential services of nightsoil and garbage collection and disposal were being well carried out and that supervision of the local authority was effective.

Some anti-mosquito subsidies have been secured and, with one small job completed and the large job nearly so, a definite improvement can be confidently looked for.

Immunisation is not lost sight of and regular campaigns keep the number of non-immunised children down to a very low percentage.

The installation of a sewerage system has already been well discussed by the local authority and a great deal of work has

been done to augment the water supply. The further implementation of the sewerage proposal depends upon the possibility of securing materials, etc.

Douglas Shire.—The appointment of a full-time inspector last September has resulted in a very definite improvement in the carrying out of the essential services and the hand of the qualified inspector is apparent in the greatly improved control. As a matter of fact, all health services are being stepped up with this officer's appointment.

The provision of separate transport for this officer will assist him considerably in the performance of his duties and the local authority is to be commended for its forethought.

With a keen energetic inspector and a sympathetic local authority, it can be anticipated with confidence that further improvement in this shire, which previously had been somewhat neglected, will take place.

Marceba Shire.—The usual close attention was paid to the carrying out of the essential services in this shire. This shire is unfortunate in some of its outlying towns, as the small populations make the cost of sanitary services much higher than obtains in larger centres. Nevertheless, the local authority has not relaxed its efforts to maintain these services. There is a possibility of the installation of combined septic systems in one town in this shire, where ample water is available and effluent disposal will offer no obstacles.

The control of infectious diseases would appear to be good, whilst immunisation is regularly carried on.

Use is made of anti-mosquito subsidies and the completion of the works involved indicates the value of these subsidies.

The matter of water supplies is one of serious import to this local authority and several schemes are in hand for improving existing supplies or providing new supplies to some of the smaller places in the shire.

With an improved and augmented water supply for Marceba, serious consideration should be given by this shire to the installation of a sewerage system for Marceba, which is a rapidly growing and prosperous town. In addition to providing an up-to-date system for nightsoil disposal, such a scheme would also provide for the effective disposal of drainage, which, owing to the nature of the soil in the business centre of the town, threatens to become a problem of no small magnitude in the near future. Failing the early installation of a sewerage system, the efforts of the local authority should be directed towards the provision of a "foul-water" drainage collection and disposal system.

Atherton Shire.—The usual satisfactory standard of nightsoil and garbage collection and disposal was maintained through the year. In this regard, the local authority has under consideration the provision of septic systems throughout the whole of the town of Atherton.

During the year, the township of Tolga was provided with a permanent water supply.

Anti-mosquito works proposed and recommended for subsidy should make a decided improvement.

Eacham Shire.—All essential services were found on inspection to be functioning well and this shire is happily placed in this regard.

Drainage works at Millaa Millaa under the subsidy scheme will remedy an outstanding nuisance and, as these works have been approved, their commencement and completion should not be unduly delayed.

The provision of public conveniences in the town of Malanda, as proposed, will fill a long felt want in this town.

Herberton Shire.—Progress has been made by this shire in health matters since the utilisation of the Eacham Shire inspector one week each month and inspections revealed good control of the essential services.

At Herberton and Ravenshoe, it is proposed to open new sanitary depot sites and the necessary inspections and arrangements are well in hand.

Ravenshoe is a growing town, in the heart of a dairying and timber district and with the projected big Tully Falls Hydro scheme, the future of this town should be assured. Any extension of tin-dredging in this shire would still further enhance its growth and the time is at hand when an inspector could be profitably engaged full time in this area.

Other Shires.—Visits were also paid to the Etheridge and Cook shires but, as the time spent in each was limited, only the main centres were visited. These were found to be in fair shape, despite the lack of inspectorial control. I would suggest that, as more qualified inspectors become available, some consideration should be given to the provision of inspectorial staffs, under some form of subsidy, to shires like Etheridge, Cook, Croydon and Carpentaria, whose small populations and revenues render the provision of inspectorial staff, with the inevitable costly travelling over long distances, a financial impossibility.

TABLE XLVII.
LOCAL AUTHORITY SUPERVISION.

Area.	First Inspections.	Re-inspections.	Official Calls.	Reports.	Towns Visited.
Headquarters	585	11	298	12	..
Country ..	1,302	..	184	167	67 (153 visits)
Totals ..	1,887	11	482	179	..
Grand Totals	2,380				

The above inspections included:—Anti-mosquito drainage (69), barbers (7), chemists (37), cold stores (5), drainage (45), fly infestation (10), food factories (141), food premises (782), hospitals (10), incinerators (4), industrial hygiene (6), milk premises (45), mosquito infestation (10), piggeries (1), premises (3), rat infestation (23), rubbish (44), sanitary conveniences (531), sanitary depots (28), trade wastes (6), warehouses (20), waters (57), and wharves (3).

TABLE XLVIII.
LICENSED PREMISES.

Area.	First Inspections.	Re-inspections.	Reports.	Plans Examined.
Headquarters ..	3	..	3	..
Country ..	88	..	88	8
Totals ..	91	..	91	8
Grand Totals ..	91			

The above inspections necessitated the travelling of 9,709 miles by train, boat and motor truck

THURSDAY ISLAND.

Nightsoil Disposal.—A new truck, with well covered body, was put on to the cleansing services during the year and removals were effected much more satisfactorily. Only interruptions now caused to the removal service is by extremely low tides which prevent disposal in deep water. Construction of a low graded pier is being considered by the Council to overcome this difficulty.

The water attachment was made to the new sanitary depot to allow full facilities of pan-washing, disinfection and tarring to be carried out.

Refuse Removal.—Removals were carried out satisfactorily during the year, although the shortage of regulation garbage bins, in view of the rat infestation on the island, is creating a very serious nuisance. Conditions at the refuse tip are far from satisfactory, and despite many adverse reports submitted to the Council, control of the tip was not maintained at a desired standard. Over one period the tip was not blinded or covered for three months. With the earth-moving machine the Council now has on hand there is no reason why these conditions should prevail.

Water Treatment.—The water catchment area on the island is ideal for the collection of good quality water, and negotiations are being undertaken by the Council to have the whole of this area proclaimed a water-works reserve to prevent possible pollution by native trespassers. Necessary lifting of the outlet pipes from the bottom of the dams and the reservoir to the surface (by means of floating arms) has not yet been carried out.

Drainage.—Most of the storm water drainage and street channelling is in serious condition. All the spade cut section and some of the stone grouted drainage is seriously overgrown with weeds and grass and water cannot escape freely. However, a large drainage works programme is proposed for the coming financial year when most of these defects can be remedied. Regular flushing during the dry season and clearing of silt during the wet season will still be required on all cement channelling.

Mosquito Control.—Very little work was done on mosquito control work during the year, although infestation is not heavy except in a small swampy area below the waterworks. Proposed drainage works mentioned above will eliminate some breeding grounds, but regular spraying is necessary and, although it could be incorporated with the labour engaged on drainage clearance and flushing, a proposal in this respect has been rejected for the coming year.

Fly Control.—The main fly infestation nuisance is due to insufficient control at the refuse tip.

Constant inspection during the year of trochus shell before landing, to ensure that all shell is free of trochus meat, has resulted in abatement of the trochus fly nuisance. While having no disease bearing potential this fly was a swarm pest in previous years.

Rat Infestation.—Rat infestation is still heavy on the island although it has decreased considerably during the last twelve months. A house to house campaign conducted early in the year to ensure removal of all war time refuse rubbish, etc., had very successful results. 63 lbs. of Phosphorus rat bait poison were used during the year.

Native Sanitation.—Sanitation of native huts, etc., was generally satisfactory although overcrowding still creates a serious problem in most huts.

Theatre.—The Thursday Island theatre was inspected regularly and satisfactory cleansing and spraying methods instituted. Under direction new conveniences are being constructed at the theatre.

Hotels.—General conditions at the four hotels on the Island improved considerably over the last twelve months although one of these requires large scale alterations, almost to the extent of reconstruction, to be brought to a satisfactory standard. Improved electricity output at the power-house is required before hot water can be supplied to kitchens, bars and bathrooms. Glass washing machines are already installed in two hotels awaiting the hot water connection. Work is also in progress for transferring bathrooms from the yard of one hotel to the first floor.

Improved sanitary conditions are required at all hotels but the septic installations recommended were postponed because of the Island's annual water shortage. General consumption figure, however, is conservatively estimated to average more than 52 gallons per head per day and this indicates that large scale wastage is rampant throughout the Island. It is to be regretted that this wastage is allowed to continue at the expense of such desirable sanitary measures as septic systems and flushing urinals in all public conveniences.

General.—The lack of finance is considerably hampering the activities of the Council, but it is equally apparent that the priority warranted is not being given to Public Health functions in present expenditure of available finance.

SUMMARY OF INSPECTIONS.

Inspections.	Re-inspections.	Official Calls.
380	186	160
Total	826	

Inspections included:—Drainage, 58; fly control, 70; sanitary conveniences, 52; rat control, 41; refuse removal, 47; sanitary depot and refuse tip, 32. water sampling, 29; and other visits of a miscellaneous character.

HOOKWORM CAMPAIGN.

Microscopist in Charge: S. THOMPSON.

The staff responsible for hookworm control consists of a microscopist, sister, one field inspector at Cairns, and one sister at Innisfail, this position being vacant at present.

During the year the microscopist visited Palm and Fantome Islands and examined all aboriginals. All those positive for hookworm were treated and re-examined, and most were found to be free of the disease. Those found positive for hookworm at Fantome Island were treated by the Administration. Further treatment will be carried out at six-monthly intervals.

It was pleasing to see the low incidence of hookworm at Palm Island, and this can be attributed to the manner in which the sanitary service and the disposal depot are conducted.

Fifty-six of the white staff at Palm Island were examined, and all found to be negative.

Most of the positive hosts are reinfections, and this might be due to new admissions suffering from the disease. In this regard it is recommended that all aboriginals on arrival on a Government settlement or mission be examined for hookworm and if found positive be treated.

Treatment has been carried out amongst the aboriginals in the Cairns, Mossman, and Daintree areas, while arrangements have been made with the Superintendent of Mona Mona Mission for the treatment of the natives there.

It was pleasing to see that the incidence of hookworm amongst aboriginals at the Lutheran Mission in the Cooktown area is low.

Surveys of cane gangs, school children, and house to house inspections have also been carried out in the Cairns area.

Of the 3,797 specimens examined, 432 were positive for hookworm, and 114 of the hookworm hosts were treated to a cure. One thousand one hundred and nine specimens contained ova of other parasitic worms—*Oxyuris vermicularis*, *Trichuris trichiura*, *Hymenolepis nana* and a few *Trichostrongylus orientalis*.

Arrangements were made with the medical officer of the district hospital in each centre for all hosts heavily infested with hookworm to be treated in hospital and kept under observation. Children three years of age and under lightly infested were also treated in hospital.

Of the 468 school children examined in all areas, 17 were positive for hookworm and 56 for other parasitic worms.

A list of defective privies was forwarded to the Local Authority inspector Mulgrave Shire,

who has issued notices to have them brought up to standard.

Medical practitioners, school teachers, and the local health inspectors have given all possible assistance to the Hookworm Campaign in helping to eradicate hookworm disease.

HOOKWORM CAMPAIGN.

TABLE XLIX.

SUMMARY OF SURVEY CARRIED OUT IN CAIRNS-INNISFAIL AREA.

Name.	Census.	Specimens.					Treatments.			
		Received.	Ex- amined.	Re- examined.	Positive.		Notices.	Delivered.	Posted.	Cured.
					H.W.	Others.				
Cairns Area—										
Schools	471	465	463	2	17	54	54	16	1	1
Mossman Area—										
Schools	..	1	..	1	..	..	..	..	..	1
Innisfail Area—										
Schools	..	2	..	2	..	2	2	..	..	..
School Total ..	471	468	463	5	17	56	56	16	1	2
Intensive Survey—										
Smithfield sub-area	..	2	2	..	..	..	..	..	..	..
Edmonton sub-area	1,133	1,045	1,045	..	13	61	38	13	..	..
Gordonvale sub-area	24	24	24	..	2	..	..	2	..	..
Intensive Survey Total	1,157	1,071	1,071	..	15	61	38	15	..	..
Other Hosts in—										
Cairns area	..	32	..	32	12	1	1	11	1	20
Mossman area	..	2	..	2	1	..	..	..	1	1
Innisfail area	..	1	..	1	1	..	..	1	..	..
Ingham area	..	5	..	5	2	..	..	..	2	3
Grand Total	..	40	..	40	16	1	1	12	4	24
Miscellaneous—										
Cairns area	203	203	203	..	14	22	22	13	1	..
Mossman area	105	105	105	..	7	18	18	6	1	..
Mona Mona Mission	4	4	4	..	..	..	..	..	..	..
Cooktown area	12	12	12	..	..	2	2	..	..	..
Innisfail area	66	66	66	..	1	4	4	1	..	..
Ingham area	24	24	24	..	3	1	1	3	..	..
Palm Island	61	56	56	..	..	..	..	..	..	..
Miscellaneous Total	475	470	470	..	25	47	47	23	2	..
Aborigines—										
Cairns area	191	173	161	12	56	52	43	49	2	3
Yarrabah Mission ..	4	4	4	..	..	4	4	..	..	..
Mona Mona Mission	223	223	223	..	113	187	187	113	..	..
Mossman area	12	12	12	..	6	5	5	*61	..	..
Daintree Mission ..	57	69	57	12	49	52	47	*47	4	..
Cooktown area	48	48	48	..	5	23	23	..	5	..
Palm Island	1,025	1,130	1,023	107	117	606	606	*116	..	80
Fantome Island	79	89	79	10	13	15	..	13	..	5
Aborigines Total ..	1,639	1,748	1,607	141	359	944	915	399	11	88
All Areas—										
Cairns area	2,022	1,944	1,898	46	114	190	158	104	5	24
Yarrabah Mission ..	4	4	4	..	..	4	4	..	..	..
Mona Mona Mission	227	227	227	..	113	187	187	113	..	..
Mossman area	117	120	117	3	14	23	23	67	2	2
Daintree Mission ..	57	69	57	12	49	52	47	47	4	..
Cooktown area	60	60	60	..	5	25	25	..	5	..
Innisfail area	66	69	66	3	2	6	6	2	..	..
Ingham area	24	29	24	5	5	1	1	3	2	3
Palm Island	1,086	1,186	1,079	107	117	606	606	116	..	80
Fantome Island	79	89	79	10	13	15	..	13	..	5
Grant Total	3,742	3,797	3,611	186	432	1,109	1,057	465	18	114

* These Aborigines were mass treated by the Microscopist. Hookworm hosts treated in hospital, Cairns 1, Mossman 17, Babinda 1.

TABLE L.
SANITATION—MULGRAVE SHIRE.

	Cairns Area.
Number of places visited	428
Number of sanitary conveniences inspected	485
Privies no action required	220
Number of defective privies	189
Number of places without sanitary convenience	1
Action taken	Nil
No action taken	Nil
Septic Tanks	67

TABLE LI.
MULGRAVE SHIRE.

	D Class.	G Class.	E Class.	F Class.	H Class.
Pails ..	204	139	25	..	..
Pits ..	9	26	14	1	1
Septic ..	65	2	..	..	..

D Class—Regulation cabinet.
G Class—Below Standard, but not allowing soil pollution.
E Class—Allowing soil pollution.
F Class—No sanitary convenience.
H Class—Soil pollution in evidence at time of inspection.

WEIL'S DISEASE CAMPAIGN.

NORTHERN CANE AREAS.

Inspector in Charge: J. M. KENNEDY.

GENERAL.

Activities of the Campaign staff during the year covered the Shires of Hinchinbrook, Cardwell, Johnstone, Mulgrave, and Douglas, being the areas to which the Rat Prevention and Destruction Regulations specially apply. The staff remained as in recent years, four field inspectors and the officer in charge.

In the following sugar-mill areas intensive field and farm inspections were carried out:—South Johnstone, Goondi, Mourilyan, Tully, Victoria, Macknade, Babinda, and Mulgrave, and attention as required was also directed to Hambleton and Mossman mill areas.

Above average crops were harvested during the 1949 crushing, but only three mills showed increased cane production over the previous year.

The first mill commenced operations on 25th May and most were in active operation by 8th June.

The earlier commencing dates are likely to remain a permanent arrangement in northern cane areas owing to increased tonnage due to the introduction of heavy yielding variety canes and the expansion of mill areas for soldier settlement on sugar lands. As shown in Table LIII, a number of new farms have already been opened up.

Cane harvesting in early June highlights a new problem in Weil's disease control inasmuch as the cane areas in northern districts normally register heavy rainfall from January to April, but in a late wet year such as 1948 and the present year, very wet conditions persist until mid-June or even later. As there is no opportunity for low-lying areas to dry out, ideal conditions prevail for the spread of infection. This is reflected in the increased incidence of leptospirosis cases occurring during 1948 and

again in the Innisfail district over the last ten days of June, when over 30 cases were notified to the Local Authority.

During the 93 wet days from 1st January to 30th June, 125 inches of rain was registered at Innisfail. Fourteen of the first 16 days in June were wet, and while burning of the cane before harvesting is now accepted as practicable and even desirable as an established practice, the wet conditions made effective burning impossible over a period of several days, during which cane was cut in the leaf by many gangs. Cutters generally prefer burnt cane, but in some instances pressure by mill interests to cut green in order to keep up mill supplies overcomes their reluctance. Sections covered by health order can be fired and a burn of sorts obtained after two or three days dry weather, but the ground conditions may remain a danger.

It is apparent that infection is acquired in the main on river flats and low-lying fields and the remedy appears to lie in postponing cutting in these localities until such time as the ground surface has drained out, a fairly rapid process in North Queensland.

This objective can be readily achieved if the necessary co-operation of millers and farmers in re-arrangement of groups can be obtained, otherwise it may be necessary to consider some compulsory action directed to the postponement of harvesting in doubtful sections until such time as safe conditions permit.

It is considered also that all cane which has been subject to flooding at any period of its growth should be burned before cutting and this policy has in the main been followed in recent years.

During the 1949 crushing a very high proportion of all crops was burned as shown in Table LII. Weather conditions generally were very good, permitting speedy and efficient harvesting in all mill areas.

Materials such as barbed wire is still in short supply, thus holding up the fencing off of waste land and river banks by farmers to protect crops and prevent infection. More machinery and labour is available, resulting in cleaner farms generally. Bulldozers have been used with advantage on a number of farms to fill in, grade, and drain fields and their use for this purpose by progressive farmers can be commended.

Many cases of fever notified or reported from the various areas were followed up during the year. Field notes were compiled and reports furnished to Head Office as required.

RODENT CONTROL.

Increased supplies of poison baits were reflected in greater activity by Pest Boards during the past year.

Most mills have a methodical system of bait distribution and conduct one or more blanket campaigns as conditions demand. Unfortunately several Pest Board officers are fully occupied with other duties such as cane grub control at a time when full attention to poison bait distribution would yield excellent results. It would appear that rodent control is considered of secondary importance here and the health aspect tends to be overlooked, the main criterion being the extent of possible economic loss to the farmers.

Zinc phosphide baits retain their popularity, but with reduction in the cost of thallium sulphate it is expected that the latter will again become the main agent for rat destruction in cane fields.

These baits are put up in $\frac{1}{4}$ -oz. torpedoes or waterproof packets of a strength 1 in 200 zinc phosphide and 1 in 300 thallium sulphate.

A noticeable reduction in general rat damage is being noted with the more extended use of variety canes such as Trojan and Eros. Trojan appears to be attacked only when fully mature. Where Clarks Seedling, Q10, or Pompey canes are in the same fields with Trojan or Eros a definite preference is shown by the rats for the former. It would appear also that in general plant cane is more subject to attack than ratoon fields.

Phosphorus paste on bread remains popular as a dry-weather bait, and where the co-operation of farmers in prompt and proper distribu-

tion can be relied upon excellent results at relatively low cost can be obtained.

The number and type of baits distributed in the various sugar-mill areas are shown in Table LIV.

Farm inspections were carried out by the Campaign staff during the slack period between harvests, when much cleaning, burning off, and destruction of secondary growth was carried out by farmers before the onset of the wet season.

The Local Authorities in the territory covered by the Campaign activities have distributed rat baits to householders and others throughout the year, and rubbish tips, river banks, and other likely breeding grounds received attention.

Full co-operation over the whole period has been received from mill officials, A.W.U. officers, growers' representatives in the various centres, and with few exceptions the cane farmers generally.

TABLE LII.

Mill Area.	Total Area Harvested.	Total Crushed.	Total Burned.	Total Burned.	Burned under Regulations (including under 10 Tons P. Ac.)	
	Acres.	Tons.	Acres.	Tons.	Tons.	Acres.
Johnstone	11,022	252,241	10,807	247,316	17,047	910
Goondi	7,494	196,781	7,336	192,423	9,680	335
Mourilyan	8,330	172,543	8,277	171,352	2,200	160
Mulgrave	11,797	271,513	11,467	263,947	92,000	4,000
Babinda	10,728	250,192	10,060	234,896	40,000	1,677
Tully	12,585	267,724	12,264	260,898	89,241	4,391
Victoria	13,587	327,039	13,020	314,741	12,809	836
Macknade	12,151	321,637	11,882	314,943	26,915	1,258
Hambledon	9,390	221,035	9,062	213,796	3,663	174
Totals	97,084	2,280,705	94,175	2,214,312	293,555	13,741

TABLE LIII.

Mill Area.	New Farms.	Average Number of Cutters.	Number of Gangs.	Stand-over Cane.	Duration of Crushing.
				Acres.	Weeks.
Johnstone	6	330	65	14	26
Goondi	1	227	35	8	27
Mourilyan	2	245	50	Nil	22
Mulgrave	4	400	102	Nil	25
Babinda	4	296	82	10	29½
Tully	6	430	74	21	24½
Victoria	6	350	62	Nil	31½
Macknade	2	360	63	Nil	32½
Hambledon	7	380	41	Nil	23
Totals	38	3,018	574	53	..

TABLE LIV.

BAITS DISTRIBUTED BY PEST BOARDS FOR RODENT DESTRUCTION.
NUMBERS AND TYPE.

Mill Area.	Phosphorus on Bread.	Thallium Sulphate. (Wheat.)	Zinc Phosphide. (Wheat.)	Other.
South Johnstone	..	..	850,000	Phosphorus. 20 lb.
Goondi	..	..	348,000	..
Mourilyan	2,030,000	650,249	..	Strychnine. 10 oz.
Babinda	..	..	886,720	..
Mulgrave	64,000	..	352,000	..
Tully	..	350,000	..	..
Victoria	..	675,500	587,000	..
Macknade	..	1,429,120	216,270	..
Hambledon	..	..	532,608	..
Mossman	500,000	..	286,000	..
Totals	2,594,000	3,104,869	4,058,598	..

SECTION OF INDUSTRIAL MEDICINE.

DOUGLAS GORDON, M.B., B.S. (Q'ld.), Director of Industrial Medicine.

C. R. LULHAM, M.B., B.S. (Q'ld.), Medical Officer.

During the past year the following matters have had the attention of this Section:—

(1) Reports submitted on industrial premises, industrial health hazards, or to a less extent on administrative matters .. 106	(2) Clinical reports to medical practitioners, the Insurance Commissioner, &c. .. 116
(3) Clinical examinations performed on patients 219	

TABLE LVI.

CASES SEEN FOR SOME SPECIAL REASON OTHER THAN FOR ROUTINE OR REPEAT EXAMINATIONS.

	Total.	Positive.	Negative.	Remarks.
Lead—				
Panel beater	1	..	1	
Printing—				
Stereotypist	4	1	3	
Compositor	4	..	4	
Letterpress machinist	2	..	2	
Bookbinder	3	..	3	
Lead-light worker	3	..	3	
Painter—				
House painter	18	1	17	The positive case was symptomless
Bridge painter	2	1	1	
Ships painter	1	..	1	
Machinery painter	4	4	..	
Lead burner	2	1	1	
Battery reclaimer	1	1	..	
Plumber	1	..	1	
Miscellaneous—				
Clerical	1	..	1	
Breaking up aluminium	1	..	1	
Wireless repairs	1	..	1	
Cold storage worker	1	1	..	
Crane dogman handling freshly painted girders	1	..	1	
Lead head nail	1	..	1	
Fitter and turner handling red lead	1	..	1	
Patients Exposed to Dust—				
Metal miners (old)	2	2	..	Symptoms due to cardiac disabilities
Coal miner	3	3	..	X-Ray signs minimal
Foundry dresser	1	..	1	
Quarryman	1	..	..	One doubtful
Marble dresser	1	..	..	One doubtful
Furnace men	4	..	4	
Coke workers	5	..	5	
Carbon monoxide	1	..	1	
Arsenic—				
Sheepskin sprays	2	2	..	
Manufacturing arsenical solutions	1	1	..	
Q Fever—Meatworker	1	1	..	
Leptospirosis-Pomona—Meatworker	1	1	..	
Dermatitis—				
Rubber dermatitis	1	1	..	
Leather worker—dermatitis	1	1	..	
Clay dermatitis	1	1	..	

SYNOPSIS OF OTHER WORK.

Monthly routine stippled cell counts were also carried out on employees in various lead trades. The number of these—amounting to some hundreds—are covered in the report submitted by the Director of the Laboratory of Microbiology and Pathology, for the members of his staff do this work. As the result of these examinations some men showing signs of dangerously high lead absorption have been moved to less hazardous jobs; these are not shown in the above tables. The staff of the Government Chemical Laboratory have done much work during the year and details of their various dust counts and chemical analyses are given by the Government Analyst. While investigation of alleged dust and lead hazards constitute the "bread and butter" lines of this section's work, enumeration of some of the other matters dealt with during the year will give some idea of the interest and scope of indus-

trial medicine even if lack of space forbids greater detail.

Tri-chlor-ethylene in dry cleaning, organic phosphate insecticides, fluoroscopy in shoe stores, arsenical sprays and mixtures—manufacture and application—silica hazard in abrasive soaps, adaptation to heat in firemen using "Proto" apparatus, cyanide exposure in metal hardening, hydrogen sulphide in sewer shafts, chlorphenates in the timber industry, irritation from Borneo pine (Ramin) and from "Miva" mahogany, carbon monoxide in pantry hands, bronchitis due to wood dust, skin conditions in coalminers and sewer workers, mercury exposure by police doing finger-print work, acid fumes from pickling metals, gilding and silvering in die-casters making badges, tobacco dusts, "nigger" in soap, beryllium hazards from old fluorescent tubes, gases and dusts around cokeworks, ash and coal dust exposure at power-houses, sugar dust exposure in refineries.

As is the usual custom, arrangements were made for follow-up X-rays of all men who in the past had shown a positive or doubtful film. Other activities included attending meetings of the State Committee of the National Association of Testing Authorities, meetings of the Queensland Health Education Council, certain sub-committee meetings of the Standards Association of Australia (Queensland Advisory Committee). Dr. Lulham attended the meetings of the "Climatological Committee" (Queensland). Dr. D. Gordon attended the Third International Conference on Pneumoconiosis held under the auspices of I.L.O. in Sydney in February as one of the Australian "advisers." Meetings of the Committee on Industrial Hygiene held approximately every quarter were also attended. This is an advisory subcommittee of the National Health and Medical Research Council.

Monthly lectures to factory inspectors were inaugurated and lectures to engineering and medical students continued. The first half of a book of notes which it is hoped will one day form the basis of a small textbook for teachers in Technical Colleges was completed and submitted for approval. The intention behind this is to give each apprentice some instruction on health and preventive medical measures, particularly those that have application to his own trade. Matters awaiting decision are the Foundry report, regulations for, and medical examinations of compressed air workers, and routine radiological examinations of those in dusty trades, particularly coalminers. The latter matter has moved one step forward in that the "blue-print" stage is being reached with the X-ray railway carriage for the Director of Tuberculosis. However, much water must flow under the bridge before routine radiological examinations in dusty occupations become an established fact.

HAZARDS OF SOME INTEREST.

In previous reports it has been mentioned that coal pits in Queensland seldom give dust counts of dangerous magnitude. During the year, however, one pit was investigated which gave counts of a high order. It is rather significant that this pit more nearly approaches complete mechanisation than any other coalmine in the State. Surprisingly enough, dangerous dust counts of very fine particle size were also recorded in the vicinity of scoop operators removing over-burden in an open-cut coalmine. The over-burden is highly siliceous, and on the face of things it would seem that a hazard exists even though the work is done in the open air.

A group of men who work in a large cold store spend some weeks each year scraping and brushing the paint from large "banks" of refrigeration coils. On the bends these pipes are painted with red lead. All men were quite seriously affected by lead. This happening is of some interest in that the only bad outbreak of lead poisoning in the previous year occurred among machinery painters also. The men concerned in that instance regularly sand-papered lead priming coats placed on new engines. Though the house painter is very conscious of a lead hazard, a much more real danger some-

times exists for his colleague the machinery painter, who often has never even thought of lead poisoning as a possible cause of his symptoms.

In a cokeworks the employees working in the grinding room were found to be subjected to coal dust of fine particle size in dangerous amounts. However, no cases of pneumoconiosis were discovered, probably mainly because the labour turn-over is great and the few men who had stayed some years at the works had changed from process to process—some dusty, others not—while there.

STAFF.

In January Dr. C. Lulham was appointed as the Medical Officer to the Health Department. The part-time services of a second medical officer make for greater ease of work and supply administrative continuity when the Director's duties take him out of Brisbane. The return of Dr. Lulham to this staff on this work is particularly fortuitous, for as a graduate in science he had worked with the late Charles Badham (the pioneer of industrial hygiene in Australia) and later as an analyst here had carried out much of the field and analytical investigation done in industrial medicine in this Department before the appointment of a full-time Industrial Medical Officer. In consequence Dr. Lulham can accept responsibility in industrial medical work which could not be given to any other medical graduate of recent standing.

The discussion associated with the above appointment brings to mind the matter of staff for a State industrial medical section. In such a division or section medical work *per se* is but a small portion of the total work required and in fact unless the necessary bacteriological, analytical, field and clerical work is performed the medical officer has usually insufficient data to make a diagnosis, furnish a report, or give worthwhile evidence in matters of dispute. In other countries, in industrial hygiene divisions, for every medical graduate employed there are usually five to eight non-medical members of the staff. The appointment of extra medical officers only therefore does not necessarily increase the output of work from a section. These are hard facts which are likely to be overlooked.

On the other hand it is well to treat industrial hygiene with realism. The size of the staff must have some relation to the industrial development of the State—particularly in the chemical and manufacturing trades which are prone to cause health hazards—and to the amount of occupational disease—as distinct from industrial accidents—which is actually occurring. Hard statistics confirm the opinion that Queensland at present is not a very large manufacturing State, and State Government Insurance records show that the volume of preventable industrial disease is not unduly excessive. Increase in staff for the type of work being at present undertaken by this Section could hardly be justified—with but one exception. There is pressing need for the part-time services of an experienced industrial ventilation engineer. Such an officer is usually part of the "stock-in-trade" of industrial hygiene sections in other countries and is of great help to industry. The small industrialist neither has the money to employ a well-qualified engineer nor the knowledge of

his own limitations to urge him to do so. When ordered to install an exhaust ventilation system he usually designs and makes it himself. The factory inspector's order may be satisfied by this procedure, but the resulting plant as often as not does not efficiently do the job for which it was designed. This is simply pouring good material and money down the drain. It is hoped approval will be given for the appointment in the immediate future.

The design of industrial exhaust ventilation requires good engineering knowledge and wide experience. A plant that will work in one situation will not work in another, and so on. Permanent confirmation of these opinions can be seen in the amount of inefficient exhaust equipment already cluttering up our factories, and there is going to be a lot more of it when sheet iron becomes more readily available and the Factories and Shops Acts more rigidly enforced.

While the present work of this section does not justify increase in staff, approval of the plan to X-ray industrial populations exposed to dust would at once necessitate a special records and clerical section. Similarly there is much merit in an organised scheme to prevent accidents in industry; but any such scheme would require, at first at any rate, a fact-finding staff of clerical and statistical workers to find out just where and how accidents were happening. All this goes to illustrate that though the object of all these plans is to prevent disease and promote health, medical graduates are required in small numbers only and then to guide rather than to carry out the actual work in many branches of industrial health.

THE FAILURES.

At this juncture it is as well to mention the work that was unsuccessful. An attempt was made with the help of the Registrar, Coal Miners' Pension Tribunal, and the Government Actuary to discover if any undisclosed medical reasons had caused coalminers over the age of forty to leave their industry. Though much time was spent on this enquiry the results were quite equivocal. In future the Registrar hopes to collect added detail for his records and in the years to come it is thought that this may give us some added information on the health of the ageing coalminer.

An inquiry into the feasibility of running a long-range experiment to determine if workers in cold stores at abattoirs, &c., suffered more ill-health from respiratory disorders than other workers of the same social class was made. It was eventually decided that such an experiment would produce records of no practical value for obviously the experiment loses all merit unless the diagnoses can be regarded as completely veracious. Since the reason for absenteeism is usually given by the employee himself the diagnoses are self-diagnoses and would often in fact be incorrect. This is an obstacle which workers elsewhere have found insurmountable.

Attempts to date to determine whether summer weather has any influence on factory production have proved abortive. It is difficult to find an industry where production per man-shift is accurately kept and even more difficult to find a job in which the employee has sufficient incentive to work "flat out." Most do, irrespective of the time of the year, what has come to be accepted by employer and employee alike as "a fair day's work."

TABLE LVII.
NORTHERN FEVERS.

Hospital.	Un- diagnosed Fever.	Scrub Typhus.	Murine Typhus.	Tick Typhus.	Weill's Disease.	Brucel- losis.	Fever eventually found due to other Medical Disease.	Still being Investi- gated.
Mossman ..	5	9	..	..	1 (Clearing new land for cane)	..	..	3
Cairns	2	9	1	..	*1 (Walking to work at Edmonton through debris from flooded cane fields) *1 (City drain cleaner)	..	4	..
Gordonvale ..	3 (plus one death)	1	..	..	1 (Cleaning debris from railway bridge)	..	..	..
Babinda ..	3	9	..	..	1 (Cane cutter)	..	..	..
Innisfail ..	7	3 (plus one death)	..	1	1 (Cane cutter—probably Barracks infection) 3 (Cane cutters)	..	..	1
Tully	8	1	..	..	..	..	..	1
Ingham ..	2	2	..	..	1 (Shooting in scrub) 1 (Clearing new land) *1 (Clearing debris from bridge)	..	..	1
Atherton ..	1	2	5	..	..	1	1	..
Mackay ..	3	1	1	..	..	..	1	..
Total (105)	35	38	7	1	12	1	6	5

* Fatal case.

Some comments on Table LVII. are necessary.

Scrub Typhus.—

- (a) If the conventional interpretation of the Weil-Felix reaction had been accepted twelve cases appearing as scrub typhus would have been recorded as Undiagnosed Fevers. Hitherto most authorities have considered that an agglutination to OXK of less than $\frac{1}{80}$ was not diagnostic. In this series any agglutination of OXK—most were at least $\frac{1}{80}$ —were accepted as positive.
- (b) The great majority of cases of P.U.O. and scrub typhus have occurred in the first half of 1950 probably due to the abnormally wet season.
- (c) If occupational histories as given were accurate it has been possible to contract scrub typhus this year while leading an uneventful suburban life in Cairns.
- (d) One death from cardiac complications due to scrub typhus—post mortem specimens were available—occurred in spite of chloromycetin. The patient was a young healthy adult who had been sick for eight days before entering hospital. He died on the third day of his chloromycetin therapy. This suggests that a scrub typhus patient who has had chloromycetin even when apyrexial should be treated with great care for tissue damage may have occurred which time alone can cure.
- (e) The scrub typhus case recorded at Mackay hospital was that of a tourist who had contracted the disease in the vicinity of Cairns. This patient was the first in this State, and probably in Australia, to receive chloromycetin for scrub typhus.

Weil's disease.—

- (a) The four Innisfail cases and that of the cane cutter from Gordonvale occurred during the latter half of 1949 and represent the failures of the Weil's disease campaign. In spite of a heavy rat infestation and fairly wet periods in the 1949 season the incidence of the disease was kept well in check.
- (b) The other seven cases are the post-deluge incidence of this year, which it would have been extremely difficult to prevent. Clearing flood debris from bridges would seem to expose the worker to a heavy hazard.
- (c) Three deaths in these seven cases—in spite of penicillin—make one wonder if the organism has gained in virulence this season.
- (d) It is rather alarming to observe a case at Mossman and the return of the disease to Ingham after its absence from there for some years.

- (e) Great care must be exercised during the present crushing season for abnormally wet weather has ushered it in and floods may well have driven the rat up into the cane fields. Silt and lodged cane—other aftermaths of floods—also encourage the disease.

Murine Typhus.—

The five cases of murine typhus in the Ather-ton area represent the rear guard of the 1949 epidemic and at the present the Tableland seems to be free from this disease.

Death from P.U.O.—

The death from "undiagnosed fever" at Gordonvale has one interesting feature. In the latter half of 1949 the deceased was the cane cutter who contracted Weil's disease. From this he made an uneventful recovery. Cause of death which occurred this year after another episode of fever was from an encephalitis of unknown origin. Post-mortem material was available for histological examination.

Remarks.—

These figures represent the first twelve months of complete records as far as Northern fevers are concerned. Probably most of the P.U.O.'s sufficiently ill to require hospitalisation are recorded herein. With one or two exceptions occupational histories, brief clinical notes and laboratory investigations have been completed in each case. This work has been made possible by the interest and zeal of Inspectors J. M. Kennedy and W. Kelly who have done much arduous travelling to collect this data which has subsequently been recorded by the Departmental Librarian. Our own Laboratory here has done the bulk of the serological examinations but the co-operation of the Commonwealth Laboratory at Cairns in many cases is gratefully acknowledged.

It is extremely gratifying therefore to observe that the interest which this Section has displayed on the problem of the undiagnosed northern fever is already bearing fruit. Since the last report Dr. E. Derrick of the Queensland Institute of Medical Research has been sent overseas to investigate improved methods of laboratory investigation and on his return a full scale plan of research has been visualised. During the year the Drs. Mackerras investigated the possibility of scrub typhus prevention by dusting dangerous areas with gammexane. The interest of the Mulgrave Shire in this matter is to be commended.

This increasing official interest in the problem is very heartening to those who are helping with this work and I am sure that it will also please the various northern medical practitioners who were the first to stimulate interest in the matter.

LABORATORY OF MICROBIOLOGY AND PATHOLOGY.

Director: Dr. J. I. TONGE, M.B., B.S. (Sydney);

Deputy Director: M. J. J. O'REILLY, M.B., B.S. (Sydney);

Senior Bacteriologist and Technical Supervisor: H. E. BROWN.

1. STAFF.
2. STATISTICAL SUMMARY.
3. LABORATORY.
4. CITY MORGUE.
5. AGGLUTINATION TESTS FOR FEVERS.
6. MALE TOAD TEST FOR PREGNANCY.
7. PEEL ISLAND.
8. MATERNAL AND CHILD WELFARE.
9. VISCERAL GRANULOMATOUS LESIONS
RESEMBLING LYMPHOPATHIA VENEREUM
HISTOLOGICALLY.
10. PUBLICATIONS.

1. STAFF.

Dr. J. I. Tonge was granted a Rockefeller Fellowship, and on the 8th September, 1949, left for the United States of America, where it has been made possible for him to undertake post-graduate study for a period of twelve months. After this is completed he will visit England for about two months, and is expected to return to the Laboratory early in January, 1951.

Dr. C. R. Lulham has assisted with the medico-legal post-mortem work since March, 1950.

Miss A. D. Bullock resigned from the Laboratory staff on the 3rd March, 1950.

Miss J. T. Hanlon and Miss H. S. J. Powell, recent graduates in the newly created Faculty of Medical Science, commenced duty in this laboratory on 13th February, 1950, and 7th March, 1950, respectively.

2. STATISTICAL SUMMARY, 1949-50.

TABLE LVIII.

1. BACTERIOLOGY.

A. Specimens of Human Origin.

Specimens.	Mode of Examination.	Number.
Swabs—		
Throat	Culture	2,508
Nose	Direct Smear ..	20
Urethra	Culture	1,280
Cervix	Direct Smear ..	6,344
Bartholin's Gland ..	Culture	2
Anus	Direct Smear ..	2
Pericardium (P.M.) ..	Culture	1
Liver (P.M.)	Direct Smear ..	3
Spleen (P.M.)	Culture	1
Peritoneum (P.M.) ..	Direct Smear ..	1
Iliac Vein (P.M.) ..	Culture	1
Stomach (P.M.)	Culture	1
Brain (P.M.)	Culture	1
Cord (P.M.)	Culture	1
Ear (P.M.)	Culture	1
	Direct Smear ..	1
Nose (P.M.)	Culture	1
	Direct Smear ..	1
Finger	Culture	1
	Direct Smear ..	1
Lip	Culture	1
	Direct Smear ..	1
Tissue from Leg	Culture	1
Tissue	Direct Smear ..	1

TABLE LVIII—continued.

A. Specimens of Human Origin—continued.

Specimens.	Mode of Examination.	Number.
Pus	Culture	10
	Direct Smear ..	13
	Culture	13
Plural Fluid	Microscopical ..	11
	Animal Inoculation ..	4
	Culture	40
Cerebrospinal Fluid ..	Microscopical ..	63
	Animal Inoculation ..	3
Seminal Fluid	Microscopical ..	18
Ascitic Fluid	Culture	1
	Microscopical ..	2
	Culture	2
Synovial Fluid	Microscopical ..	1
	Animal Inoculation ..	2
Fluid from Bronchus ..	Microscopical ..	1
	Direct Smear ..	3,362
Serous Exudate	Dark Ground Examination ..	9
	Culture	147
Sputum	Direct Smear ..	399
	Animal Inoculation ..	133
Blood	Culture	7
	Culture	170
Urine	Microscopical ..	1,249
	Animal Inoculation ..	8
Faeces	Culture	89
	Microscopical ..	1
	Culture	5
Gastric Contents	Microscopical ..	4
	Animal Inoculation ..	3
Mucus	Culture	1
Hair	Microscopical ..	1
Skin	Culture	1
	Microscopical ..	1
		15,950

TABLE LIX.

B. Foods and Waters.

Specimens.	Mode of Examination.	Number.
Water	Plate Count	221
	Culture	221
	Microscopical ..	16
Milk	Plate Count	120
	Reductase Test ..	4
	Culture	140
	Animal Inoculation ..	1
Ice Cream	Plate Count	3
	Culture	5
Cream	Culture	2
Ice Cream Scoop Rinse ..	Plate Count	17
Water		
Rinse Water	Plate Count	5
Gelatin	Plate Count	5
	Culture	5
Bread	Culture	4
Oysters	Plate Count	11
	Culture	1
Tinned Sardines	Culture	15
Fish	Culture	2
Sausages	Culture	6
Roast Mutton	Culture	1
Icing Sugar	Culture	1
Molasses	Culture	1
Black Olives	Macroscopic ..	4
Pineapple Juice	Culture	2
Tinned Bananas	Culture	4
Brewed Horehound	Culture	3
Advocaat	Culture	1
		821

TABLE LX.

C. Various Materials.

Specimens.	Object of Examination.	Number.
Disinfectants ..	Rideal-Walker Co-efficient ..	17
	Germicidal Value ..	6
Antiseptic ..	Rideal-Walker Co-efficient ..	2
	Germicidal Value ..	1
Glasses ..	Sterility ..	11
Preservative Solution ..	Sterility ..	1
Endovax ..	Sterility ..	1
Bacterial Cultures ..	Identification ..	3
Fungus ..	Identification ..	1
Hair ..	Origin ..	2
Faeces ..	Presence of Glass ..	3
	Sensitivity to Streptomycin ..	1
Organisms ..	Sensitivity to Penicillin, Chloromycetin and Aureomycin ..	3
Effluent ..	Presence of <i>E. typhosa</i> ..	5
Sewerage Effluent ..	Presence of <i>M. tuberculosis</i> ..	2
	Presence of Worms ..	1
Sewerage Effluent ..	Presence of Micro-organisms ..	1
Fibre ..	Presence of Micro-organisms ..	1
Tobacco ..	Presence of Yeasts and Moulds ..	3
Packets of Cigarettes	Presence of Yeasts and Moulds ..	7
		72

TABLE LXI.

2. SEROLOGY.

	Number.
Serum Agglutination Tests—	
<i>Eberthella typhosa</i> (H) ..	359
<i>Salmonella paratyphi</i> (H) ..	349
<i>Salmonella schottmüller</i> (H) ..	348
<i>Proteus</i> OX19 ..	349
<i>Proteus</i> OXK ..	348
<i>Proteus</i> OX2 ..	32
<i>Brucella abortus</i> ..	329
<i>Leptospira pomona</i> ..	354
<i>Leptospira australis</i> A ..	349
<i>Leptospira australis</i> B ..	349
<i>Leptospira mitis</i> ..	353
<i>Leptospira icterohaemorrhagiae</i> ..	358
<i>Leptospira canicola</i> ..	3
<i>Coriella burneti</i> ..	334
Cold Agglutinins test ..	2
Paul Bunnell Test ..	14
Complement Fixation Tests—	
Eagle Wassermann (Serum)—	
Routine ..	4,062
Quantitative ..	33
Eagle Wassermann (C.S.F.) ..	149
Gonococcal C.F. ..	1,656
Flocculation Tests—	
Kline ..	4,802
Kahn—	
Routine ..	1,121
Quantitative ..	9
Verification ..	4
Lange Colloidal Gold Reaction (C.F.S.) ..	115
	16,181

E

TABLE LXII.

3. BIOCHEMISTRY.

Specimen.	Examined for.	Number.
Whole Blood ..	Urea ..	71
	Sugar ..	8
	Uric acid ..	9
	Cholesterol ..	1
	Pigments ..	3
	Thiocyanate ..	1
Plasma ..	Total Protein ..	89
	Chloride (as NaCl) ..	1
	Cholesterol ..	2
	Sodium (as Na) ..	1
Serum ..	Calcium ..	3
	Protein ..	24
	Cholesterol ..	47
	Bilirubin ..	16
	Sodium (as Na) ..	2
	Chloride (as NaCl) ..	5
	Acid phosphatase ..	16
	Alkaline phosphatase ..	4
	Inorganic phosphate ..	2
Cerebrospinal Fluid ..	Protein ..	73
	Globulin ..	71
	Chloride (as NaCl) ..	66
	Sugar ..	63
	Urea ..	5
Urine ..	Specific Gravity ..	17
	Albumin ..	1,427
	Sugar ..	1,426
	Acetone Bodies ..	1
	Lactose ..	2
	Glucose ..	1
	Hydrogen ion concentration ..	1,196
	Bence Jones Protein ..	1
	Pigments ..	6
	Chloride (as NaCl) ..	3
	Urobilin and Urobilinogen ..	2
Faeces ..	Total, Split and Unsplit Fats ..	19
	Occult Blood ..	7
Duodenal Contents ..	Trypsin ..	12
Ascidic Fluid ..	Protein ..	1
Renal Calculus ..	Chemical Constitution ..	12
		4,716
Functional Tests	Glucose tolerance tests ..	31
	Urea clearance tests ..	18
	Urea concentration tests ..	26
	Fractional test meals ..	4
Other Tests ..	Thymol turbidity test ..	1
		80

TABLE LXIII.

4. HAEMATOLOGY.

	Number.
Cell Counts—	
Red Cells (Total) ..	1,436
Red Cells (Stippled) ..	904
Reticulocytes ..	14
White Cells (Total) ..	2,373
White Cells (Differential) ..	1,488
Platelet Count ..	6
Haemoglobin Estimations ..	2,419
Haematocrit ..	997
Sedimentation Rate ..	44
Coagulation Time ..	14
Bleeding Time ..	16
Prothrombin Time ..	5
Retraction Time ..	1
Clotting Time ..	1
Price Jones Curve ..	1
Red Cell Fragility ..	3
Blood Grouping (A. B. O.) ..	498
Blood Typing (Rh) ..	498
	10,718

TABLE LXIV.

5. PARASITOLOGY.

Specimen.	Object of Examination.	Number.
Faeces	Amoebae (cysts and vegetative)	25
	Helminth ova	622
	Helminth adults	2
	<i>Trichomonas vaginalis</i>	26
Pus	<i>Microfilariae</i>	1
Blood	<i>Plasmodium</i> sps.	28
Intestinal Contents	Amoebae	1
	Helminth ova	1
Fluid from Liver	Amoebae	1
Mud	Amoebae	1
Arthropods	Identification	3
Helminths	Identification	6
		717

TABLE LXV.

6. VARIOUS TESTS.

—	Number.
Mantoux Test	180
Ascheim Zondek Test (Pregnancy)	15
Male Toad Test (Pregnancy)	424
Virulence Test (<i>C. Diphtheriae</i>)	103
Histamine Skin Test	2
	724

TABLE LXVI.

7. HISTOLOGY.

Tissues Sectioned.						Number.
Human—						
Biopsy	..	..	..	..	..	1,613
Post-Mortem	..	..	..	..	..	434
						2,047

TABLE LXVII.

8. MEDICO-LEGAL.

Post-mortem Examinations	457
Clothing—	
Blood	57
Spermatozoa	62
Various Articles—	
Blood	34
Spermatozoa	8
Smears—	
Gonorrhoea	5
Spermatozoa	12
Swabs—	
Gonorrhoea	2
Spermatozoa	6
Hair, Identification	5
Scrapings, Blood	7
Tissue, Examination	17
Skin, Examination	1
Bones, Identification	11
	684
Attendances at Courts—	
Supreme Court	17
Police Court	29
Coroner's Court	11
Other Courts	2

TABLE LXVIII.

9. EXAMINATION OF RODENTS.

Rodents received for examination from Brisbane City Council—

Classification—				
Rattus norvegicus	..	..	..	9,833
Rattus rattus	..	..	..	490
Unclassified	..	..	..	3,550
Mus musculus	..	..	..	99
				13,972

Special Examinations for Plague—

Rats fully dissected	3,019
Spleen smears examined	3,019

Rat Smears Received from Other Centres—

Mackay	1,533
Bundaberg	712
Maryborough	468
Gympie	148
Ipswich	682
Sandgate	705
Wynnum	657
Meatworks (Brisbane area)	298

5,203

No rat was found infected with *Pasteurella pestis*.

TABLE LXIX.

10. VACCINES PREPARED.

A. Typhoid-Paratyphoid Vaccine—360 ccs.

T.A.B. Vaccine were prepared.

B. Autogenous Vaccines were prepared as follows:—

From Pus	6
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11. MATERIAL SUPPLIED.

One hundred and seventy-eight (178) requisitions were supplied during the year to hospitals, private practitioners and Local Authorities consisting of 5,736 swabs, 5,734 cultures, 626 faeces tins, 934 Wright's capsules, 315 urine bottles, 50 glass slides, 156 C.S.F. bottles, and 48 blood bottles.

TABLE LXX.

12. CULTURE MEDIA PREPARED.

	Number of Tubes.
Serum Cultures—	
Inspissated Serum Slopes	7,970
Nutrient Broth Cultures—	
Small tubes	700
5 cc. tubes	1,000
Large tubes	200
Nutrient Agar Cultures—	
Large slopes	372
Small slopes	336
Sugars—	
Lactose (20 per cent.)	55
Lactose	850
Glucose	250
Maltose	200
Sucrose	200
Inositol	100
Inulin	50
Mannite	150
Dulcitol	50
Levulose	50
Salacine	100
Sorbitol	50
Rhamnose	50
Xylose	50
Miscellaneous Tubes and Plates—	
Schuffner's medium for <i>Leptospira</i>	700
Fletcher's medium	125
Treble Lactose	192
Methyl red medium	150
Voges-Proskauer	25
Cooked meat—	
Large	108
Small	144
Starch medium	50
	14,277

TABLE LXX—continued.

12. CULTURE MEDIA PREPARED—continued.			
Material in Bulk—			Litres.
Normal saline	..	..	3
Buffered saline	..	..	150
Sterile distilled water	..	..	37
Gonococcus sugars	..	..	4
Nutrient agar	..	..	18
Count agar	..	..	30
Endo's medium	..	..	13
Milk medium	..	..	10
Nutrient broth	..	..	12
Maltose agar	..	..	2
Glucose agar	..	..	1
Gonococcus media	..	..	35
Miscellaneous stains	..	..	20
Miscellaneous reagents	..	..	55
McConkey's broth	..	..	2

3. LABORATORY.

Approval has been given for alterations to the Haematology room, and it is hoped that this work will be completed shortly. The alterations will provide a considerable increase in available bench space and storage room, and will make it possible to carry out a greater variety of procedures with greater convenience and efficiency. A new refrigerator has been acquired for this section for the preservation of sera, reagents and blood specimens.

During the year a new microscope has been purchased, and this has made it possible to allocate permanently one microscope for dark ground examinations. A diffraction grating type of spectrophotometer was also bought and has proved to be highly satisfactory for the type of work required of it. An automatic pipetting machine is on order and is expected to arrive within a few weeks. This will assist greatly in the performance of complement fixation tests, dispensing of culture media and solutions, filling of vaccine vials, &c.

4. CITY MORGUE.

During the year the City Morgue was transferred from the control of the Department of Justice to that of the Department of Health and Home Affairs, and is now under the direct supervision of the Director of the Laboratory of Micro-Biology and Pathology.

5. AGGLUTINATION TESTS FOR FEVERS.

There has been a significant increase in the number of specimens submitted for these tests (441 for the current year as against 315 for the previous year), and in 77 cases (89 sera) it was possible to make or confirm a diagnosis by means of these tests. These diagnoses were as follows, the numbers representing new cases:—

Typhoid	..	..	..	..	..	2
Paratyphoid A	..	..	..	..	..	1
Typhus—						
Murine	..	..	..	..	..	6
Tick	..	..	..	..	..	4
Scrub	..	..	..	..	..	21
Leptospirosis—						
<i>Pomona</i>	..	..	..	..	..	17
<i>Mitis</i>	..	..	..	..	..	4
<i>Australis A</i>	..	..	..	..	..	3
<i>Australis B</i>	..	..	..	..	..	4
<i>Icterohaemorrhagiae</i>	..	..	..	..	..	3
<i>Canicola</i>	..	..	..	..	..	—
Q. fever	..	..	..	..	..	4
Brucellosis	..	..	..	..	..	8

The differentiation between Murine and Tick Typhus on the basis of agglutination tests with strains of *Proteus* is difficult, and the

classification has been made on clinical probabilities. Further cases of Leptospirosis have occurred in the Kyogle district, and it is not unlikely that cases occur further south and would be discovered if sera were examined. Sera have been received from Adelaide, Melbourne, Launceston, and Auckland and Waipukurua, New Zealand, for leptospiral agglutination tests but all have been negative. A culture of *Leptospira canicola* was received from the Institute of Medical and Veterinary Science, Adelaide, and has been maintained. So far no human sera have agglutinated this organism nor could antibodies be demonstrated in the sera of a few dogs forwarded by the Animal Health Station, Yeerongpilly.

It is perhaps significant that during the last twelve months the sera of eight different patients were found to contain antibodies against *Brucella abortus*. This represents a considerable increase over previous years since during the previous 14 years only 23 cases were diagnosed.

6. MALE TOAD TEST FOR PREGNANCY.

A great demand for this test has been made during the year and a total of 424 tests has been performed. The supply of sufficient male toads was a major problem during the latter half of 1949, but since the warmer weather little difficulty has been experienced. Our thanks are due chiefly to Inspector Kennedy of Innisfail, who has collected and forwarded several hundred good male toads, and also to Miss M. Whitla, of the Bundaberg Hospital, who has also assisted. A "toadery" has been established adjacent to the present animal house, and this provides suitable living conditions for the toads, though the coldest months of winter have proved too severe and have caused many deaths. For this period therefore it has been necessary to transfer the toads to the more tropical atmosphere of the autoclave room.

Experimental work has been undertaken to determine the sensitivity of the toad used here (*Bufo marinus*) to pregnancy hormone. Using purified commercial chorionic gonadotropin, it was found that these animals give a positive result (spermatozoa in the urine) with a dose of 1.5 units of hormone per gram of body weight. Thus it appears that this species is less sensitive than other species described in other countries.

An attempt has been made to assess the accuracy of the test in actual clinical practice by following up the subsequent course of patients tested. After an interval of three to four months a circular letter asking for appropriate information has been sent to the doctor who referred a patient. The results of this investigation are given in the following table:—

Number of Letters Sent	..	..	..	150
Number of Replies Received	..	..	..	117
Patients Pregnant	..	..	..	61
Test Correct	..	..	..	45
False Negative	..	..	..	16
Patients Not Pregnant	..	..	..	49
Test Correct	..	..	..	49
False Positive	..	..	..	—
Information Indefinite	..	..	..	7

It will be seen that no false positive results have occurred, but that the number of false negative results in pregnancy is unduly high.

These may be partly explained by imperfections of technique when the test was first being established and also by the submission of specimens either too early or too late in pregnancy—it is well recognised that biological pregnancy tests are unreliable before the sixth week and after the twelfth week of pregnancy. Nevertheless it is felt that the proportion of false negative results is still too high and further work is planned to increase the sensitivity of the test and to provide further checks for negative results.

7. PEEL ISLAND.

This laboratory has continued to carry out routine haematology and urine examinations for Peel Island as well as the regular tissue smears. As about 20 blood specimens and 12 urine specimens are examined each week, this has added appreciably to the work of the laboratory. A new staining method for acid-fast bacilli in tissue sections was recently brought back from America by the Director General of Health and Medical Services, and has proved highly successful in practice. As a result it is now possible to use the biopsy method for the diagnosis of Hansen's Disease, and also as a final check for those patients who have given several negative smears.

8. MATERNAL AND CHILD WELFARE.

At the request of the Director of Maternal and Child Welfare the laboratory has under-

taken the haematological investigation of all infants admitted to the Clayfield and St. Paul's Terrace Homes. The Haematologist visits these homes periodically and collects specimens of blood which are later examined in the laboratory.

9. VISCERAL GRANULOMATOUS LESIONS RESEMBLING LYMPHOPATHIA VENEREUM HISTOLOGICALLY.

Further examples of these lesions which were described in the last Annual Report have been found, both in this Laboratory and in the Pathology Department of the University of Queensland. The majority have been found in lymph glands removed at biopsy and there is a tendency for the cases to occur more frequently in the northern part of the State. So far no further clues as to their etiology have been found but it is hoped to investigate this condition more thoroughly during the coming year.

10. PUBLICATIONS.

Inglis, J. A., and Tonge, J. I.: "A Disease with Visceral Granulomatous Lesions of Unknown Etiology", *Medical Journal of Australia*, 1st April, 1950, page 433.

Derrick, E. H., and Brown, H. E.: "A Survey of Human Brucellosis in Queensland", *Medical Journal of Australia* (in the press).

Johnson, D. W.: "The Australian Leptospiroses", *Medical Journal of Australia* (in the press).

GOVERNMENT CHEMICAL LABORATORY.

S. B. WATKINS, M.Sc., F.A.C.I., Government Analyst and Chief Inspector of Explosives.

A. S. HURWOOD, B.Sc., A.R.I.C., A.R.A.C.I., Deputy Government Analyst and
Inspector of Explosives.

The total number of samples examined during the year was 18,840. This is the greatest number so far recorded in the history of the laboratory and exceeds last year's record figure by 1,276.

The following table covers the number of samples examined for each of the preceding ten years:—

Year.	Total Number of Samples Examined.
1939-40	13,363
1940-41	13,063
1941-42	10,401
1942-43	10,859
1943-44	14,105
1944-45	15,434 (Record year)
1945-46	11,875
1946-47	12,834
1947-48	13,629
1948-49	17,564 (Record year)

The progressive increase over the last few years is indicative of the growing demand for the services of the laboratory by Government Departments, both State and Commonwealth, semi-governmental bodies, Hospital Boards and the Medical Profession. It indicates that a chemical service of the kind offered by the laboratory is a valuable asset to the State and justifies the recent decision to maintain intact the Government Chemical Laboratory as a centralised service.

I would again draw attention to the necessity of providing further accommodation if the volume and quality of the work is to be maintained. The Ore preparation equipment remains housed in the Executive Building in a room quite unsuitable for the purpose. Too much time is taken up in transferring ore samples thereto and the prepared material therefrom. Much valuable equipment is housed on laboratory benches, reducing the space available for analytical work. The transfer of this equipment to new premises suitably laid out for its accommodation would give substantial relief.

Staff.—The professional staff has been recently augmented by the elevation of Mr. H. Couper (Furnace Room Attendant) to the

position of Acting Assistant Analyst. Mr. Couper completed the examination requirements of the Diploma of Industrial Chemistry in 1949. Mr. J. T. Williams joined the staff in a temporary capacity on 17th April, 1950, to assist in the work of the Water Section. The accumulation of water samples will be substantially reduced as a result of this assistance. Messrs. Foreman and Yule (Assistants to Analysts) were successful in their University examinations and have only to complete Chemistry III. for their degrees. Mr. F. Esdale who was also successful in his University examination was appointed Assistant to Analysts on 23rd April, 1950, and Mr. D. Leckey (junior clerk) was appointed cadet on 1st February, 1950. The professional staff includes in addition to the Government Analyst and the Deputy Government Analyst, 3 Senior Analysts Division I., 2 Senior Analysts Division II., 9 Analysts, 3 Assistants to Analysts and 1 Cadet.

The following table details the number of samples examined for the respective departments and others:—

Health and Home Affairs	5,098
Police	218
Geological Survey	629
Mines Department	62
Machinery and Scaffolding	15
Irrigation and Water Supply	936
Portmaster (Explosives)	1,716
Harbour and Marines	12
Local Government	136
Main Roads Commission	118
State Stores	316
Queensland Government Railways	26
Public Works	404
Tile Testing Station	558
Other State Departments	175
Commonwealth—	
Trade and Customs	6,378
Commerce and Agriculture	1,296
Others	113
Brisbane and South Coast Hospitals	
Board	132
Medical Profession	95
Public	407
	18,840

SECTION I.

FOODS AND DRUGS.

Staff.—A. S. Hurwood, B.Sc., A.R.I.C. A.R.A.C.I., Deputy Government Analyst, Officer in Charge; R. S. Potter, A.R.A.C.I., Analyst; H. G. Dunstan, B.Sc., A.R.A.C.I., Analyst; G. Lahey, M.Sc., A.R.A.C.I., Analyst; R. C. Lukey, B.Sc., Analyst; K. A. Glover, Assistant to Analyst.

The samples examined by the section showed a decrease of 452 on last years figures, due to the smaller number of milk samples submitted, Table LXXI. gives the number and source of the samples examined:—

TABLE LXXI.

Showing the number and source of the Samples examined*

Department	No. of Samples
Health and Home Affairs	3,939
Other State Departments	205
Commerce and Agriculture (Commonwealth)	1,296
Other Commonwealth Departments ..	6
Public	53
Total	5,499

TABLE LXXII.

SUMMARY OF SAMPLES EXAMINED FOR THE DEPARTMENT OF HEALTH AND HOME AFFAIRS.

Nature of Sample	Number of Samples	Passed	Failed
Beverage or cordial	232	103	129
Bread	48	31	17
Cereal	56	46	10
Condiment	23	15	8
Disinfectant	43	35	8
Drug or medicine	68	51	17
Essence	13	4	9
Fruit or fruit juice	34	14	20
Jam or jelly	22	12	10
Meat	64	41	23
Vegetable	38	31	7
Milk	2,395	2,021	374
Milk product	40	26	14
Paint	160	80	80
Spirituous liquor	67	42	25
Tobacco	209	126	83
Toy	37	30	7
Miscellaneous	390	240	150
	3,939	2,948	991

Those samples classed as failed include samples not conforming with prescribed standards and samples falsely described and incorrectly labelled.

The miscellaneous samples include walnuts, soap, refrigerator parts, tooth paste, hydrometer, food colour, popcorn, fish, confectionery, flock, fibre, cake powder and cosmetic.

The comparatively high proportion of failures in the case of most of the foods, other than milk, is due to the fact that many of the samples have been taken by the Inspectors as being of doubtful quality. The high proportion of

failures recorded is therefore no indication of the true position.

It is otherwise with milk, where the sampling is more general, taken as widely as possible, and must be a fair indication of the state of the milk supply.

TABLE LXXIII.

DETAILS OF LEGAL SAMPLES TAKEN BY INSPECTORS IN ACCORDANCE WITH THE PROVISIONS OF THE "HEALTH ACTS, 1937-1949."

Nature of Sample	Number Examined	Passed	Failed
Milk	2,179	1,827	352
Paint	74	45	29
Minced meat	24	9	15
Sausage	22	14	8
Bread	13	9	4
Spirituous liquor	9	2	7
Cream	6	6	..
Miscellaneous	12	2	10
	2,339	1,914	425

The miscellaneous samples include ice cream, honey, wine, herbs, lysol, and chlorodyne.

Milk.

As in past years, the several brands of pasteurised milk were regularly examined and were invariably correctly pasteurised and conformed with the standard in milk constituents. There were fewer complaint samples from the public than last year, concerning dirty milk bottles, foreign objects in milk, and milk quality in general.

The following observations are made from a survey of Tables LXXIV. to LXXVIII:—

Two thousand one hundred and seventy-nine (2,179) legal samples of milk were submitted for examination compared with 2,476 samples last year.

The position as regards adulteration of milk either by added water or extraction of fat is stationary.

Of the milks submitted, 53 per cent. were obtained from the Greater Brisbane area and 47 per cent. from the rest of Queensland. The proportion of milks adulterated with water was 1.7 per cent. in the Greater Brisbane area, and 4.6 per cent. outside this area. As in the last 3 years no watered milks were obtained from the Cairns district. The proportion of watered milks (1.7 per cent.) in the Greater Brisbane area was exactly the same as last year.

Due to good seasons, the proportion of naturally poor milks (3.5 per cent.) was about the lowest on record. The overall proportion (3.1 per cent.) of watered milks was an improvement on last year (4.3 per cent.). The proportion of milks (9.6 per cent.) deficient in fat was higher than last year's record figure of 9.4 per cent., suggesting that there is still a considerable amount of skimming being practised among milk suppliers.

The average fat content (3.96 per cent.) was practically the same as last year (3.95 per cent.) and the year before (3.98 per cent.). There was no significant difference between the average fat content of town and country milk.

TABLE LXXIV.
DETAILS OF LEGAL SAMPLES OF MILK.

Place	Number of Samples	Passed the Standard	Below the Standard in Fat	Below the standards in Total Solids and/or solids not Fat	Number of Watered Samples	Proportion of watered Samples, per cent.	Average proportion of added water, per cent.
Greater Brisbane	1,154	1,020	98	16	20	2	8.8
Barcaldine	2	2	..	..	..	..	..
Beaudesert	22	13	7	2	..	..	..
Biloela	3	3	..	..	..	..	..
Blackall	4	1	3	..	..	..	..
Bowen	2	2	..	..	..	..	..
Bundaberg	47	40	3	3	1	2	2.0
Caboolture	22	16	2	4	..	..	..
Cairns	35	27	6	2	..	..	..
Charleville	5	5	..	..	..	..	..
Childers	3	3	..	..	..	..	..
Chinchilla	2	2	..	..	..	..	..
Clermont	4	3	1	..	..	..	..
Cleveland	20	17	1	2	..	..	..
Collinsville	3	3	..	..	..	..	..
Cunnamulla	2	..	..	..	2	100	18.0
Dalby	8	5	3	..	..	..	..
Dayboro'	51	41	7	1	2	4	2.0
Esk	14	12	2	..	..	..	..
Goondiwindi	7	4	3	..	..	..	..
Ingham	5	2	3	..	..	..	..
Innisfail	4	4	..	..	..	..	..
Ipswich	133	113	7	12	1	1	19.0
Kingaroy	7	5	..	..	2	29	7.0
Mackay	38	30	3	1	4	10	21.0
Maryborough	47	39	1	..	7	15	13.0
Merrimac	60	43	6	10	1	1	5.0
Miles	4	4	..	..	..	..	..
Mitchell	3	..	3	..	..	..	..
Munduberra	2	1	1	..	..	..	..
North Coast	71	63	1	1	6	9	8.1
Proserpine	5	1	..	..	4	80	7.5
Redcliffe	66	54	4	8	..	..	..
Rockhampton	83	66	15	1	1	1	11.0
Roma	22	13	9	..	..	..	..
South Coast	86	72	6	8	..	..	..
Strathpine	10	..	..	..	10	100	3.1
Toowoomba	93	79	9	2	3	3	7.3
Townsville	13	4	4	4	1	7.7	15.0
Wallangarra	2	..	..	..	2	100	11.5
Warwick	15	15	..	..	..	..	..
	2,179	1,827	208	77	67	3.1	9.0

TABLE LXXV.

SUMMARY OF TABLE LXXIV.

	Percentage of Total Samples.
Adulterated with water	3.08
Deficiency in fat only	9.55
Below the standard in total solids and/or solids not fat	3.53
Passed the standard	83.84
	100.00

TABLE LXXVI.

MILK SAMPLES TAKEN IN GREATER BRISBANE.

Year.	Number of Samples.	Proportion of Total Milk Samples.	Proportion Adulterated with Water.
		Per Cent.	Per Cent.
1945-46	1,411	66.7	1.1
1946-47	1,358	62.7	2.2
1947-48	1,261	55.2	1.6
1948-49	1,221	49.3	1.7
1949-50	1,154	53.0	1.7

TABLE LXXVII.

SHOWING THE AVERAGE FAT CONTENT OF THE LEGAL SAMPLES OF MILK IN WINTER AND SUMMER IN TOWN AND COUNTRY.

Number of Samples.	Greater Brisbane or Country.	Season.	Months.	Average Fat Content.
2,179 ..	Both	Overall	January-December ..	3.96
611 ..	Brisbane	Summer	October-March	4.00
448 ..	Country	ditto	ditto	3.92
1,059 ..	Both	ditto	ditto	3.96
396 ..	Brisbane	Winter	July-September	4.03
408 ..	Country	ditto	ditto	3.83
804 ..	Both	ditto	ditto	3.93
147 ..	Brisbane	ditto	April-June	4.04
169 ..	Country	ditto	ditto	4.20
316 ..	Both	ditto	ditto	4.12

TABLE LXXVIII.

MILK POSITION COMPARED WITH PREVIOUS YEARS.

Year	Number of Legal Samples	Deficiency in Fat	Below the standard in Total Solids and/or Solids not Fat	Watered Samples	Added Water (Average)
		Per Cent.	Per Cent.	Per Cent.	Per Cent.
1943-44	2,005	2.7	14.0	4.4	11.0
1944-45	2,099	3.7	12.4	4.5	12.0
1945-46	2,116	3.2	11.7	4.0	8.0
1946-47	2,166	2.4	17.7	4.4	10.0
1947-48	2,283	1.8	7.4	2.5	10.0
1948-49	2,476	9.4	4.0	4.3	10.0
1949-50	2,179	9.6	3.5	3.1	9.0

Bread.

The comparatively few complaint samples received from the public would indicate that the quality of bread as a whole was an improvement on recent years. Breads from country districts, including Barcaldine and Chinchilla, were examined and most of these samples were properly baked and of good quality. From 34 samples of wholemeal and brown breads examined, 27 samples or 80 per cent. conformed with official requirements relative to wholemeal content.

Flour.

The white flours and wholemeal flours from the several mills in Brisbane were examined regularly with satisfactory results.

A number of samples of flour, known to some extent in the trade as "Starch reduced flour" was examined. The results obtained are outlined in Table LXXIX. together with the results obtained over the same period on the ordinary white flours from the same mills.

TABLE LXXIX.

COMPOSITION OF WHITE FLOUR AND "STARCH REDUCED" FLOUR FROM THREE MILLS.

MILL.	1.		2.		3.	
	White.	"Starch Reduced."	White.	"Starch Reduced."	White.	"Starch Reduced."
Variety (Declared.)						
Moisture (per cent.)	11.2	12.0	12.0	12.4	11.8	12.3
Ash (per cent.)	0.50	0.45	0.50	0.50	0.5	0.45
Protein (N. x 5.7) (per cent.) ..	10.3	12.0	11.9	12.9	11.4	13.2
Fat (per cent.)	2.0	2.0	1.9	1.8	2.0	2.0
Carbohydrate (per cent.), (chiefly starch)	76.0	73.55	73.7	72.4	74.3	72.05
	100.0	100.0	100.0	100.0	100.0	100.0
Cold Water Soluble	7.6	8.0	7.5	7.7	9.0	9.0
Wet Gluten	34.0	37.2	35.6	40.0	35.2	41.6
Crude Fibre	0.3	0.3	0.3	0.3	0.25	0.25

All the samples conformed with the prescribed standard for white flour, and none had been starch reduced. Those submitted as "starch reduced" had been milled from specially selected high protein wheats and were slightly higher in protein and consequently slightly lower in starch than the other flours, but were misdescribed as starch-reduced flours.

Meat.

Because minced meat is much used by invalids, the presence of preservative in it is not permitted, but some butchers persist in its use. Of 24 samples examined, 15 contained the preservative substance sulphur dioxide in proportions up to 10 grains to the pound.

In sausage meat, sulphur dioxide is permitted with a prescribed limit of 3.5 grains per pound. Of 21 samples of sausage meat examined, 8 samples exceeded this limit for chemical preservative.

Soft Drinks and Cordials.

A large number, 215 samples in all, of aerated drinks and cordials was examined. Many were submitted from country centres, including Beenleigh, Bowen, Bundaberg, Caboolture, Chinchilla, Cloncurry, Gayndah, Gin Gin, Laidley, Maryborough, Miles, Pinalba, Proserpine and Rosewood, and the majority conformed with the prescribed standards, although many failed in the labelling requirements. The country drinks compared favourably in quality with those from the metropolitan area.

Most of the aerated fruit drinks with a prescribed minimum fruit juice content of 5 per cent., and the fruit juice cordials with a prescribed minimum fruit juice content of 20 per cent. conformed with the standards. These fruit drinks, however, whether from town or country, are deficient in Vitamin C, and should not be regarded as effective substitutes for fresh fruit.

Contaminated Vegetables.

Although the vast majority of fruits and vegetables marketed in Queensland is in clean and sound condition, occasionally a line reaches the public containing an excessive amount of spray residue. A few such instances are recorded.

Following complaints from a number of consumers, samples of potatoes almost white with

dusting powder, obtained from the local market, were examined. They had been too heavily dusted with a Gammexane preparation for insecticidal purposes and were condemned as unfit for human consumption. These potatoes, even after washing, peeling, and cooking, still retained to a marked degree the objectionable flavour of the Gammexane.

One sample of cabbage containing lead arsenate was condemned, as also were several samples of cabbage heavily plastered with a D.D.T. preparation.

Vegetables must be marketed in a clean condition and according to the Regulations, "No person shall send any fruit or any vegetable to market for sale, unless and until it is clean and free from any spray residue, or any other foreign substance which is deleterious, objectionable, or injurious to health."

Toys.

Under the Health Acts, the presence of lead in any form in toys is prohibited, either in the toy substance itself or on the painted surface.

Of 37 samples examined, 30 of the toys were free of lead.

Metal Parts of Home Refrigerators.

Last year, the movable parts of home refrigerators, such as trays and shelves, were examined, and this year an examination was made of the inside metal fixtures of those refrigerators manufactured in Queensland. All the parts examined were free of the toxic metals, lead and cadmium, and were composed of tin coated steel, zinc coated steel, or nickel coated copper. Zinc is a toxic metal and zinc coated steel is not the ideal material for the inside of a home refrigerator. Foodstuffs, however, seldom come in contact with these fixed metal parts and the possibility of metallic contamination of foodstuffs from this source is remote.

Drugs and Medicines.

Fifty-three samples of drugs and medicines were submitted against 164 samples last year.

Most of the proprietary lines of "Mineral Spring" Salts and Anti-Acid Stomach Powders were examined.

Several medicines associated with complaints from the public were checked for accuracy in dispensing.

A number of lines, including hydrogen peroxide and calomine lotion, was examined in relation to British Pharmacopoeia Standards.

A capsule shown to be Dilantin 1½ Gr. was said to have been dispensed in error for a half-grain capsule of that drug.

Four new proprietary lines of medicine were examined and a check made of their claims and composition.

Tobacco and Cigarettes.

Mould was the chief spoilage agent in 83 samples of cigarettes, tobacco, and cigars condemned as unfit for smoking. In all 209 samples, chiefly from the King's Warehouse, were examined.

Canned Beans.

Seven different brands were examined with the majority below average quality.

The drained weights varied from 64 to 75 per cent., and the beans were either of the small Navy bean variety or the larger Great Northern type.

Two brands claimed to have been oven baked, but there was little, if any, difference in palatability or nutritive value between these brands and the steam baked products.

Canned Tomato Soup.

Eight brands of canned tomato soup were examined with results as shown in Table LXXX. All were good quality products, free of preservative and artificial colouring and fairly uniform in tomato content and in food value.

TABLE LXXX.
COMPOSITION OF CANNED TOMATO SOUP.

	Maximum %	Minimum %	Mean %
Total solids	20.2	12.6	16.4
Common salt	1.8	1.2	1.5
Degree of concentration (relative to Tomato Juice)	2.8	1.8	2.3

Dangerous Drinking Glass.

An expensive glass tumbler of 10 fluid ounce capacity was submitted for examination with the complaint that a similar tumbler had exploded into fragments with a loud report when slightly chipped. The trouble was shown to be associated with internal strain in the glass due to inefficient annealing in manufacture.

A photograph taken of the tumbler in polarised light with colour film showed the typical multi-colour effect of glass under strain—such glass will stand up to hard knocks but will fly to pieces with explosive violence when simply chipped or scratched on the surface, the broken pieces being conchoidal in fracture with no sharp edges. A definite element of danger exists in the handling of a tumbler of the type submitted and although of some curiosity value, such a tumbler is unsafe for use in the home as a drinking glass.

Danger of Spoiled Foodstuff in Tins.

A number of "blown" tins and rusted tins of fish and other foodstuff was examined. All were condemned as unfit for human consumption. Any unopened tins of foodstuff not flat on the ends and showing a bulge, however small,

or giving a movement when pressed, should be discarded, as these are outward signs of decomposition of the foodstuff. The product could be wholesome and the distortion of the tin due to faulty canning practice, or to a harmless hydrogen swell. The consumer has no means of determining the cause of distortion in the tin and should assume it due to decomposition of the foodstuff and discard the pack. Also, when an unopened tin of foodstuff shows any marked external rusting with actual pitting of the metal, the tin should be discarded. In this state, the danger of pinholing is great and once a tin is holed, however minutely, decomposition of the content is rapid.

Metallic contamination of Wine from an Altar Cruet.

Following a number of cases of sickness after drinking wine from an Altar Cruet, a small metal goblet was submitted for examination. It was composed of silver coated brass, the brass containing 69 per cent. copper and 31 per cent. zinc.

One fluid ounce of wine stored in the vessel for 16 hours became heavily contaminated with both copper and zinc to the extent of about 300 parts per million of each metal. The wine was discoloured, objectionable in flavour, and unfit for human consumption. Such contaminated wine if consumed could cause nausea and vomiting.

The goblet was condemned as unfit for use in an altar cruet.

Food Contamination from Plastic Garden Hose.

A specimen of green plastic garden hose was submitted by an aerated drink manufacturer at Cairns with a complaint that summer drink pumped through the hose acquired an objectionable flavour, becoming spoiled as a commercial article. The hose was of aldehyde-phenol origin and contained considerable free phenol (carbolic acid). One inch of the specimen immersed in two ounces of cold tap water for half an hour yielded phenol to the water at the rate of 12 parts per million. The resultant water had a mild odour of phenol, and a marked objectionable taste of this substance. Plastic hose of the type submitted, although suitable for use in the garden, is unsuitable for use for the conveyance of drinking water or other liquid foodstuff.

Metallic Colours in Foodstuffs.

Two samples were submitted for an opinion as to whether they were suitable for colouring cake icing. One was a fine silvery powder, consisting wholly of aluminium metal, and the other a golden powder composed wholly of brass, the brass containing 80 per cent. copper and 20 per cent. zinc. Both were condemned as unfit for use in cake icing, or in any other foodstuff intended for human consumption.

A sample of cachous examined consisted of small spheres of confectionery coated with pure silver leaf.

Silver is usually regarded as a non-toxic metal, and silver-coated cachous have been on the market for many years. Nevertheless, the use of metallic coatings of any kind on confectionery is a contravention of the Regulations, and should not be permitted.

"Ammonium Ion" Tooth Pastes.

So-called "ammonium ion" or "ammoniated" tooth pastes and powders have appeared on the market during the year, and many claims have been advanced of their value in preventing dental caries. A number of these pastes and powders was examined. They all had precipitated chalk as largest ingredient, and also had in common approximately 2 per cent. Urea and 5 per cent. diammonium phosphate. One paste had in addition a large proportion of glycerine.

Although considerable research work has been carried out overseas in this field, it has not been definitely established that the continued use of these preparations has any significant value in preventing dental caries.

There would appear to be little doubt that the intelligent use of a properly designed tooth brush is still the best weapon for the combat of tooth decay.

"MINERAL SPRING" SALTS.

Four popular brands of "Mineral Spring" salts were examined with results as outlined in Table LXXXI.

They were essentially admixtures of Epsom Salts and Glauber's Salt with much the same therapeutic value as these salts.

TABLE LXXXI.

COMPOSITION OF SOME OF THE COMMON "MINERAL SPRING" SALTS ON THE MARKET.

	No. 1	No. 2	No. 3	No. 4
	%	%	%	%
Sodium Sulphate (anhydrous Glauber's Salt)	74.0	37.2	85.1	6.3
Magnesium Sulphate (anhydrous Epsom Salts)	15.3	24.8	..	56.2
Sodium Chloride and Potassium Chloride ..	2.1	3.8	0.7	10.7
Sodium Bicarbonate ..	..	..	13.4	..
Sodium Phosphate ..	..	..	0.2	..
Tartaric or Citric Acid ..	0.2	6.0	..	1.4
Magnesium Carbonate ..	..	2.1	..	..
Potassium Iodide ..	..	0.1	..	..
Water	8.4	26.0	0.6	25.4
	100.0	100.0	100.0	100.0

Ant-Acid Stomach Powders.

A number of common brands of ant-acid stomach powder was examined with results as given in Table LXXXII. These preparations were alkaline powders of definite value in neutralising acidity but as to whether they could do all they claimed in the relief of stomach ills was another question.

TABLE LXXXII.

COMPOSITION OF SOME COMMON BRANDS OF ANT-ACID STOMACH POWDERS FROM THE LOCAL MARKET.

	No. 1	No. 2	No. 3	No. 4	No. 5
	%	%	%	%	%
Sodium Bicarbonate ..	25.1	48.0	30.7	16.8	69.0
Calcium Carbonate ..	24.9	20.0	31.0	35.5	6.8
Magnesium Carbonate ..	25.0	10.0	26.2	35.1	20.0
Magnesium Trisilicate ..	25.0	10.0	..	..	..
Kaolin ..	..	9.0	..	..	..
Bismuth Oxy Carbonate ..	..	..	10.0	12.6	..
Undetermined (including moisture and flavouring) ..	..	3.0	2.1	..	4.2
	100.0	100.0	100.0	100.0	100.0

Organic Fungicides in Case Timber.

Queensland Forestry Research Officers have shown that unseasoned timber immersed for 5 seconds in a one-half ($\frac{1}{2}$) per cent. solution of pentachlor phenol sodium salicylanilide or chloro hydroxy phenol methane (D.D.M.) is effectively protected against mould.

Experiments in this laboratory demonstrated the absence of taint in foodstuffs stored in boxes made from timber which had been treated in this way.

Paint and Paint Scrapings.

Under the Queensland Health Acts, it is enacted that there shall be supplied on, or attached to, every package of paint packed or enclosed for sale, a label containing, inter alia, a statement of the ingredients and the percentage proportions of the same in such paint.

The present position in this regard is not satisfactory. Of 28 samples of paint examined, representing 24 different manufacturers, 8 from Queensland and 16 from other States, only 8 samples conformed with these labelling requirements. With 5 of the brands, the composition was not declared on the label, and with each of the other 15 brands, the declared composition was not correct. Considering that Zinc Oxide (zinc white) and titanium dioxide (titanium white) are first class paint pigments and barium sulphate and lithopone comparatively poor quality ones, improper descriptions used in some of the labels did not improve the position.

The term, "zinc white," was commonly used for admixtures of zinc oxide and barium sulphate and "titanium white" for admixtures of titanium dioxide and barium sulphate. Also lithopone appeared at times as "Orr's Zinc White" and Barium Sulphate as "blanc fixe."

Further, one paint vehicle was described as "fortified linseed oil," another as "linseed oil medium," and a third as "linseed oil varnish." All these terms or expressions are commonly and loosely used in the trade but are misleading or meaningless to the general public, in whose interest largely the labelling regulations for paint, have been framed.

Of 132 samples of paint and paint scrapings examined for soluble lead, 60 samples contained more than the prescribed maximum of 5 per cent.

Pepper Substitutes.

Pepper has been in short supply since World War II., when the Japanese occupied the chief pepper-producing countries of the world. Prices have soared and pepper substitutes have made their appearance. Of two such samples examined, one was the ground berry of *Piper longum*, and except for a faint objectionable odour of the oil, was a fair substitute for ordinary pepper (*Piper nigrum*). A second sample, which consisted largely of starch, containing less than 5 per cent. pepper-like material, was a poor substitute for the genuine article.

Bubble Gum as the cause of sore lips.

Following complaints that bubble gum was causing sore lips with children, a well known and popular brand was examined. It contained 72 per cent. sucrose and glucose, 25

per cent. mixed gum and 3 per cent. inert mineral material.

It did not contain any chemical skin irritant substance, and lip trouble associated with its use was no doubt of physical origin.

Suspected Ambergris.

Four samples thought to be ambergris came from coastal areas of the State. One was wood resin, another ordinary tallow, the third an animal fat resembling adipocere, and the fourth paraffin wax containing copper compounds and similar to wax used by fishermen for the preservation of their nets.

Only one sample of ambergris has been submitted to this laboratory in recent years. In the last 30 years, six genuine samples have been examined, and they have come from Queensland beaches as far north as Cooktown and as far south as Stradbroke Island.

For many centuries, ambergris has been valued as a perfume material. The best variety known as grey ambergris has sold for as much as 120 shillings per ounce, and the poorest type, the black soft variety, up to 10 shillings per ounce.

With the advent of synthetic perfumes, the demand for ambergris has diminished with a subsequent marked reduction in its market value.

Bedding and Upholstery Filling Materials.

Of 62 samples of flock, fibre, kapok and cotton linters submitted, 19 failed to attain the standard of cleanliness required by the Bedding and Upholstery Regulations of 1948.

Commerce and Agriculture.

For the Federal Department of Commerce and Agriculture, 1299 samples were examined, an increase of 184 on last year's figure.

Most of the work was in connection with export standards and a summary of the samples examined is given in Table LXXXIII.

TABLE LXXXIII.

SUMMARY OF SAMPLES EXAMINED FOR THE DEPARTMENT OF COMMERCE AND AGRICULTURE.

Nature of Sample	Number Examined
Butter	254
Liquid egg pulp	248
Canned fruit and fruit juice	195
Honey	176
Cheese	142
Canned meat	119
Jam	65
Canned beans	41
Cream	28
Miscellaneous	28
Total	1,296

The miscellaneous samples include milk, margarine, ghee and chutney.

Other Government Departments.

For State and Federal Departments other than Health and Home Affairs and Commerce and Agriculture, 211 samples were examined, an increase of 142 samples on last year.

For the Department of Public Works, 173 samples of paint scrapings from State Schools, Police Stations, and other public buildings were

examined for soluble lead content. Of these samples, 125 contained less than the prescribed maximum of 5 per cent.

Samples of fish and creek waters were submitted by the Harbours and Marine Department for an opinion on the cause of death of the fish.

Other work for various departments varied from an examination of an adulterated spirituous liquor from the Railway Refreshment Rooms to examination of samples of human milk from Maternal and Child Welfare centres.

Samples submitted direct from the Public.

A further 53 samples were examined for the public.

A silky oak tree was shown to have been poisoned with arsenic.

Other samples under this heading covered a wide field including jams, ambergris, textiles, and preserved fruit.

SECTION 2.

TOXICOLOGY, BIOCHEMISTRY AND INDUSTRIAL HYGIENE.

I. L. B. HENDERSON, B.Sc., A.R.A.C.I., Senior Analyst, Division I, Officer in Charge; M. J. Guyder, B.Sc., Senior Analyst, Division II.

The total number of specimens submitted for examination to this section was 1395.

Police Department.

Specimens submitted by this Department during the year numbered 218, of which 151 were in connection with 46 post-mortem examinations.

Poisons found included arsenic (7), strychnine (5), cyanide (1), mercury (1), barbiturate (2), paraldehyde (1), phenol (1), and kerosene (1).

The remaining 27 post-mortem examinations proved negative. Many of the latter are routine examinations to exclude the possibility of poison where the Government Pathologist's examination does not positively indicate the cause of death.

The incidence of barbiturate poisoning has dropped suddenly, possibly due to more careful prescribing of such tablets and to less publicity given by the press to such deaths.

Arsenic and strychnine are still the cause of many deaths, both accidental and suicidal, owing to the widespread use of these two poisons for pest destroying, cattle dipping and weed-killing purposes.

A number of cases of severe illness which occurred in the Barcaldine district was found to be due to contamination of bags of sugar with boric acid.

Animal poisonings involving 10 examinations were also investigated.

Other specimens examined for this Department included alcoholic liquors, foodstuffs, citrus trees, clothing, soils, weedkillers, tattooing chemicals, blood, vomitus and stomach washings.

Evidence was given in Court on a number of occasions.

Biochemistry.

The nature, significance and number of specimens submitted by the Department of Health and Home Affairs, Hospitals and medical practitioners is given in the following table:—

Nature of Specimen and Significance.	Number of Specimens.
Blood and/or Urine for alcohol, ether or other drugs	150
Urine for lead, mercury, &c.	152
Hair, Nail, Urine for arsenic	155
Miscellaneous	84
Total	541

The miscellaneous specimens included blood, stomach washings, vomitus, cerebro-spinal fluid, faeces, ether, drugs, &c.

The large increase in the number of biochemical specimens examined for arsenic is accounted for by a survey of workers in the hide and skin industry at present being conducted by the Director of Industrial Medicine.

At least twice during the year, inquiries have been received from anxious parents whose children have swallowed portions of indelible pencil. They have been reassured to learn that the "filling" of such pencils is based on the relatively harmless dyestuff, methyl violet.

Industrial Hygiene.

The number of samples examined totalled 636, comprising 494 dust counts and dust analyses, and 142 miscellaneous items.

Industrial problems investigated included the following:—

- (1) Ventilation and dust surveys were made at five Central Queensland coal mines:—
 - (a) State Coal Mine, Ogmoo.
 - (b) Dawson Valley New Pit, Baralaba.
 - (c) Cambria, Excel and Windsor Mines, Bluff.
- (2) An assessment of possible dust hazards was made at the four open-cut coal mines at Blair Athol and Callide.
- (3) The State Coke Works at Bowen were visited to investigate possible health hazards arising from exposure to dust and noxious gases and fumes.
- (4) Ventilation, dust and noxious gas surveys were made at Mackay Power House.
- (5) One method of case-hardening of steel involves the use of molten cyanide. The process was investigated and it was found that the cyanide was appreciably volatile at the temperatures used, but was rapidly oxidised to the relatively harmless cyanate on contact with air and did not constitute an industrial hazard.
- (6) An explosion and fire at a Brisbane hat-making factory were investigated. In this instance, the hats were treated with a stiffening agent dissolved in toluol, and placed in a drying chamber fitted with open element heaters.

The presumption was that toluol vapours were ignited on contact with the exposed elements and a recommendation was made that totally enclosed heaters be installed, or a system of steam pipes be used as a source of heat.

- (7) A number of fluorescent lamps was examined for the presence of beryllium. Cuts from broken tubes containing this substance are difficult to heal and sometimes require surgical treatment. The lamps examined did not contain beryllium.

- (8) Firemen are required to undergo periodic training in the use of the "Proto" Self-contained Oxygen Breathing Apparatus in hot and humid atmospheres. Investigations of temperatures and humidities encountered during the training were made on two occasions.

SECTION 3.

MINING, MINERALOGY, METALLURGY AND EXPLOSIVES.

Staff.—V. R. CUNDITH, B.Sc., A.R.A.C.I., Officer in Charge; D. MATHERS, M.Sc., A.R.A.C.I., Senior Analyst, Division II., T. R. LOWTH, B.Sc., A.R.A.C.I., Analyst; H. COUPER, Diploma Industrial Chemistry, Acting Assistant Analyst; F. ESDALE, Assistant to Analysts.

Samples examined, 3,376.

The table shows the sources of work done by this section and the numbers of samples from each:—

Department.	Number of Samples.
Geological Survey and Mines Department ..	677
Portmaster (Explosives)	1,716
Other Departments	750
Industrial Hygiene	1
Public	232
	3,376

Mines Department and Geological Survey.

Work for these departments followed a similar pattern to that of the previous year. In addition to the usual assays of ores for gold, silver, copper, lead, tin, and cyanidation tests, the analytical work associated with the surveys of Queensland coal deposits continues to be considerable.

Another calorimeter is being purchased to cope with these analytical requirements which, include calorific value, proximate and ultimate analyses, ash analysis, fusion point of ash and washability tests.

Fire tests were made on 29 clays to determine their suitability for the manufacture of tiles, bricks and refractories.

In regard to manganese ore, 32 samples were assayed. Some samples showed the presence of lead and barium and the higher recordings for manganese content ranged 50-55 per cent.

Two samples of igneous rock were also analysed for the Massachusetts Institute of Technology, in connection with a world survey of analytical methods initiated by this Institution.

Coal, coal ash analyses and tests were carried out for the Powell Duffryn Services Ltd.

Other Departments.

Apart from consultative work, investigations and analyses were carried out on boiler water, boiler deposits, metals, galvanised iron, filter sands and refractories.

A deposit said to have been taken from the generator of an absorption type of refrigerator (20 years old) consisted of magnetic iron oxide octahedra.

Supplementary to the physical tests carried out by the Works Department on concrete roofing tiles, tests on the pigments used thereon have been undertaken by this department through the year. Of 558 tiles and 8 pigments examined, four (4) were condemned on account of the presence of red lead, and three (3) did not conform with the standard, being coloured with a green organic dye.

Of interest was the discovery of a growth of *Crenothrix polyspora* which seriously clogged the cooling vanes to a Freon condensing unit with slime. The addition of Chloride of Lime to correspond with 10 parts per million Chlorine in the circulating water effectively removed the infestation.

A local clay showed the presence of a small proportion of copper mineral which was just sufficient to discolour the white glaze applied to the biscuit.

A corrosion product obtained from a copper calorifier proved to be derived from soft solder which had been used instead of a suitable brazing alloy to joint the seams.

There was a falling off in the number of tankers and containers examined for the presence of dangerous proportions of inflammable gas.

An inspection of an extensive range of X-ray films (negatives) was made during the year. Safety film had been used since 1939 but older films from 12 to 27 years old were of nitro cellulose base. Generally, the films were in good condition and of those examined, only a small proportion showed any defects such as darkening, discolouration of silver image, stickiness or films stuck together.

This deterioration was only apparent in a few of the 1923-8 films, and as this occurs well in advance of any changes leading to spontaneous combination of nitro cellulose base film, the necessity for replacement or destruction of useless film is indicated in ample time. Heat tests were also made on the film.

Explosives.

There was no conference of State Chief Inspectors of Explosives during the year. However, attention was directed to reviewing certain regulations issued under the Explosives Act (1906), more especially in relations to decisions agreed to at the last conference held in Melbourne, during April and May, 1949. The Authorised List of explosives was amended to provide for three in place of two divisions of the Fireworks Class (Class VII.). The third division covered manufactured fireworks of the "shopgoods" type which are sold in quantity for Guy Fawkes and Christmas celebrations. These goods do not require the supervision which is essential in the case of the storage and transport of other explosives. Initially they are subjected to close examination by Inspectors of Explosives, before they are cleared through the

Customs to ensure that no dangerous compositions have been used in their manufacture. The recently gazetted Fireworks Regulations of 1950 impose prohibitions on the importation of certain types of fireworks which are considered too dangerous for storage, transport, sale and use. Minor amendments to the packing regulations were effected to cover the introduction of the third division of the Fireworks Class.

A new explosive under the name of "Monograin" was added to the Authorised List of Explosives. This is a "free running explosive" and it might be of interest to give some details of trials in which it was employed. The first was carried out at Reid Bros. Quarry near Melbourne, Victoria, where basalt is being worked. Estimates were to the effect that 5,000 tons of rock were shattered for consumption of 517 pounds of free running explosives and 24 ounces of gelignite. Fragmentation was better than with previous shots using Quarry Monobel. The operation was completed in 90 minutes where normally it takes a day; one hole was charged in six minutes. The twelve holes each 2½ inches in diameter were previously drilled at a depth of 21 feet. They were spaced 6 to 8 feet apart and individually charged with from 40 to 50 pounds of explosive. Prior to charging each hole with free running explosives, a length of Cordtex carrying at its lower end 2 x ½ inch plugs of A.N. "50" Gelignite was lowered to the bottom. The explosive was directed into the separate holes by means of a short stemmed copper funnel through which passed to the bottom of the hole, a slender wooden rod built up in 6 feet detachable sections. As the explosive was run in, the rod was moved lightly up and down to prevent clogging and each section removed as it protruded from the hole with progressive charging. The holes were stemmed with sand, and each free end of cordtex was taped to a main cordtex line using insulation tape for the purpose. The main line was initiated with a No. 6 detonator to which was fitted a length of safety fuse which was ignited in due course.

A complete account of a similar trial at the Mt. Morgan Mines was published in January, 1949 issue of the Queensland Mining Journal.

SAMPLES EXAMINED—1716.

The following table details the type, source and quantity of explosives imported into Queensland for the year ended 30th June, 1950.

TABLE LXXXIV.
SAMPLES EXAMINED.

Type.	Australian		Overseas	
	Cases.		Cases.	
Blasting gelatine	113	..	..	..
60 per cent. gelignite S.N.	200	..	..	..
A.N. gelignite "60"	16,948	..	..	..
A.N. gelignite "50"	12,250	..	..	..
Ajax	13,186	..	..	..
Quarry monobel	2,701	..	..	..
Dynobel No. 2	2	..	..	..
Geobel No. 2	3,439	..	..	..
Monograin	200	..	..	..
40 per cent. Ligdyn S.N.	1,593	..	..	..
A.N. ligdyn "40"	100	..	..	..
Blasting powder	550	..	..	..
	51,282	Nil		

TABLE LXXXIV.—*continued.*

DETONATORS.			
		Number.	Number.
No. 6 detonators	1,812,000	337,000	
Electric detonators No. 6 x 72" ..	243,000	..	
Electric detonators No. 6 x 120" ..	35,000	..	
Electric detonators No. 6 x 144" ..	15,000	..	
Electric detonators No. 8 x 12" sub-marine	4,000	..	
Gasless delay action detonators 144" ..	..	600	
Electric delay fuses Mount Isa type 144"	..	10,000	
		Feet.	Feet.
Blue fuse	3,398,400	..	
Plastic cordtex	..	93,000	

Except for a small parcel of gun powders no explosives were condemned during the year.

TABLE LXXXV.

LICENSES IN FORCE.

—	1948-1949.	1949-1950.
Bulk magazines ..	14	16
Retail magazines ..	549	542
Rack-a-Rock	2	2

Inspection of Magazines and Trucks.

Two magazines for fireworks and four magazines for explosives were inspected, one of which was a bulk magazine at Roma. Two cases of explosive were examined at Bajool magazine on 14th April by Mr. Cundith, Inspector of Explosives, and sent out for immediate consumption.

Further consideration was given to the proposed magazine to replace the present one at Dakabin and a detailed inspection carried out of an area at Morayfield.

Three trucks were inspected to determine their suitability for the transport of explosives.

SECTION 4.

CUSTOMS, STORES AND ROADWAY MATERIAL.

Staff.—J. R. W. Adamson, A.R.A.C.I., Senior Analyst, Officer in Charge; J. C. Yule (Dip. Ind. Chem.), Assistant to Analyst; J. V. Foreman, Assistant to Analyst.

The total number of samples examined by the section was 7149, an increase of 858 over the previous year.

The Commonwealth Customs Department submitted 6,378 samples. The work for this department covers a wide range and consists principally of analyses to determine the classification of the samples for purposes of the Customs and Excise Tariffs. Thermometers, hydrometers, &c., are also checked to ascertain the correctness of their graduations.

The remainder of the samples was submitted by the following departments:—

Main Roads Commission	112
State Stores Board	307
Queensland Railways	26
Miscellaneous Government—	
Departments	313
Public	13
	771

There was a decrease in the number of samples submitted by the Main Roads Commission for the year. The work for this Department concerns chiefly the examination of bitumen, tars, bituminous emulsions and paints.

The Public Works Department submitted a large number of paints and paint materials for analysis and report.

The paints showed a marked improvement on those submitted in the previous year. The use of volatile mineral thinners was not so pronounced, and "livering," so noticeable in the previous year, was also considerably reduced.

The State Housing Commission also submitted a number of paints for examination.

The State Stores continue to make considerable use of the services of this section. The samples submitted are of diverse type, and consist chiefly of textiles, inks, carbon papers, paints, disinfectants and soaps.

The importation of fireworks was again supervised by this section, and some hundreds of cases were examined. No defective or dangerous fireworks were discovered—a very satisfactory state of affairs.

The small staff has been fully extended to cope with the work occasioned by the record number of samples submitted during the year.

SECTION 5—WATER.

Staff.—J. A. Forbes, A.R.A.C.I., Analyst-in-Charge; W. N. Carvosso, A.R.A.C.I., Analyst; J. T. Williams, Temporary Analyst.

The appointment of additional assistance to this section is welcome as the present staff has been working under pressure for some time past. It is anticipated that the accumulation of samples for analysis will be substantially reduced in the coming months. The following table indicates the number of samples examined for the relevant Departments:—

Health and Home Affairs	183
Irrigation and Water Supply	935
Local Government	113
Other Departments	96
Public	94
Total	1,421

The major part of the samples from the Health and Home Affairs Department are concerned with the chemical evaluation of the waters for human consumption, whilst those from the Local Government Department are for much the same purpose in connection with water supplies projects of Local Authorities. The Irrigation and Water Supply Department are interested in determinations of the saline content of bore waters and waters for irrigation. This section also examines waters to determine their suitability for steam raising.

Queensland waters do not generally contain nitrates. However, one sample from a well in the Kilkivan district showed 23 grains per gallon calculated as sodium nitrate, whilst a second sample from a limestone quarry in the Cloncurry district gave a figure of 143.8 grains per gallon. The latter high figure may have been occasioned by contamination of the water with oxides of nitrogen from blasting explosives.

Mine and pit waters are occasionally submitted for assessment for ablutionary purposes, in which connection the advice to chlorinate or otherwise sterilise is always given, without which the water should not be used.

Advice has been sought concerning the use of waters drawn from the sandy country along the

ocean fringe in areas which are now undergoing rapid closer settlement. The examination of samples has indicated varying degrees of pollution. In many homes, septic systems have been installed and the effluent therefrom passes to the sandy soil. Caution should be exercised in the use of these waters, except for gardening purposes. Sterilisation by chlorination or other means should be applied in the case of their use for domestic purposes.

Request for the examination of septic effluents including the "Biological Oxygen Demand," which is a measure of the working efficiency of installations, are on the increase and the Laboratory is now equipped for this specific work.

SECTION OF MATERNAL AND CHILD WELFARE.

Director: H. C. MURPHY, M.B., B.S. (Syd.)

Deputy Director: G. REID, M.B., Ch.B., D.P.H. (Aberd.)

Part-time Pre-school Child Health Officer: T. HENRY R. MATTHEWSON, M.B., Ch.B. (Edin.)

Supertintendent: D. BARDSLEY, A.T.N.A.

Deputy Superintendent: A. JENKINSON, A.T.N.A.

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Introduction—Prematurity—Pink Disease—Vital Statistics—The Year's Work—Extensions of the Service—Rail Car—St. Paul's Terrace Home—St. Paul's Terrace Training School—Clayfield Home—Clayfield Training School—Maternal and Child Welfare Home, Toowoomba—Toowoomba Home Training School—Maternal and Child Welfare Home, Sandgate—Ante-Natal Clinics—Correspondence Service for Expectant Mothers—Director's Consultant Centre—Pre-School Health Centres—Correspondence Section—Social Welfare Service—Lecture Demonstrations to School Girls—Kindergarten and Kindercraft Trainees—Medical Students—Newspaper Articles—Publications of the Service—Staff—Baby Clinic Social Club—Visits to Newborns and Attendances at Centres.

INTRODUCTION.

It may be stating an obvious fact to say that the health of any community as a whole is bound up with the health of the mothers and children in that community, but there is no doubt that this is a fact which must be continually re-stated if those who are directly concerned with mother and child health are to have constantly before them the fact of their tremendous responsibilities.

Obstetricians, paediatricians, the family doctors, hospital and private duty nurses, as well as medical and nursing officers in the recognised public health services are in the final count answerable to the public for the quality of the service they give to the community in which they are called to serve.

This should be one of the first precepts of teachers in medical and nursing fields and the one to be most strongly emphasised. The Queensland Health Education Council, the School-Nurse-Lecturer Section of the Maternal and Child Welfare Service and other organisations concerned with the instruction of the general public in health matters will, as time goes on, develop an educated public increasingly aware of the quality of the service rendered to it. Indeed, we have the experience already, that many mothers interested enough in child health and development to become well-informed on these matters themselves are already critical of the advice given to them by some of the medical men and nurses with whom they have to deal. For this reason, amongst others, standards must be kept high and there is a good deal of evidence that such is not always the case.

On the other hand, we have the picture of the mother with her first baby insufficiently instructed in matters concerning her new responsibilities. Probably, the greatest sufferers from any defect in any system of Mother and Child care are these mothers with first babies and we should, from time to time, take careful stock of our various health services, in order to be sure that this extremely vulnerable group are not being sacrificed to expediency.

Several of the senior sisters attached to Centres and Homes in this Service have made comment during the year on the number of young mothers discharged from hospital with babies, who are completely unable to face the tasks which lie ahead, and who require a great deal of attention when they attend Centres. Other reports are of the number of new babies admitted suffering from vomiting and other feeding difficulties attributable, at least in part, to a routine four-hourly feeding carried out in their first few days. Some of the new babies are on a four-hourly feeding with large complements of artificial food and many of these babies are, as a result of the conditions referred to, liable to be subjected to the manifold risks of early weaning. It may be said that the Maternal and Child Welfare Centres are there to deal with this problem and this they are doing, but it must be remembered that, in some cases, damage is done which cannot be repaired and every baby affected does not attend a Centre. Previous annual reports have drawn attention to the large amount of unnecessary weaning which is done in hospitals and on the advice of medical men and others—as well as the cases due to the ignorance of the mother.

Admitting that the shortage of staff in hospitals may be responsible for the introduction of a routine four-hourly feeding and a lack of the individual attention and instruction needed by every mother and baby until the infant is established on the breast, a concrete example is here provided of the sacrificing of the new mother to expediency. In this connection, consideration must also be given to the question of whether the trouble lies not only in staff shortage which it is difficult to overcome, but in the lack of knowledge by the existing medical and nursing staffs of the principles of breast feeding, and whether, in the case of student nurses who cannot be expected to be well grounded in this important subject, there is sufficient supervision by a well informed superior.

The education of the mother herself at some period before her baby is born is another important factor. There is no doubt that small families, together with the fact that most girls follow occupations outside the home from the

end of school days to marriage, make it necessary for some organised instruction to be given to girls and young women.

Excellent results have been observed from the system of lectures to school girls previously referred to which have been carried out by this Service in the metropolitan area, Wynnum and Ipswich for the last eight years.

The training of girls sixteen years and over at the Clayfield and Toowoomba Homes plays a small, though decisive part, in educating girls for motherhood, as well as providing them with a career. Unfortunately, every girl in Queensland does not come within the scope of this instruction.

It is hoped that as the number of sisters employed in country centres is increased, thus reducing the large areas which have to be covered by one sister, or cars provided so that a great deal of time is no longer wasted in travelling, it may be practicable to extend the teaching of mothercraft to country schools. The scheme is not without its difficulties, in that the mothercraft lectures have to be inserted into an already crowded school curriculum and the nurses undertaking such lectures must be not only experienced in Child Welfare work, but, at the same time, capable of teaching it to the young in such a way, that it appears attractive and interesting to them.

The opening of Maternal and Child Welfare Homes in Ipswich, Rockhampton and Towns-

ville will also serve to increase the scope of the training of Queensland girls in subjects which should form part of the basic education of all girls—we might say, of all young people, potential fathers as well as potential mothers.

The improvement in the thorough understanding of the principles and practice of breast feeding by medical men and nurses is strongly urged, but must be dealt with by the appropriate authorities.

PREMATURITY.

The following statistics on prematurity are based on the definition of prematurity recommended by the Committee of Inquiry into the Decline of the Birth Rate, namely that a premature infant is one whose birth weight is between 2 lb. 12 oz. and 5 lb. 8 oz.

In previous years at the Brisbane Women's Hospital a premature infant was one whose birth weight was 5 lb. 4 oz. or under, with no lower limit. Consequently a number of non-viable infants either born in the hospital or admitted to hospital, were included in the Statistics, thus raising the percentage mortality of premature infants.

For the year 1949, 235 premature infants died, representing 34.2 per cent. of the deaths occurring under 1 year. In 1948 the percentage mortality was 37.8. Of deaths under one month, prematurity accounted for 225 out of a total of 481, or 46.8 per cent. The corresponding figure for 1948 was 51.5 per cent.

TABLE LXXXVI.

SUMMARY.

	Live Births.	Premature Infants.	Per Cent. of Live Births.	Deaths of Premature Infants.	Per Cent. Mortality of Prem. Infants.
Queensland Public Hospitals	20,648	853	4.1	153	17.9
Extra-Metropolitan Public Hospitals	12,699	451	3.6	101	22.4
Brisbane Women's Hospital	7,949	402	5.0	52	12.9
(a) Public	2,239	127	5.7	18	14.1
(b) Intermediate	5,710	275	4.8	34	12.4

N.B.—These statistics are not comparable with those in Table LXXXVII. as prematurity in the above is based only on a weight standard.

CAUSATION OF PREMATURITY.

Questionnaires concerning prematurity were forwarded by the Government Statistician to Public Hospitals in Queensland. Replies from 90 hospitals show the following data as regards the causation of prematurity.

Of 451 premature births, the prematurity has been attributed to the following causes:—

	Number.	Per Cent.
Cause Unknown	294	65
Multiple Pregnancy	31	6.9
Toxaemias of Pregnancy	30	6.6
Ante Partum Haemorrhage	17	3.8
Illness of Mother	12	2.7
Malpresentation	8	1.8
Albuminuria and Nephritis	8	1.8
Pregnancy	8	1.8
Hypertension	8	1.8
Macerated Foetus	7	1.5
Placenta Praevia	6	1.3
Congenital Malformations	4	0.9
Early rupture of membranes	4	0.9
Caesarian Section	4	0.9
Rh. Factor	4	0.9
Other Causes	14	3.2

"PROBLEMS OF PREMATURITY."

Under this title a booklet has been published by the Maternal and Child Welfare Service, dealing with the statistical, obstetrical, medical and nursing problems of prematurity. The authors of the booklet are:—The Director of Maternal and Child Welfare; Dr. G. Shedden Adam, Professor of Obstetrics at Queensland University; Dr. Felix Arden, Paediatric Consultant to the Brisbane Women's Hospital, and Miss E. McCorkindale, A.T.N.A., Relieving Acting Matron, Brisbane Women's Hospital.

This booklet will be distributed to Medical students, hospitals, Maternal and Child Welfare trainees and all medical practitioners practising midwifery throughout Queensland.

The purpose of the booklet is the reduction of infant mortality due to prematurity by the application of knowledge necessary for the care and nutrition of premature infants.

PINK DISEASE.

The recent work of Hicks and Cheek on the etiology and treatment of Pink Disease has stimulated interest in that condition.

A Committee has been formed under the Chairmanship of the Director of the Medical Research Institute of Queensland for the purpose of investigating cases of Pink Disease.

VITAL STATISTICS.

Outstanding features of vital statistics for 1949 are:—

- (1) A lower maternal mortality rate (1.44 per thousand live births) than the record low rate of 1948 (1.47 per thousand live births).
- (2) The lowest rate of infantile mortality ever recorded (24.7) per 1,000 live births.
- (3) The lowest marriage rate since 1938, but which, however, still remained slightly above normal.
- (4) A slight decrease in the birth rate from 24.7 per 1,000 mean population in 1948 to 24.2 in 1949. The peak rate was 25.7 per 1,000 mean population in 1947.
- (5) A fall in the death rate from 9.3 per 1,000 mean population in 1948 to 8.9 in 1949.

BIRTHS.

During the year 1949, 27,748 births were registered in Queensland, a decrease of 110 from the 1948 total. The crude birth rate, 24.2, was the lowest since 1944, when the rate was 23.1. From 1933 the birth rate had risen steadily until it reached the high level of 25.7 in 1947, but since then has declined to 24.7 in 1948 and to 24.2 in 1949.

In 1949, there were 14,241 males and 13,507 females born, giving a normal masculinity rate of 105 males for every 100 females born.

The natural increase of births over deaths of 17,587 for 1949 was equal to an increase of 1.55 per cent. compared with 1.57 per cent. for 1948 and 1.66 per cent. for 1947.

MARRIAGES.

Registrations of marriages during the year numbered 10,234, compared with 10,125 in 1948, giving a marriage rate of 8.9 per 1,000 mean population. This rate was the lowest since 1938, when the rate was 8.8. This low marriage rate must be attributed in a large measure to the difficulties attendant upon the housing situation.

Minors married during the year numbered 3,737, of whom 629 were males and 3,108 were females.

DEATHS.

Maternal.

The number of deaths of women due to diseases of pregnancy and childbirth was 40 in 1949, with a corresponding mortality rate of 1.44 per thousand live births. Both these figures set new records, falling below the record low levels experienced in 1948.

Of the 40 deaths occurring in 1949, 13 followed childbirth and 19 were due to diseases and accidents of pregnancy (excluding abortion).

The causes of the 13 deaths due to diseases and accidents of childbirth were as follows:—

Infection during childbirth and puerperium	3
Puerperal toxæmias	3
Haemorrhage of childbirth and puerperium	1
Other accidents of childbirth, including Caesarian section	2
Other diseases of childbirth	4

The causes of the 19 deaths due to diseases and accidents of pregnancy were as follows:—

Toxaemia of pregnancy	11
Ectopic gestation	5
Haemorrhage of pregnancy	1
Other diseases and accidents of pregnancy	2

Of the toxæmias of pregnancy, two deaths occurred in the Metropolitan area and nine in extra-metropolitan areas. Four of these cases were not in hospital, one in the metropolitan and three in country areas. Four of these eleven cases developed eclampsia.

The following table shows the progressive decline in maternal mortality since 1940:—

Year.	Maternal Deaths.	Maternal Mortality Rate.
1940	96	4.70
1941	92	4.28
1942	84	3.97
1943	89	3.83
1944	74	3.02
1945	66	2.47
1946	61	2.26
1947	46	1.62
1948	41	1.47
1949	40	1.44

The gradual improvement in the maternal mortality is very gratifying, and no doubt reflects in a great measure the ever-increasing importance attached to adequate ante-natal supervision. That there is no room for complacency however, is shown by the fact that 11 fatal cases of toxæmia of pregnancy occurred in 1949 as against 3 in 1948 and 5 in 1947. Also the number of deaths due to diseases and accidents of pregnancy were greater than the number due to diseases and accidents of childbirth. Since the revised International list of Causes of Death came into use in 1940, deaths following childbirth have always been greater than deaths during pregnancy. Stricter ante-natal supervision would appear to be indicated.

DEATHS.

Infantile.

Deaths of infants under one year numbered 686 compared with 779 in 1948, a decrease of 93. The infantile mortality rate of 24.7 per 1,000 live births was the lowest ever recorded for the State. The metropolitan area continued to show a marked improvement; the rate having fallen from 35 in 1947 to 30 in 1948 and to the very low rate of 21 in 1949. While the rate for sub-tropical (non-metropolitan) area showed a decrease from 27 to 24 the rate for the tropical area increased from 27 to 30.

The fall in the rate was principally due to a substantial decrease in deaths of infants due to premature birth. Deaths from this cause showed a decrease from 294 in 1948 to 235 in 1949, giving a proportion of 8.5 deaths out of every 1,000 births which was the lowest ever recorded in the State. The previous lowest was 9.8 deaths per 1,000 births in 1947.

There were 481 deaths of children aged under 1 month and 205 deaths of children aged from

1 month to under 1 year during the year, the corresponding mortality rates being 17.3 and 7.4 per thousand live births. The mortality rate for children aged under 1 month (17.3) is the lowest ever recorded in the State.

The following table shows the major causes of deaths under 1 year, in the tropical, sub-tropical (excluding metropolitan), and metropolitan areas:—

TABLE LXXXVII.
CAUSES OF DEATHS IN INFANTS UNDER ONE YEAR, QUEENSLAND, 1948-49.

Disease.	1948.	1949.				Increase or Decrease.
		Metropolitan.	Sub-Tropical. (a)	Tropical.	Total.	
Premature birth	294	68	106	61	235	-59
Congenital malformation.. .. .	86	35	39	28	102	+16
Injury at birth	85	16	39	28	83	-2
Atelectasis	39	16	13	16	45	+6
Haemorrhagic condition of the newborn	4	5	3	1	9	+5
Congenital debility	18	..	1	4	5	-13
Icterus neonatorum	8	1	3	2	6	-2
Other diseases of early infancy	22	5	8	3	16	-6
Total pre-natal causes	556	146	212	143	501	-55
Broncho-pneumonia	70	17	25	19	61	-9
Diarrhoea and enteritis	59	18	14	9	41	-18
Whooping cough	4	6	..	1	7	+3
Lobar pneumonia	4	4	1	1	6	+2
Convulsions	3	..	..	1	1	-2
Diphtheria	..	..	..	1	1	+1
All other causes	83	19	29	20	68	-15
Total deaths under One Year	779	210	281	195	686	-93

(a) Excluding Metropolitan.

Deaths of Children aged one year and under five years.

Deaths of children aged one year and under two years during the year numbered 92, representing a death rate of 3.5 per thousand children in that age group.

The chief causes of deaths were:—

Accidents	24
Broncho-pneumonia	17
Congenital malformations	8
Diarrhoea and Enteritis	5

Of the 24 deaths due to accidents, 6 were caused by burns and 6 by drowning.

Deaths of children aged two years and under five years during the year numbered 102, representing a death rate of 1.3 per thousand children in that age group.

The chief causes of deaths were:—

Accidents	29
Diphtheria	10
Congenital malformations	6
Broncho-pneumonia	5

Of the 29 deaths due to accidents, 8 were caused by motor accidents, 5 by drowning and 4 by burns.

THE YEAR'S WORK.

The number of Centres and Sub-centres throughout the State now totals 200, 45 in the metropolitan area and 155 in the country.

The total attendances numbered 382,227 as compared with 392,010 in the previous year,

The chief causes of the decrease in attendances are:—

- (1.) The Australian wide coal strike in July and August necessitated many Centres being closed for lack of transport.
- (2.) Exceptional wet weather and cyclonic conditions in January, February and March. In Townsville for the month of March there were six dry days. The Railway car itinerary was twice dislocated by floods. Unseasonal flood conditions were experienced in South-West Queensland in June. Flood conditions were also experienced in October, in many parts of the State.
- (3.) Epidemics of measles and whooping cough.

EXTENSIONS OF THE SERVICE.

Despite difficulties caused by staff shortage this Service continues to expand. Seven new Sub-centres have been opened, and approval granted for opening a further five when circumstances permit. The new Sub-centres which have been opened are—

Dulacca on 29th August, 1949, Jackson on 5th September, 1949, and Surat on 21st September, 1949, all of which are visited from Roma; Mulgeldie on 23rd August, 1949, which is visited from Gayndah; Harristown on 4th May, 1950, visited from Toowoomba; Darra on 4th November, 1949, visited from Herschell Street; and Murroona on 3rd April, 1950, which is visited from Bowen.

Approval has been given for the establishment of Sub-centres at Cloncurry, Calen, North Rockhampton, Cooktown, and Marian.

The Cairns Toddlers' Centre will commence on 14th July, 1950.

The value of Mothercraft Homes is well recognised by the Department of Health and Home Affairs and provision is being made to extend this service into country areas by the acquisition of properties at Ipswich, Rockhampton, and Townsville. The alterations and additions necessary for the conversion of these properties into Mothercraft Homes will be undertaken in the immediate future.

RAIL CAR.

The regular itinerary of the Rail Car now includes Winton, Cloncurry, Dajarra, Hughenden, Julia Creek, Kajibbi, and Richmond.

Mothers and children were attended at the following stations and sidings not included in the regular itinerary:—Stamford, Whitewood, Corfield, Nonda, Nelia, Olio, Quamby, Dobbyn, Gilliatt, Oorindi, Maxwellton, Alba, Watten, Malbon, Duchess, Marathon, Undina.

The installation of a battery-operated electric light system has added greatly to the comfort of the staff.

ST. PAUL'S TERRACE HOME, BRISBANE.

There was again an increase in the number of mothers and babies admitted into residence as against the previous year, despite the fact that the Home was closed for a short time from December to mid-January owing to staff shortage. More than the usual number of abnormalities and feeding difficulties were encountered. Cleft palate and hare lip babies have provided experience in the feeding of these cases for trainees. In addition there have been infants with congenital heart conditions, mongols, and some infants with pancreatic deficiency.

Premature babies of varying ages and weights have been cared for in the premature nursery. Two small premature infants brought by air from Mackay are now making good progress.

All babies in residence still have Salmonella tests carried out, and recently arrangements were made with the Deputy Director of the Department of Micro-biology and Pathology for full blood examinations to be done for each infant. Mothers in residence have had Schick tests performed to determine the presence or absence of immunity to diphtheria. The number of these mothers is too small for any comment to be made at this stage.

The external portion of the Home and the roof were painted early in the year. Some necessary repairs to the roofing were also effected. The painting of the interior of the milk room is a great improvement. A trainees' change room situated in the basement has become a change room for the domestic staff. This was an urgent need and the room is ideal for the purpose. The trainees now change in the dormitory at the end of the verandah in the wing, and find the larger room more spacious and congenial.

In December, Miss Butterworth retired after five and a-half years in charge of the Home,

during which time she contributed much to its organisation. Her efforts had been untiring in an attempt to make the training better and give some amenities to the girls in training.

The staff position has been difficult and without the temporary staff difficulty would have been experienced in continuing the service given.

ST. PAUL'S TERRACE TRAINING SCHOOL.

The year 1949-50 marked the inauguration of the longer period of training for nurses. This training, six months instead of four, was commenced in February, 1950. It is of undoubted value, allowing extra time for lectures and practical procedures and a better understanding of the work. In November, thirty-two candidates were presented for examination and four failed to satisfy the examiners. In June, 1950, thirty trainee nurses were candidates for examination and all were successful.

In November, certificates were presented to successful candidates by Hon. A. Jones, M.L.A., Minister for Health and Home Affairs.

CLAYFIELD HOME, BRISBANE.

A number of infants with congenital abnormalities have been admitted during the year, among these have been cleft palate and hare lip cases, congenital heart conditions, congenital defects of various kinds, and pancreatic deficiencies. One is struck by the present attitude of so many people towards breast feeding, even those whose work is among mothers and young babies. It is regrettable that so many early weanings are advised for reasons which are apparently trifling and which would suggest lack of knowledge of the value of breast feeding.

Towards the end of the year it was decided to provide a mid-day meal for girls in training. To do this a room, used for a mother in residence, had to be converted into the diet kitchen. This reduced our resident mothers from six to five and consequently the number of mothers admitted during the year was reduced.

The admission of difficult toddlers continues, the difficulty usually being the result of mismanagement, often brought about by poor housing facilities. Not the least of the difficulty is the over anxiety of the parents, and much patience is necessary in reassuring them.

The present milk room in which the sterilising is also carried on, is far from an ideal arrangement, and when the necessary additions are made, this position will be rectified.

At the end of May last year, Miss Nixon left for New Zealand and returned early in August. One month was spent doing post-graduate work in Dunedin and the month of July was spent mostly in visiting Mothercraft Homes throughout the Dominion. In December, Miss Nixon was transferred to the St. Paul's Terrace Home. She was Matron of the Clayfield Home from its inception in 1943, and success of the Home is due in no small measure to her untiring efforts.

Routing Blood Counts of infants and Schick tests on mothers have recently been inaugurated at the Home.

CLAYFIELD TRAINING SCHOOL, BRISBANE.

The girls in training have on the whole shown keen interest in their work fully realising their responsibilities. Most of them go on

to train as general nurses and are being sought by matrons of several training schools. The training of these untrained girls remains a difficult and exacting work requiring much patience and understanding. The girls are in the impressionable years and what is taught now is likely to mould the life of the student in regard to work and behaviour. The value of the lectures given by the educational officer at the various State schools cannot be over estimated in stimulating their interest in this branch of nursing. Largely as a result of these lectures a waiting list is held at the Administrative Office, of girls seeking training.

In December, 1949, nineteen girls presented themselves for examination and all gained certificates. In May, 1950, fifteen candidates sat for the examination and all fifteen were successful. Great credit must go, not only to the girls themselves, but also to their lecturers and tutors for this splendid result. Graduation ceremonies were held in December and in June where the certificates were presented by the Minister for Health and Home Affairs.

MATERNAL AND CHILD WELFARE HOME, TOOWOOMBA.

This Home is now well established, and is catering well for the mothercraft needs of the Darling Downs and South-Western Queensland.

About two-thirds of the infants admitted are artificially fed. Many of them were given complementary feedings during their first weeks and were quickly weaned, later becoming difficult feeding cases.

Infants admitted during the year included several premature babies, five sets of twins for management of breast feeding, and artificially fed premature twins were transferred from the Warwick Hospital. There were two cases of Pink Disease, several of advanced malnutrition and a number of vomiting babies, including two difficult cases of pylorospasm who responded well to treatment.

Matron E. Rogers completed duties in February, 1950, prior to her marriage. A farewell function was arranged by the staff in appreciation of her services.

Minor repairs were carried out by the Department of Public Works and the new laundry which is nearing completion will be a great boon, particularly in wet weather.

TOOWOOMBA HOME TRAINING SCHOOL.

Two examinations for trainees were held during the year. Seven trainees were successful in December and five in June. Graduation ceremonies were held in these months and certificates were presented by Dr. T. H. R. Mathewson and Mr. L. A. Wood, M.L.A.

It is pleasing to be able to record that seven of the graduates are now training in general nursing at the Toowoomba General Hospital, and reports of their progress have been most satisfactory.

The number of girls applying for training has been disappointing, and it is to be hoped that the vocational talks given by the Matron at various schools in November and the appeal made by the Director in June will result in more applications being received.

Lectures were given by Drs. G. V. Hickey, Senior and Junior, and by Miss A. Clark. Thanks are due to Matron Fountain and Miss Butterworth who assisted in the examinations.

MATERNAL AND CHILD WELFARE HOME, SANDGATE.

During the year 510 children from 1 to 12 years old were admitted from 194 families, 271 boys and 239 girls.

It is again noted that a number of the children under 3 years of age were still being bottle fed and were in the habit of sucking a dummy. They were weaned from the bottle and taught to drink from a cup.

The year just ended has been the worst year for sickness among the children. In November two children were admitted with severe coughs which proved to be whooping cough, and they were admitted to hospital. Fortunately none of the other children in residence at the time developed whooping cough.

In February an outbreak of Sonne dysentery occurred, 27 children being affected. The Home was closed, and rectal swabs of the children were examined weekly by Dr. Singer of the Medical Research Institute. After four weeks all the swabs were negative, the children in residence were sent home, and children were again admitted. Swabs were also taken from all the members of the staff, and a number of these were positive.

In May an outbreak of measles occurred, 17 children being sent to hospital. At the end of May one child developed mumps, and the Home was again closed, to be re-opened on 21st June.

In January the Home was flooded by tidal water, the water in the grounds being up to 2 feet. This flooding damaged the motors of the refrigerators and washing machines which had just previously been installed. The garden also suffered as all plants were destroyed by the salt water. During the month of March the grounds were again flooded, this time by rain water.

At Christmas time the children were entertained with a Christmas tree, toys being supplied by the Department of Health and Home Affairs, the Courier-Mail Christmas Toy Fund, and the Buffalo Lodge of Sandgate.

In the Babies Home 34 babies were admitted during the year.

A mild outbreak of varicella (chicken pox) occurred in July, and the Home was closed for a time. Most babies of over eight months when admitted were not having any solids in their diet and educational feeding of these infants is difficult. Some of the infants were affected by the outbreak of Sonne dysentery, and one was infected with Salmonella B organism.

ANTE-NATAL CLINICS.

Attendances at the three main Ante-Natal Clinics, Woolloongabba, Valley and Caboolture have been satisfactory throughout the year. The numbers attending these Clinics are unlikely to increase for several reasons—

- (1) Many mothers are now in a financial position enabling them to attend private medical practitioners.

- (2) They prefer the continuity of supervision and treatment throughout pregnancy, the confinement and the puerperium thus provided and, indeed, this is the ideal to be aimed at.
- (3) This continuity of supervision is also available to those attending the Ante-natal Clinics at the Brisbane Women's Hospital.

Mothers still do not seem to realise the importance of a post-natal examination and a very small percentage attend for this purpose. However, by the courtesy of the Superintendent of the Brisbane Women's Hospital, all Clinic mothers are visited in hospital after the birth of their babies and this provides a useful follow-up. During this visit each mother is advised to attend her Clinic for post-natal examination.

The lack of an adequate and well balanced dietary intake is probably the main problem met with at Ante-Natal Clinics. There are still far too many expectant mothers who compromise their own and their baby's health through subsisting on a sub-standard diet. As would be expected, the incidence of maternal morbidity, especially anaemia and toxæmia is very markedly greater in those mothers taking an inadequate diet compared to those on an adequate one.

The ill-effects of a poor maternal diet on the foetus and newborn baby are well known and further defects due to inadequate nutrition are being increasingly recognized. In the present series of cases the diets of twenty-seven mothers were assessed as satisfactory and twenty-eight unsatisfactory. There were no infant deaths in the first group but three stillbirths occurred in the second group. Infant deaths (one in each group) due to the presence of Rh antibodies in the maternal blood are not included. It would of course be unwise to draw any definite conclusions from such a small series of cases but these figures do tend to confirm already well established facts.

Further, British authorities believe that the chief factor influencing spontaneous premature birth is the level of nutrition in the mother. There is other evidence in support of this and thus yet another reason emerges for appreciating the importance of recent work on the nutritional requirements of pregnancy. And again a good maternal diet has an all important influence on the success of breast feeding.

As much personal education as possible is undertaken at the Ante-Natal Clinics and this is supplemented by various publications and pamphlets, but it is felt that in too many cases our efforts are too late to have the desired effect. To be fully effective education for parenthood and, particularly for motherhood, should begin in the home and be continued through home, school, and adult life.

Expectant mothers who are taking unsatisfactory diets or who suffer from anaemia and other deficiency states receive free mineral and vitamin supplements from the Clinics.

Emphasis is also placed on the education and preparation of expectant mothers for breast feeding their babies.

Attendances for the year ending 30th June, 1950, were as follows:—

Fortitude Valley	489
Woolloongabba	530
Caboolture	147
Herschell Street	32
Nundah	12
West End	32
Talks to Mothers	71
Total attendances	1,313

Ante-natal Clinics and individual Talks to Mothers continue at the Metropolitan Centres and Caboolture with increased attendances.

CORRESPONDENCE SERVICE FOR EXPECTANT MOTHERS.

There has been a marked increase in Circulars and Serial Letters sent through the Correspondence Section to country expectant mothers. This Service is very much appreciated by the letters received asking for further advice or a letter of thanks (often written while in hospital) telling of baby's birth.

The revised Ante-natal and Post-natal Exercise Books have been received during the last half-year and a copy is sent to each Correspondence Expectant Mother. At the Metropolitan Centres an Expectant Mother's Book and an Ante-natal and Post-natal Exercise Book are given on the first visit.

Circular letters forwarded to expectant mothers	5,176
Response to circular letters	1,425
Circular letters forwarded to expectant mothers (other than above) re "Expectant Mother" book	1,682
Serial letters to expectant mothers	8,180
Special letters of advice sent on request	137
Copies of "The Expectant Mother" sent on request	1,280
Copies of baby patterns sent on request	114
Copies of other patterns sent on request	36
Copies of special exercises sent on request	263

DIRECTOR'S CONSULTANT CENTRE.

Sisters in Metropolitan and Country Centres, also Private Medical Practitioners referred to the Director a number of infants and toddlers whose feeding or management proved difficult.

Children for admission to Maternal and Child Welfare Home and Red Cross Home, Margate, were examined and throat swabs taken.

Throat swabs taken from children were—1,048 negative, 23 positive, 1 virulence test positive.

Attendances for the year ending 30th June, 1950, were as follows:—

Number of children examined for admission to Sandgate Home	680
Number of children examined for admission to Margate Red Cross Home	391
Attendances at Director's Consultant Centre for advice	1,591
Total number of children examined or advised at Centres	2,662

PRE-SCHOOL HEALTH CENTRES.

At the fifteen centres and seven kindergartens, children from the age of 1 to 5 years were examined by the Director, Deputy Director and Dr. Mathewson.

The total number of examinations made during the year numbered 3,967 of which 1,786 were first examinations and 2,181 were subsequent examinations.

Examinations during the previous year numbered 1,531 first examinations, and 1,808 subsequent examinations, making a total of 3,339.

Of the new centres opened last year, Stone's Corner, Bulimba, Hamilton and Kedron have been disappointing, Stone's Corner and Bulimba are most unattractive centres, Bulimba Centre is very small and this makes measuring and examining children very difficult. During the recent flood all books and cards at Stone's Corner Centre were destroyed; also after one or two visits mothers ask to be transferred to Woolloongabba Centre as being more convenient to them.

It was noticed that children who had the benefit of kindergarten training were much more amenable to examination than those who had only home environment.

All Toddler's Clinics were closed during the Christmas vacation. The survey on Knock Knees is not completed but is progressing slowly but satisfactorily.

The following tables show the chief defects found in children examined during the year:—

Enlarged tonsils	676
Infected tonsils	66
Defective teeth	322
Adenoids	115
Knock knees—	
1½ inches and under	319
Over 1½ inches	349
Flat feet	668
Bow legs	539
Intoeing	160
Talipes	40
Worm infestation	2
Umbilical hernia	24
Congenital cardiac disease	26
Bronchitis	19
Squint	8
Asthma	7
Inguinal hernia	6
Hydrocele	5
Cretinism	2
Mental retardation	2
Mongolism	2
Rectal prolapse	1
Laryngeal stridor	1
Geographical tongue	1
Pink disease	1
Deafness	1
Stammering	1

CORRESPONDENCE SECTION.

Birth Notifications received from Centres have slightly increased, more especially No. 2 Circulars—those who are unable to attend Centres. Letters of advice re feeding and management have increased somewhat, especially in New Guinea and various isolated Islands and Mission Stations around the Northern part of Queensland.

Supplies of Queensland Mother's Books have been forwarded to various hospitals, i.e., Moresby, Lae, Wau, and Thursday Island as well as the far west. Birthday Cards are still forwarded to babes at 1 year and are greatly appreciated by the correspondence mothers. In addition to these Birthday Cards 6 monthly greeting cards are sent each month to mothers who are unable to attend the Centres, advising them to have their babes immunised against Diphtheria as soon as possible.

Since the last Annual Report arrangements have been made through the Registrar-General to have monthly lists of death notices forwarded for the whole of Queensland. The metropolitan

list is sent weekly. This is a great benefit as it prevents, as far as humanly possible, the circularisation of a mother concerning an infant already deceased.

Letters in response to newspaper articles are still received and advice given if necessary.

Shopping for country mothers is still being done. Supplies of essentials are forwarded to them C.O.D., and arrangements are made for the hiring of scales.

Number of birth notifications received..	3,728
Number of circular letters posted—	
(1) Within reach of Centre	1,415
(2) Not within reach of Centre	2,313
Number of follow-up circular letters posted	2,226
Visits to Centres in response to Circular Letter No. 1	677
Letters to Correspondence Section in response to Circular Letter No. 2	625
Letters of advice re feeding and management sent on request	1,664
Number of "Care of Mother and Child" books sent on request	783
Number of birthday cards posted	221
Number of six-month greeting cards sent advising diphtheria immunisation..	976

SOCIAL WELFARE SERVICE.

Mothers, who for various reasons are unable to attend the Centres, find this service a very valuable one. Many mothers, in their first weeks home from hospital, find that they are not strong enough to take their infant to the Centres, and in such cases they are visited in their homes until such time as they feel well enough to attend the Centre.

Although the housing problem has eased somewhat, there are still a large number in housing camps and rooms or living with relatives, and the Sister does what she can to overcome the many problem associated with the environment of the family.

A large number of premature infants are artificially fed on discharge from hospital due to the fact that the mother is discharged prior to the infant, as in most cases, she has a large family to care for, and cannot stay in hospital with her infant. Many mothers express their breast milk and take it to hospital daily. This constant journey to and from hospital plus her family responsibilities has a marked adverse effect on lactation and by the time the premature infant is discharged lactation has practically ceased.

Every assistance and encouragement is given to mothers who are partly breast feeding their infants, to increase lactation. The co-operation of the mother is sought by explaining to her the advantages of breast feeding, and where this co-operation is given, many outstanding results are obtained.

All the mothers visited, express appreciation of the service, and look forward to the sister's regular visit.

Number of newborns visited in public hospitals	7,943
Number of newborns visited in private hospitals	995
Number of newborns visited at home	297
Number of cases visited for test feeds and advice	1,485
Number of test feeds—	
Cases	101
Feeds	134

LECTURE DEMONSTRATIONS TO SCHOOL GIRLS.

The courses of Mothercraft Lessons in the Schools are much the same as in previous years—thirteen metropolitan, primary and secondary schools and one Ipswich school were visited during the year. The larger Domestic Science Schools which are attended by pupils from the smaller schools in the district were visited daily during the course and at Woolloowin School two classes were held daily.

The interest of the girls in the Mothercraft teaching is shown by their attention during the lessons and by the work and time that is spent in compiling their Mothercraft Scrap Books. From the classes in secondary schools enquiries are frequently made by the girls regarding the Child Welfare Training at Clayfield Home and a number have eventually undertaken the training.

On request by the Plunket Society, New Zealand, a Mothercraft Scrap Book compiled by a Kedron School girl was sent on loan. A letter of congratulation from the Plunket Society was sent to the Service and to the school girl.

It was with regret that a suitable time was not available to visit Cannon Hill School this year, especially as the Head Teacher was most co-operative and the pupils very keen.

The usual functions toward the end of the school year were arranged when a senior member of the Maternal and Child Welfare Service visited the schools, gave a short address and presented the certificates and prizes to the successful pupils.

Our thanks are again due to Principals, Headmasters and teachers of the various schools who by their co-operation and interest make the Mothercraft Lessons possible and greatly add to its success.

Eight hundred and three children out of a total attendance of 928, sat for the examination, and of this number 726 gained certificates.

KINDERGARTEN AND KINDERCRAFT TRAINEES.

Six lectures on Child Health and Child Development were given by Dr. T. H. R. Mathewson, as well as one demonstration of the different stages of development.

Lectures were also given to the trainees by the Matron of St. Paul's Terrace Home on "The Nutritional Needs of the Mother during Pregnancy and Lactation," "The Nutritional Needs of the Infant to One Year," "The Premature Baby," and "The Psychological Reaction of a Child to Handling."

MEDICAL STUDENTS.

During the year Dr. Mathewson gave four lectures to each of three groups of fifth year medical students. These lectures dealt with "Child Development," "Breast or Natural Feeding," "Difficulties associated with Breast Feeding which may lead to Premature Weaning," and "Artificial Feeding."

Demonstrations on normal healthy babies were given at the Brisbane Women's Hospital and also babies and older children attending the Maternal and Child Welfare Centre, Fortitude Valley.

The Students visited St. Paul's Terrace Home where they were given a demonstration on infant feeding as well as on the infants in residence.

During the course of these lectures and demonstrations, the importance of a knowledge of child welfare and of the happy child was emphasised, and judged by their attendances the students appeared interested in this aspect of their training.

NEWSPAPER ARTICLES.

During the year a copy of an article on some aspect of Maternal and Child Welfare work has been sent each month for publication to sixty-one newspapers in the State. The titles of the articles were:—"Bed-Wetting," "Sleep and the Baby," "Problem Children," "Behaviour Problems in Young Children," "Summer Sense," "Reasons Why You Should Breast Feed Your Baby," "Ante-natal Preparation for Breast Feeding," "The Technique of Breast Feeding," "Difficulties in Breast Feeding," "Further Problems in Breast Fed Babies," "Hints on Weaning," "Feeding Our Children."

PUBLICATIONS OF THE SERVICE.

"Problems of Prematurity" has already been mentioned under that heading. The revision of "Ante-natal and Post-natal Exercises" has been completed, the exercises being illustrated by photographs of models doing the actual exercises.

Requests for "The Expectant Mother" and "Care of Mother and Child" are being continuously received.

Three thousand copies of "Problems of Prematurity," ten thousand of "Ante-natal and Post-natal Exercises," nine thousand five hundred of "The Expectant Mother" and four thousand of "Care of Mother and Child" were published during the year.

STAFF.

The nursing staff position is still far from satisfactory. Though very few Centres and Sub-centres had to close for lack of relieving staff, and the total staff shows an increase of ten on the previous year, nevertheless the staff is not sufficient to bring this service up to the necessary requirements. The number of permanent staff is 48 and the number of temporary staff is 68. Both the permanent and temporary staff are doing good work in their service to the mothers, babies and children of Queensland in the many districts where this service is provided.

More staff is required not only in districts where the population is on the increase, but also to enable more new Centres to be opened.

It must be remembered that the staff to whom we are very grateful for doing good work especially in the country Centres, have not the social or home life, or comforts comparable with other nursing services of this State. The Maternal and Child Welfare nurse has a responsible position in the community; her duties of giving advice and watching mothers, babies and children up to school age, call for knowledge, observation, keenness and interest in her work so that her purpose of preventing ill health and sickness is fulfilled. She needs to be in good health, not overtired, alert and always ready to advise and help wherever necessary even if off duty. This standard that is so necessary cannot be maintained if existing conditions in some country Centres where no accommodation is provided is not remedied. The work is hard

during duty hours and every effort shall be made to provide comfort for the nurses when off duty.

A slight improvement to the staff position is the appointment of six new members to the permanent staff but unfortunately these six replaced four of the permanent members who resigned to be married and two other members who retired. These new appointees have to gain more experience as assistants in metropolitan and country centres before taking the more responsible positions as Sister in Charge of country centres. By this method we aim to maintain the high standard already set.

BABY CLINIC SOCIAL CLUB.

Ten meetings were held during the year, one of these being a Graduation Ceremony for the successful nurses at the Maternal and Child Welfare examination, one a River Trip, and three being our quarterly lecture meetings.

Miss Nixon gave a very interesting talk on "Conditions and Methods of Welfare Work in New Zealand" in September, Doctor K. B. Fraser presented his subject on "Abnormalities in Children" in March. In June films on "Digestion" were shown. All lectures were much appreciated.

Two parcels and annual subscription were sent to "Save the Children Fund" for the Club's sponsored child, Marion Saunders.

The Club members are grateful to Rev. A. Duff who showed a travel film at one of the socials.

Quarterly newsletters were posted to country members and some country members attended the monthly social while in Brisbane on leave.

Several indoor games were purchased for the use of members.

TABLE LXXXVIII.

VISITS TO NEWBORNS, SUBSEQUENT AND TOTAL VISITS.

Year	Visits to Newborns	Subsequent and Other Visits	Total Visits
1947-1948	22,875	2,916	25,791
1948-1949	22,912	2,396	25,308
1949-1950	23,658	2,705	26,363

TABLE LXXXIX.

ATTENDANCES AT CENTRES.
Number of New Cases seen at the Centres.

	1947-48	1948-49	1949-50
Infants—			
Under one year ..	17,091	18,083	17,719
One to two years ..	4,568	4,574	5,257
Over two years ..	2,113	2,234	2,600
Total ..	23,772	24,891	25,576
Expectant mothers ..	1,122	997	939
Total new cases	24,894	25,888	26,515

TABLE XC.

ATTENDANCES OF INFANTS AND CHILDREN AT MATERNAL AND CHILD WELFARE CENTRES AND SUB-CENTRES.
Metropolitan.

—	1947-48.	1948-49.	1949-50.
Fortitude Valley ..	28,412	24,381	22,561
Branches—			
Caboolture ..	792	910	562
Clayfield ..	2,775	2,186	1,718
Dayboro' ..	320	361	352
Enoggera ..	1,338	2,118	1,868
Hamilton ..	1,922	1,498	1,371
Hendra ..	1,591	1,612	1,357
Mitchelton (opened 2-12-49) ..	..	..	422
Newmarket-Grange	1,523	1,381	1,523
Windsor ..	2,515	2,846	2,353
	41,188	37,293	34,087
Herschell Street ..	19,650	18,356	15,639
Branches—			
Ashgrove ..	4,005	3,501	3,541
Auchenflower ..	887	752	165
Bardon ..	1,864	1,990	1,814
Corinda ..	2,437	2,936	3,096
Darra (opened 4-11-49) ..	..	..	359
Graceville ..	2,376	2,230	2,322
Indooroopilly ..	1,549	1,452	1,319
Kelvin Grove ..	1,991	1,988	1,569
Paddington ..	1,760	1,792	1,552
Rosalie ..	2,183	1,892	2,230
St. Lucia ..	619	503	520
Toowong ..	1,927	2,114	2,358
	41,248	39,506	36,484
Nundah ..	5,574	5,446	5,606
Branches—			
Cribb Island ..	283	251	310
Geebung ..	..	228	391
Kedron ..	3,382	3,142	3,249
Redcliffe ..	2,565	2,359	2,012
Sandgate ..	4,522	4,463	3,545
Zillmere ..	339	316	257
	16,665	16,205	15,370
West End ..	8,760	9,601	8,536
Branch—			
Beenleigh (Fr. Dec., 1949) ..	..	..	339
	8,760	9,601	8,875
Woolloongabba ..	24,180	20,275	19,050
Branches—			
Beenleigh (to Nov., 1949) ..	517	641	308
Bulimba ..	1,686	1,861	1,941
Camp Hill ..	1,701	1,884	2,190
Ekibin ..	876	970	1,038
Holland Park ..	1,631	2,156	2,226
Holland Park T. H. Establishment ..	1,045	951	822
Ipswich Road ..	2,130	2,460	2,402
Morningside ..	1,566	1,568	1,623
Rocklea ..	1,042	1,029	917
Salisbury ..	1,019	973	1,036
Stones Corner ..	992	638	708
Yeronga ..	1,358	1,551	1,893
	39,743	36,957	36,154
Wynnum ..	7,715	7,399	8,131
Branch—			
Cleveland ..	..	519	581
	7,715	7,918	8,712

Country.				Country—continued.			
	1947-48.	1948-49.	1949-50.		1947-48.	1948-49.	1949-50.
Atherton	2,022	1,913	2,085	Gayndah	903	702	1,269
Branches—				Branches—			
Herberton	440	333	312	Eidsvold	252	182	141
Malanda	527	646	816	Monto	1,383	969	1,150
Millaa Millaa ..	741	912	955	Mulgeldie (opened			
Ravenshoe	810	779	859	23-8-49)	659	..	154
Tarzali	..	37	27	Mundubbera ..	..	572	603
Yungaburra ..	183	324	293				
	4,723	4,944	5,347		3,187	2,425	3,317
Barcaldine	1,468	1,376	1,221	Gladstone	4,016	4,170	4,130
Branches—				Branches—			
Aramac	614	516	413	Calliope	239	262	204
Longreach	1,645	1,290	1,589	Miriam Vale ..	344	378	382
	3,727	3,182	3,223	Mt. Larcom ..	661	888	1,048
					5,260	5,698	5,764
Biloela	2,332	2,374	2,754	Goondiwindi ..	1,856	1,395	1,748
Branches—				Branches—			
Baralaba	533	419	178	Dirranbandi ..	294	259	369
Goovigen	210	306	150	Inglewood	618	614	671
Jambin	106	176	136	Texas	557	476	656
Moura	..	162	131	Yelarbon	363	444	424
Thangool	431	537	399				
Theodore	237	463	407		3,688	3,188	3,868
Wowan	415	659	431				
	4,264	5,096	4,586	Gympie	6,349	6,164	5,816
Bowen	2,775	2,401	3,022	Branches—			
Branches—				Cooran	281	243	274
Collinsville ..	1,096	1,448	1,375	Imbil	403	355	247
Murroona (Opened	..	..	246	Kandanga	79	140	209
3-5-50)	..	..	..	Pomona	416	467	279
Proserpine	1,414	1,374	1,346		7,528	7,369	6,825
	5,285	5,223	5,989				
Bundaberg	8,198	7,682	8,708	Ingham	..	1,479	2,149
Branch—				Branches—			
Gin Gin	238	322	341	Cardwell	..	207	319
	8,436	8,004	9,049	Halifax	..	548	707
					..	2,234	3,175
Cairns	8,708	8,997	9,354	Innisfail	4,509	5,304	5,370
Branches—				Branches—			
Edge Hill	1,039	987	955	Babinda	1,203	1,060	1,192
Edmonton	453	229	302	El Arish	87	140	247
Gordonvale	1,060	1,131	1,077	Mourilyan	219	227	180
Kuranda	93	222	135	Silkwood	261	328	209
Mossman	1,008	1,030	899	South Johnstone	339	256	171
	12,361	12,596	12,722	Tully	1,661	1,675	1,827
					8,279	8,990	9,196
Charleville	3,426	2,966	3,165	Ipswich	12,146	12,884	12,774
Branches—				Branches—			
Cunnamulla ..	755	780	893	Boonah	1,168	1,345	1,520
Quilpie	618	598	516	Esk	763	871	577
	4,799	4,344	4,574	Laidley	751	1,101	918
				Lowood	158	308	369
Charters Towers	3,561	3,095	3,706	Rosewood	800	1,466	1,477
				Somerset Dam ..	107	434	343
Dalby	4,447	4,603	3,554	Toogoolawah ..	849	1,141	792
Branches—					16,742	19,550	18,770
Chinchilla	1,984	1,938	1,836	Kingaroy	3,414	3,316	2,916
Miles	671	834	727	Branches—			
	7,102	7,375	6,117	Kumbia	191	247	245
				Nanango	1,077	995	653
Emerald	1,234	1,540	1,432	Yarraman	224	440	252
Branches—					4,906	4,998	4,066
Alpha	122	137	94	Mackay	10,537	9,837	8,807
Blackall	1,030	1,089	746	Branches—			
Blair Athol ..	169	251	223	Finch Hatton ..	372	389	424
Capella	142	199	128	Kourmala	256	450	297
Clermont	1,002	830	584	North Mackay ..	1,255	1,488	1,758
Jericho	14	27	37	Sarira	974	876	1,074
Springsure	722	792	642		13,394	13,040	12,360
	4,435	4,865	3,886				

Country—continued.

—	1947-48.	1948-49.	1949-50.
Mareeba	3,843	3,949	3,252
Branches—			
Dimbulah	734	1,125	756
Mt. Mulligan ..	488	534	273
Yungaburra (to Oct., 1947) ..	104	..	..
	5,169	5,608	4,281
Maryborough ..	8,910	7,744	7,868
Branches—			
Biggenden	1,167	1,064	1,108
Childers	855	780	716
Howard	726	723	457
Pialba	870	731	714
	12,528	11,042	10,863
Mount Isa	..	1,199	2,317
Branch—			
Camooweal	..	16	107
	..	1,215	2,424
Murgon	1,450	1,368	1,619
Branches—			
Goomeri	737	789	706
Hivesville	61	105	115
Kilkivan	308	253	207
Proston	200	228	176
Wondai	1,209	1,225	934
	3,965	3,968	3,757
Nambour	4,922	4,774	4,631
Branches—			
Buderim	159	180	200
Caloundra	628	710	568
Cooroy	1,124	1,282	1,639
Eumundi	133	201	213
Landsborough ..	125	179	110
Maroochydore ..	567	449	591
Palmwoods	390	294	250
Yandina	205	290	305
	8,253	8,359	8,507
Railway Car—			
Winton	685	729	484
Cloncurry	483	597	324
Dajarra	116	84	45
Hughenden	1,039	992	956
Julia Creek	215	410	432
Kajabbi	36	29	20
Mt. Isa (to 10-1-49)	1,296	622	..
Richmond	374	421	277
	4,244	3,884	2,538

Country—continued.

—	1947-48.	1948-49.	1949-50.
Rockhampton ..	14,836	17,595	16,602
Branches—			
Mt. Morgan	1,710	1,911	1,995
Ogmore	366	445	245
St. Lawrence	195	361	300
Yeppoon	993	1,152	1,043
	18,100	21,464	20,185
Roma	2,939	2,603	2,462
Branches—			
Dulacca (opened 29-8-49)	..	..	127
Jackson (opened 5-9-49)	..	..	116
Mitchell	1,202	1,222	1,163
Surat (opened 21-9-49) ..	..	..	258
Wallumbilla	209	265	177
Yuleba	198	270	118
	4,548	4,360	4,421
Southport	4,757	3,819	3,835
Branches—			
Beaudesert	1,423	1,399	1,655
Burleigh Heads ..	467	473	581
Coolangatta	3,208	2,665	2,794
	9,855	8,356	8,865
Toowoomba	10,272	11,433	10,359
Branches—			
Clifton	379	342	326
Crows Nest	450	560	464
Forest Hill	146	157	107
Gatton	1,337	1,518	1,318
Harristown (opened 4-5-50)	..	..	58
Oakley	781	1,069	800
Pittsworth	802	834	904
	14,167	15,913	14,336
Townsville	14,485	13,462	13,167
Branches—			
Ayr	3,307	4,286	3,580
Giru	428	483	624
Home Hill	2,235	2,207	2,611
Ingham (to 15-8-48)	1,928	124	..
	23,384	20,562	19,982
Warwick	3,974	3,893	4,162
Branches—			
Allora	645	591	547
Killarney	507	509	346
Stanthorpe	2,410	2,378	2,368
	7,536	7,371	7,423

TABLE XCII.
TOTAL ATTENDANCES OF INFANTS AND CHILDREN AND
EXPECTANT MOTHERS

1947-48.	1948-49.	1949-50.
396,380	392,010	382,227

TABLE XCIII.
ANTE-NATAL CLINICS

Centre.	New Cases.	Attend- ances.	New Cases.	Attend- ances.	New Cases.	Attend- ances.
	1947-48.		1948-49.		1949-50.	
Fortitude Valley	111	618	72	519	65	489
Woolloongabba	111	664	92	480	79	530
Caboolture	27	162	19	104	24	147
Herschell Street	21	60	16	46	7	32
Nundah	2	7	3	15	3	12
West End	12	21	12	24	7	32
Redcliffe (closed December, 1947) ..	2	19	..	..	..	..
Wynnum (closed March, 1948) ..	..	1	..	..	..	..
	280	1,552	214	1,188	185	1,242

SCHOOL HEALTH SERVICES.

P. R. PATRICK, M.B., B.S. (Qld.), Chief Medical Officer.

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

E. O. MARKS, M.B., Ch.B., B.A.O. (Dubl.), Part-time Ophthalmic Officer.

The most notable event in School Health work during the year 1949-50 was the commissioning of Rail Dental Clinic No. 4.

This new Clinic, which contains the good points of its predecessors and also many improvements, was placed into commission during March, 1950, and takes to the children attending schools along the North-Western Line, the latest in dental service. Already the Clinic has serviced schools at Camooweal and Mount Isa.

In other sections of School Health Services, shortage of medical and nursing staff prevented any expansion, but the existing staff maintained a regular service to schools in both city and remote country areas.

STAFF.

Medical Section.—There were no applications for the position of Medical Officer at Brisbane and Townsville.

While the School Nurse plays an important role in screening the school population, no School Health Service can be considered complete without adequate medical staff.

The number of School Sisters at the end of the year on the staff was sixteen. This was a decrease of four compared with the number at the end of 1948-49. Three centres, Innisfail, Mackay and Maryborough, were without the services of a School Sister for several months, but two new appointments have been made, and these appointees will proceed to Innisfail and Mackay respectively in July, 1950, and it is hoped that Maryborough will be staffed in the near future as well.

Dental Section.—The dental staff remained the same in number, officers who resigned being replaced. The replacements included the Officer appointed to the new Rail Dental Clinic. As the number of dentists graduating increases, it is expected that further appointments to this section will be possible.

At the end of the year 1949-50, the staff consisted of—*Field Staff:* Chief Medical Officer, 1 part-time Medical Officer, 1 part-time Ophthalmic Officer, 1 senior sister and 15 school sisters, Chief Dental Inspector of Schools, 20 dental inspectors.

ROUTINE MEDICAL INSPECTIONS.

During the year, 62,649 children were examined by the nursing staff.

Over 43,000 of these examinations were performed outside the metropolitan area. In all, parents were notified of 4,460 defects. In the metropolitan area, where children found defective were examined by a School Medical Officer before notification, parents were notified in

663 cases, and subsequent medical attention was obtained in 632 cases, a pleasing percentage of 95.

In the country areas, some 3,700 children were found defective, of which 2,100 were taken for medical attention. The smaller proportion of children receiving treatment in the country is due, probably, to the distance from medical attention and unfamiliarity of some country parents with School Health work.

COMMUNICABLE DISEASES IN THE SCHOOLS.

An epidemic of morbilli (measles) which commenced in the latter months of 1949 but did not reach its peak till April and May, 1950, has caused the greatest absenteeism from communicable diseases during the past twelve months. The previous epidemic of 1947 was of such magnitude that during 1949, there were not a great many children at schools who were not immune. The epidemic was, therefore, of a simmering nature in 1949, but with the admission of new children at the beginning of 1950, the number of school children suffering from the disease greatly increased. In the early stages, many cases of rubella (German measles) occurred as well, and this fact somewhat complicated the matter of exclusion from school. Very few cases of rubella have occurred during 1950. Apart from a mild epidemic of mumps, and a slight increase in the number of diphtheria cases in school children, communicable diseases have not otherwise caused any concern during the year.

In the Diphtheria Immunisation Campaign of the Brisbane City Council, school sisters assisted in the immunisation of 902 children comprising 542 pre-school and 360 school children. In addition, 1,346 children were given booster injections during this part of the campaign.

From the reports of school sisters, percentage of children immunised against diphtheria was found to be as follows:—

Metropolitan—

Number of children on roll, 19,548.

Number immunised against diphtheria, 17,556, equivalent to 90 per cent.

Country—

Number of children on roll, 36,907.

Number immunised against diphtheria, 31,566, equivalent to 85 per cent.

A dissection of the notifiable diseases occurring during the year shows that amongst children of school age, there was no serious outbreak of notifiable diseases. There were 11 more cases of diphtheria in school children than in 1948-49, but the cases of scarlet fever and poliomyelitis were actually fewer than in the preceding year.

School sisters examined the class contacts of pupils suffering from notifiable diseases on 47 occasions, and examined 2,599 contacts. The diseases necessitating these visits were—

Scarlet Fever	34
Diphtheria	11
Poliomyelitis	1
Cerebro-Spinal Meningitis	1

SCHOOL BUILDINGS.

Any criticism of school buildings has surely been answered by the new Kelvin Grove School opened for instruction at the beginning of 1950. The excellent lighting and ventilation illustrates how well versed in school architecture are the present officers of the Public Works Department. While it is difficult sometimes to alter existing structures, it is hoped that present labour and materials position will permit many of the older schools being brought into line in this regard. When the results of research work into school furniture mentioned elsewhere in this report are completed and put into effect, new schools in Queensland will be excellently equipped as regards buildings and appointments.

HEALTH EDUCATION IN SCHOOLS.

Reports from school inspectors and teachers reveal that health education in schools is proceeding smoothly since the introduction of the handbook, "Subject: Health." The Queensland Health Education Council has decided to supplement the handbook with teaching charts, and the supervisory committee responsible for the publication, of which the Chief Medical Officer is a member, has been called together to consider this new teaching aid. Together, with the book, these charts should help the teacher to place health education in Queensland schools on the highest possible plane.

ANTHROPOMETRICAL SURVEY.

The survey being conducted by this Service in an endeavour to estimate the effect of climate on the growth of children is now almost complete. Figures from the North-Western Zone, including the heights and weights of children attending schools at Cloncurry, Mount Isa, and Hughenden, are the only ones now required before a report can be given. Although the final assessment cannot yet be made, a check of measurements to hand indicate that Queensland children are well up to standard with regard to stature and may even be taller and heavier than children of the same age living in Southern States.

PHYSICAL EDUCATION.

The work done by Physical Educationists plays an important role in a sound school health programme. Despite the fact that the Physical Education Branch and School Health Services come under separate departments, there has been very close liaison between them during the past year, to mutual benefit of both services, and the health of the school child. Several school camps were held during the year, and this Branch provided a School Sister at each. At a camp for student teachers, the Chief Medical Officer was invited to lecture on School Health and Health Education.

As a result of the combined efforts of both branches, great interest has been aroused in

school seating. This interest was manifest when the Director-General of Education, and some of his senior officers, together with an architect from the Public Works Department visited one of the newer Brisbane Schools, and discussed the problems at great length. Already, improvements have been made in seats and desks installed in the latest schools. It is intended to carry out some research work in school seating during the coming year, using a special measuring chair which the Physical Education Branch is having constructed.

During the year, physiotherapy students from the Queensland University have visited schools in the metropolitan area one half-day per week, and have studied the posture of school children under the guidance of the Chief Medical Officer, and demonstrators from the University. This has given these students the opportunity of studying the normal child in contradistinction to their work at the hospitals which is concerned mainly with abnormal children. In addition, it has stimulated an interest in posture in the schools, and as a result of these examinations, many children have received attention from orthopaedic surgeons and the physiotherapy departments at the public hospitals.

HOOKWORM CAMPAIGN.

Owing to the vacancy at Innisfail, the Hookworm Campaign was assisted by School Nurses at Cairns only. However, reports from the Microscopist in Charge show that the incidence of hookworm amongst white school children is almost negligible.

SPECIAL SCHOOLS.

The School for Blind and Deaf.—The number of blind children enrolled for tuition at the School for Blind and Deaf is still very low, being under 20. The causes of blindness in these children are mainly congenital and traumatic. It is several years since any child has been enrolled as a result of trachoma.

There has been no great increase in the number of deaf children enrolled—the number at 30th June, 1950, being 216. The greatest single cause of deafness in these children is still "maternal rubella," occurring during the 1938 and 1941 epidemics.

Children suspected of deafness during routine medical examinations are referred to the Commonwealth Acoustic Laboratory where audiometric testing is performed. In addition, hearing aids and maintenance of these aids have been supplied by this Laboratory in certain cases.

The Opportunity School and Grades.—It is noted with interest that an Officer of the Research and Guidance Branch of the Department of Public Instruction has been allotted the task of systematically studying the children enrolled at the various Opportunity Classes. It is hoped that, as a result, there will be some definite grading of these children. The teachers of these classes have, at present under their care, children who are uneducable. This prevents their spending their full time with those children who are able to benefit by this special education. Enquiries are received from time to time concerning a residential Opportunity School where children in the country might

receive this type of instruction. It is hoped that such a boarding establishment will be considered in the near future.

THE DENTAL SERVICES.

The year 1949-50 has shown a slight increase in the number of children treated by school dentists, the actual figure being 21,294. The most important event in the Dental Section was the placing into service of Rail Dental Clinic No. 4. Despite these improvements, there is still need for more school dentists and more clinics. The ideal district to be worked by a school dentist is one in which he can inspect all children at least once a year. At present in the best serviced district, the schools are visited once every two years. In some areas, schools have to wait up to four years for a service. In every district the schools are visited in regular sequence and the reason for such long periods between visits is due entirely to lack of staff. It is hoped that with the increase in dentists graduating, the staff position will improve. Experience has shown that the best school dental service is that done in the modern surgeries of Rail Clinics. While the dentists using portable equipment do excellent work with the facilities available, they often are handicapped by having to work with limited equipment, and in limited space in the small country schools. The solution lies in increasing the number of rail dental clinics.

VISITS TO SCHOOLS IN REMOTE AREAS.

At the beginning of 1949, official approval was given for the use of hired private transport by School Health Officers to visit schools away from public transport and where accommodation is unsuitable. Previously, the supply of transport to such schools had been a matter for the local school committees, and as a result, children at these schools were often unfortunately bypassed. Under the new scheme, it is now possible for every school child to be examined by the school dentist and the school nurse. The new system has naturally added more schools in each area serviced by the various officers and has increased the time between visits. This applies particularly to the dentists, and when more staff is appointed, areas will be lessened and the visits will be more frequent. Records show that during the year 1949-50, school nurses used hired transport to visit 218 schools and examined 5,682 children—an average of 25 pupils per school, many of them being one teacher schools.

In addition, Sisters at Toowoomba and Southport visited small out of the way schools using official cars.

School dentists hired private transport to visit 90 schools and treat 2,467 children at an average of 27 per school. Further children in remote areas including correspondence children have been treated dentally with the aid of seven official cars, four of which are attached to Rail Dental Clinics. During the year, 60 correspondence school children were attended to by school dentists, entailing 370 treatments. In this small but important section of the Dental Branch, helpful co-operation has been received from the Supervisor of the Primary Correspondence School in advising parents of the

whereabouts of dentists and passing on requests for treatment.

GATTON AGRICULTURAL COLLEGE.

The annual medical and dental visits were paid to the Gatton College. All students at the college were dentally inspected, and those needing treatment notified. All new students were immunised against typhoid (using alcoholised vaccine), and tetanus. The new students receiving these protective injections numbered 170, while 90 students were given booster doses.

STUDENT TEACHERS.

In the annual medical examination for admission to the Teachers' Training College, 157 students were examined. For the first time, this examination included Mantoux testing for tuberculosis, with radiological examination of positive reactors. This work was kindly done by the Director of Tuberculosis. While it has been found necessary to recommend further X-ray examination in 3 cases, no definite case of active tuberculosis was found amongst the students examined. Two students were rejected on other medical grounds.

THE WILSON OPHTHALMIC SCHOOL HOSTEL.

The daily average at Wilson Ophthalmic School Hostel for the year 1949-50 was 26. Most of the children treated were admitted as a result of Dr. Marks' tour at the end of 1948. There were no serious cases of trachoma, and as a result, the stay at the Hostel was shorter than in former years, and the discharge of cured children has reduced the present bed state to 10.

The mildness of disease and the shorter stay in the Hostel has resulted from the efforts of the Department to fight this disease.

TABLE XCIII.

TABLES OF FINDINGS—SCHOOL HEALTH SERVICES—1949-1950.

Number of visits paid to Schools on Medical Inspection by School Sisters—

Metropolitan	..	..	..	67
Country	..	..	..	633

Number of children examined by School Sisters—

Metropolitan	..	..	..	18,912
Country	..	..	..	43,737

Number of children whose parents were notified of child's defect—

Metropolitan	..	..	..	663
Country	..	..	..	3,797

Number of children known to have been treated by Medical Practitioners—

Metropolitan	..	..	..	632
Country	..	..	..	2,142

Number of homes visited by School Sisters—

Metropolitan	..	..	..	47
Country	..	..	..	400

Apparent physical defects discovered by
Metropolitan and Country School Sisters—

Defect.	Metropolitan.	Country.	Total.
Defective Vision ..	236	1,103	1,339
Strabismus ..	5	87	92
Other Eye Defects ..	6	102	108
Deafness ..	25	77	102
Ear Discharge ..	5	30	35
Nasal Defects ..	17	492	509
Tonsils ..	295	2,172	2,467
Scabies ..	30	84	114
Impetigo ..	113	321	434
Tinea ..	15	38	53
Pediculosis ..	550	732	1,282
Groin Swelling ..	23	99	122
Scrotum Swelling ..	17	38	55
Spinal Defects ..	23	97	120
Other Defects ..	80	489	569

Number of special cleanliness visits made by
School Sisters to Schools—

Metropolitan ..	71
Country ..	17

Number of children examined—cleanliness
visits by School Sisters—

Metropolitan ..	10,474
Country ..	1,673

Defects found on special cleanliness visits by
Metropolitan and Country School Sisters—

Defect.	Metropolitan.	Country.	Total.
Impetigo ..	69	2	71
Pediculosis ..	426	68	494
Ringworm ..	8	..	8
Chicken Pox ..	5	..	5
Scabies ..	4	..	4
Deafness ..	1	..	1
Tinea ..	1	..	1
Foot Defect ..	2	..	2
Knock Knee ..	1	..	1
Swelling in Scrotum ..	1	..	1
Other Defects ..	1	..	1
Tonsils ..	..	2	2

Number of cases of Diphtheria in School
Children—

Metropolitan ..	21
Country ..	32

Number of cases of Scarlet Fever in School
Children—

Metropolitan ..	48
Country ..	88

Number of cases of Poliomyelitis in School
Children—

Metropolitan ..	4
Country ..	5

Number of cases of Cerebro-Spinal Meningitis
in School Children—

Metropolitan ..	—
Country ..	1

Number of cases of Tetanus in School
Children—

Metropolitan ..	5
Country ..	4

Number of cases of Malaria in School
Children—

Metropolitan ..	2
Country ..	—

Number of cases of Tuberculosis in School
Children—

Metropolitan ..	1
Country ..	—

SCHOOL DENTAL SERVICE.

INSPECTION.

The subjoined table details the total findings revealed at the different inspections of the staff of dental personnel during the year—

TABLE XCIV.

Number of Children Examined.	Number Notified for Professional Attention.	Number of Children under Regular Dental Care.			Number with Sound Mouths.		Caries Teeth Saveable (Permanent).	Caries Teeth Unsaveable (Permanent).	Temporary Carious Teeth.	Permanent Teeth Lost or Extracted.	Six-year Molars Extracted.
		Clinic.	School Dental Officer.	Private Dentist.	Natural.	Operatively Restored.					
34,846	9,371	1,869	6,826	7,585	2,433	6,231	34,246	4,739	46,032	12,557	10,473

TABLE XCIV.—continued.

Permanent Teeth Filled.	Temporary Teeth Filled.	State of Mouth.			Use of Tooth Brush.			Percentage of Children with Dirty Mouths.	Total Number of Defective Permanent Teeth.	Average Number of Defective Permanent Teeth per Child.
		*A.	*B.	*C.	†A.	†B.	†C.			
45,494	10,220	10,861	20,130	3,855	11,848	17,886	5,112	11	38,985	1.1

State of Mouth—

- *A.—Good Standard of Mouth Health.
*B.—Fair Standard of Mouth Health.
*C.—Bad Standard of Mouth Health.

Use of Tooth Brush—

- †A.—With a full measure of effectiveness.
†B.—With a partial measure of effectiveness.
†C.—With no effectiveness.

CLINICAL PHASE OF SERVICE.

Tabulated hereunder are particulars of the total treatment performed through the application of the clinical activities associated with the Department's dental service for children, for the period under review, excluding the treatment performed in country areas throughout the State by Hospital Board Dental Clinics.

Number of Children Treated.	Number of Extractions Performed.	Number of Fillings Inserted.	Number of Other Treatments.
21,294	17,698	72,568	23,594

WILSON OPHTHALMIC HOSTEL.

Commencing with 41 children in the Hostel, only four fresh cases were admitted during the year while 35 were discharged to their homes,

leaving 10 remaining on 30th June. Of these 10 children the majority will very soon be fit for discharge.

One of the children admitted (and discharged) during the year was not really a case of trachoma but required treatment for a squint. Two of the children admitted came from Mt. Isa and were mild cases which improved rapidly so that they were fit to return to their parents who had shifted to Maryborough. The fourth admission was a child selected when inspecting the school at Bungunya in 1948.

Presumably there must still be, as in 1948, a small percentage of trachomatous children in the West, but the continued mildness of the disease is such that the parents do not seek treatment for the children in the Hostel.

SECTION OF MENTAL HYGIENE.

B. F. R. STAFFORD, M.B., B.S. (Melb.), Director of Mental Hygiene, and Medical Superintendent, Brisbane Mental Hospital, Goodna.

The central administration of the Mental Hygiene Service has been transferred to offices provided in Brisbane for the Director of Mental Hygiene and his staff. This is an implementation of what was envisaged in planning the modern re-organisation and development of the Mental Hygiene Service.

It is felt that the establishment of this central office, as well as having been necessitated by the growth of the Mental Hygiene Service, will tend for a closer liaison than is already existing with the public generally as well as with other Governmental and social services.

The establishment of the central office has also entailed the Director of Mental Hygiene being relieved of his duties as Medical Superintendent of the Brisbane Mental Hospital. It is felt the State will benefit thereby as a result of this officer being able to devote his administrative and professional capacity to a State wide survey of psychiatric medicine in the metropolitan and the several regional areas; and of uniform application throughout the State Psychiatric Clinics and Mental Hospitals of modern preventive and remedial treatments following the latest available research into the predisposing and exciting causes of mental sickness and the interaction of mind and body in association therewith.

The fullest advantage is taken along these lines, and the services of the medical officers and nursing staffs in the Mental Hygiene Service in association with the visiting consultant specialists during the past year resulted in an overall recovery rate of 53 per cent. of the number of patients admitted. This recovery rate is based on the total number of admissions, and the rate would be considerably increased if the mentally deficient and senile cases, which might be looked upon as irrecoverable, were excluded therefrom.

Owing to the somewhat abstract nature of mental sickness as opposed to the concrete symptoms of physical illness, it is not always readily apparent to the general public that the rehabilitation of emotional stresses are perhaps more beneficial than the recovery from physical illnesses, since the humanizing effect of the nervous stability is at least equally as comforting to the patient as recovery from physical illness and probably more comforting to the patient's friends and relatives.

Modern treatments have been continued, and in order to ensure the greatest lasting benefit the occupational and recreational therapies are arranged to progressively approach ordinary civilian standards as individual cases approach discharge.

The Psychiatric Clinics continue to function satisfactorily and public awareness of the benefits to be derived from these Clinics is evidenced by the fact that the demands upon their services are more than can be adequately met; and the staffs and appointments to the Clinics, are, of necessity, being increased.

The economic benefits to the State resulting from these treatments must be considerable in

that a great majority of patients seeking guidance and treatment there are maintained as efficient social units, whereas without such guidance and early treatment their illnesses may develop to such an extent as to necessitate hospitalization for a period. A further benefit in this direction should result to the State from the establishment of the Intermediate Hospital already planned for suburban Brisbane and the treatment therein of early and incipient cases. The regional Mental Hospitals would then undertake the treatment of the more acute cases of mental illness and those of longer duration.

The extra-mural activities comprise lectureships under the auspices of the University of Queensland for the Diploma of Psychological Medicine; the tuition of medical and psychology students from the University of Queensland; meetings of the Nurses' Registration Board; assistance at the Courts; the psychiatric and psychological examinations at the Prisons and medical referees for the Commonwealth Department of Health.

The shortage of female nursing staff has been somewhat relieved by the intake of a large number of migrants, but the shortage of trained female nursing staff still endures. A number of male nursing assistants are employed on the female sections of the hospitals, and they appear to have established themselves as essential in the performance of the less intimate and domestic ward duties, thus relieving the trained female staff for active psychiatric nursing.

The general health of the patients during the past year has been quite good, and no serious epidemic illnesses occurred.

In the cases of any sudden or untoward deaths which occur in the hospitals the Coroner is always advised. A number of coronial enquiries were held during the past year, but in no case was any negligent or suspicious circumstances found.

The standard of patients' food and clothing continues to be improved by close supervision, and kept at a reasonably high level.

Divine services are held at each of the hospitals for the various denominations, while in some cases patients are also conveyed by bus to services in the respective churches.

Numbers of visitors are welcomed to the hospitals, and at two larger hospitals canteens provide a very satisfactory service for the social comforts. The canteens are freely availed of by both patients, visitors and staff.

Various public-minded bodies also visit the hospitals for the entertainment of patients therein and the fullest appreciation is expressed of their kindness.

Recreations for patients have been provided by picture shows, concerts, dances, band entertainments and various forms of reading matter. Outdoor entertainment is provided by bus trips, field games and country walks. These appear to be equally enjoyable, with the older forms of entertainment, dances and picture shows, vying for popularity with the more recently instituted bus trips, Cricket, tennis

and football are also played on the recreation reserves and bus trips for patients are arranged to local football games and travelling shows.

The gardens and grounds of the various Mental Hospitals continue to be further improved in collaboration with the Superintendent of Institutional Gardens, with a desirable therapeutic benefit resulting from the beautification of the grounds. It is our aim that these grounds will be notable for their botanical and scenic excellence.

The Architectural and Construction Branch of the Public Works Department have undertaken various works during the past year in improving the facilities for the accommodation and treatment of patients, and the construction work on the Charters Towers Mental Hospital is proceeding apace.

An abundance of fresh green vegetables continues to be produced at the several market gardens at each hospital, and the tested dairy herds provide a regular supply of milk.

We have had the pleasure of visits from Professor Alexander Kennedy, Professor of Psychiatry, University of Durham, England, in October, 1949; Dame Catherine Watt, Nursing Advisor to the Ministry of Health, England,

in February, 1950, and Dr. Daniel Blain, Executive Officer of the American Psychiatric Association.

All three evinced keen interest in the organisation of the State's Mental Hygiene Service, and it was refreshing to avail oneself of the opportunity for discussing psychiatric and nursing problems with experts from overseas.

The construction of a new Mental Hospital at Charters Towers to serve the northern regional area of the State is now proceeding, and the progress that has been made is set out hereafter. Preliminary work in connection with the proposed establishment of an Intermediate Hospital in suburban Brisbane is progressing. Proposals to construct a home for the segregate accommodation and treatment of senile cases has advanced to the extent of procuring a very suitable site, and already considerable data has been correlated to ensure efficient planning. These three projects will, without doubt, not only supply an urgent need but will place this State in the forefront of Mental Hygiene facilities.

A statistical table showing the movement of patients at the three Mental Hospitals is shown hereunder:—

TABLE XCV.
QUEENSLAND MENTAL HOSPITALS.
ADMISSIONS, RE-ADMISSIONS, DISCHARGES AND DEATHS, DURING THE YEAR ENDED 30TH JUNE, 1950.

				Males.	Females.	Total.
On the books of the hospitals on 1st July, 1949				2,060	1,896	3,956
	M.	F.	T.			
Admitted for the first time	355	318	673			
Re-admitted	77	94	171			
				432	412	844
Total under care during the year				2,492	2,308	4,800
Discharged—						
Recovered	152	174	326			
Section 49	32	57	89			
Relieved	27	21	48			
Not improved	2	6	8			
Voluntarily left	24	10	34			
Died	143	111	254			
				380	379	759
Total discharged and died						
Remaining on books of hospitals on 30th June, 1950				2,112	1,929	4,041
Average number daily resident				2,015	1,834	3,849
Number on leave of absence on 30th June, 1950				60	76	136
Proportion of mentally sick to each 1,000 of population as at 31st December, 1949				3.53	3.41	3.48
Proportion of admissions per 10,000 of population for year ended 31st December, 1949				7.27	7.28	7.28

TABLE XCVI.
STATEMENT SHOWING EXPENDITURE BY THE DEPARTMENT OF PUBLIC WORKS AT MENTAL HOSPITALS
AND THE EPILEPTIC HOME DURING THE FINANCIAL YEAR ENDED 30TH JUNE, 1950.

Building.	Expenditure.		
	Revenue.	Loan.	Total.
Mental Hospitals—	£ s. d.	£ s. d.	£ s. d.
Goodna (including expenditure at the Repatriation Hospital)	689 2 2	2,819 9 7	3,508 11 9
Ipswich	197 16 4	6,587 19 9	6,785 16 1
Toowoomba	938 6 3	1,078 15 4	2,017 1 7
Charters Towers	0 17 0	18,499 17 10	18,500 14 10
Toowoomba Epileptic Home	868 8 2	3,348 10 1	4,216 18 3
	£2,694 9 11	£32,334 12 7	£35,029 2 6

DETAILS OF EXPENDITURE ON MAJOR WORKS.

Details.	Expenditure. 1949-50.		
	£	s.	d.
Goodna Mental Hospital	Supply and erection of rectifier and supply of power	1,000	0 0
	Construction of dam	1,626	12 11
Ipswich Mental Hospital	Erection of buildings for Occupational Therapy for males and females ..	4,600	10 5
	Provision of laundries, foul linen rooms, &c. Female wards 1, 2 and 3 ..	1,272	7 4
Charters Towers Mental Hospital ..	Construction of internal roadway system ..	6,194	0 11
	Erection of Farm Bailiff's residence ..	2,295	10 6
	Erection of male and female admission wards	6,525	16 0
	Fencing site	1,270	17 6
Toowoomba Epileptic Home	Enclosing verandahs, &c.	3,579	2 4

BRISBANE PSYCHIATRIC CLINIC.

J. C. WINSHIP, M.A., Psychologist.

Major changes within the Clinic this year have concerned staff appointments. Miss C. Smiles, Welfare Officer, who left to be married, was a foundation member of the Clinic and helped to see it through its early, more difficult, days.

The appointment in August of a clerk-typist considerably lightened the load on the psychologist who, up to that time, had borne the brunt of the clerical work. Further relief was afforded in December by the attachment to the section of an assistant psychologist from within the service, and again in March by the appointment of another assistant.

Though the emphasis in the beginning has been, and must continue to be for some time yet, on training and gaining of experience, their help has already enabled some expansion of the psychology section's activities. For example, a first visit that may be a forerunner to regular visits to various hospitals was made in June to Psychiatric Wards, Townsville and Cairns Hospitals, by the psychologist; weekly visits are made to Brisbane Mental Hospital; arrangements are in hand for the psychological examination of all children in the Ipswich Mental Hospital.

For the time being this seems a more economical use of the psychologists—it is certainly sounder practice than the appointing of inexperienced personnel to full-time jobs, where they are virtually without help or guidance. Sooner or later full-time appointments to the larger hospitals—Brisbane, Townsville, Toowoomba, &c.—will need to be considered.

Up to the present moment the position of junior speech therapist has not been filled though the need is as pressing as ever. The position is to be advertised in the near future. The wisdom of appointing a *qualified* person will be fully appreciated if one notes the types of cases that the speech therapist has been able to handle with marked success—cases such as aphasias or those who have had laryngectomy operations. Though the numbers of these patients are relatively small, it is work that has not been attempted previously in Queensland.

The appointment of a trained social worker completes what is recognised elsewhere as the

psychiatric team—psychiatrist, clinical psychologist, and social worker. This is to the best of knowledge, the first time in Brisbane that such a team has been formed. It puts the Clinic in the forefront of accepted psychiatric practice and procedure.

The growth of the Clinic is not without its disadvantages. At one time it could be said that every patient was known to each of the staff. Of necessity one can know now only those patients with whom one is directly concerned. This suggests that the careful co-ordination of one section's work with that of the others is now a necessity.

One further appointment should be mentioned—that of consultant physician who, in the main, has examined those children for whom it was considered a psychiatric consultation was not necessary. This has not only relieved the psychiatric staff of doing what were virtually physical examinations only—it has helped to focus physical disabilities, which in children can be a definite contributing factor to apparent psychological difficulties in the form of misbehaviour, &c.

The services of the E.N.T. specialist have, as in previous years, been freely availed of on his monthly visits, more particularly with respect to those patients under speech therapy treatment.

Though the ranks of the medical officers doing psychiatric work have been sadly depleted at times, the position for some months now has been most satisfactory, with the regular attendance part-time of four doctors from Brisbane Mental Hospital and one doctor who is in private practice, in addition to the Director of Mental Hygiene.

The growth of the Clinic is again reflected in the increased number of *new* patients, being 462 as against 371 in the year 1948-49. It might be pointed out, as in previous reports, that although the figures as shown in the tables are mutually exclusive, any one patient may be seen by psychiatrist, psychologist, speech therapist, or, perhaps, consultant physician, psychologist, and speech therapist, and &c.

TABLE XCVII.
MONTHLY SUMMARY, JULY, 1949—JUNE, 1950.

	0-4.		5-9.		10-14.		15-19.		20-29.		30-39.		40-49.		50-59.		60 & over.		Total.		Total.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Depression							1		1		3	1	6		2		1		1	14	15
Depression Involuntional												2	1	1					3	1	4
Schizophrenia							2	1	7	1	3	7		2	1				13	11	24
Paraphrenia													1	2		2		3	1	7	8
Anxiety and Depression							1		3	1	1	2	2	4		1		2	7	10	17
Anxiety					1		2		4	2		6	1	1		1	2		10	10	20
Hysteria							1	1	2	1	5	1			1			3	9	12	
Obsession Compulsive								1			1							1	1	2	
Schizoid Personality					1	3	3	8	1	2	1		1					13	7	20	
Chronic Alcohol													1					1		1	
Epilepsy							1	1		1	2							2	3	5	
Senility																					
Various organic								1						1				2		2	
Normal			1		1						1						1		4		4
																			61	73	134
Backward	2	2	4	1	2	1		6	1		1								10	10	20
Borderline	1		1	1	2														4	1	5
																			14	11	25
Social Delinquency					2	1	2	1											4	2	6
Sexual Delinquency									3		2		1						6		6
Behaviour Problems	5		14	4	22	8	1	2											42	14	56
Spastic			4	2	1	2	3			2									8	6	14
																			60	22	82
Diagnostic Testing			3		6	2	10	7	23	25	19	16	8	1	4	1		2	73	54	127
Vocational Guidance																					
Educational Backwardness			1	1	9	1		1											10	3	13
																			83	57	140
Stammering	2	2	3	1	9	2	4		1	1		1							19	7	26
Dyslalia	1	2	9	1	2	1			1	1									13	5	18
Cleft Palate			1	1	1			1											2	2	4
Aphasia				1															1		1
Dysphasia																					
Dysarthria																					
Idioglossia	1			1															1	1	2
Hyperhinophonia						1	1												1	1	2
Audimutitas	2	2	1	1	1														4	3	7
Dysgraphia																					
Laryngectomy													2		1		1	1	4	1	5
Deafness	1	1		5	2														3	6	9
																			48	26	74

Grand Total 455

On Speech Therapy waiting list 80

Patients seen by Ear, Nose and Throat Specialist 25

Patients seen by Physician consultant 65

From—	Psychiatry.	Psychology.	Speech-Therapy.
ex Brisbane Mental Hospital	28		
Brisbane General Hospital	1	3	2
Juvenile Employment Bureau		2	
Justice Department	6		
Commonwealth Departments	10	23	10
Red Cross	1		
Medical Practitioners	16	13	25
Self	58	36	12
Other sources	14	50	25
Spastic League		15	
Private Psychiatrists		33	
Hospital Work		72	
	134	247	74

BRISBANE MENTAL HOSPITAL.

H. R. G. BARRETT, M.B., M.S. (Melb.), Deputy Medical Superintendent.

J. A. HEDE, M.B., M.S. (Melb.)	} Medical Officers.
K. J. MEAGHER, M.B., B.S. (Melb.)	
P. J. ZECK, M.B., B.S. (Syd.)	
J. A. ALEXANDER, M.B., Ch.M. (Syd.)	
L. L. GRIMMETT, M.B., B.S. (Qld.)	

The patients admitted during the past twelve months—namely, 339 males, 347 females, total 686—included a fairly wide cross section of the community, with a wide representation of different nationalities.

Modern concepts of psychiatric and general therapies and nursing were followed, resulting in a total of 180 male, 206 female, total 386 patients, being discharged recovered, or a total of 56.2 per cent. of the total admissions. Since these figures are based on the total admissions, including the non-recoverable mentally deficient and senile cases, they do not reflect the true credit of the work of the medical and nursing staffs.

There was a total of 2,916 patients under treatment during the past year, the numbers being fairly evenly distributed in the male and female sections of the hospital, being 1,463 and 1,453 respectively. The average numbers daily resident in the hospital were 1,075 males, 1,053 females, total 2,128 patients.

The panel of consultant specialists has been widened by the appointment of Dr. John Booth, Consultant Physician, who commenced duty on the 1st March, 1950. The services of these consultants are freely availed of by the reference to them of cases met with, thus ensuring specialised services of a high standard to the patients in this hospital.

Doctors R. Evans, B. C. Orde, and V. L. Matchett resigned from the service during the year and Doctors K. J. Meagher, P. J. Zeck, L. L. Grimmett, and J. A. Alexander were appointed to the staff.

Mr. J. I. Wearne was appointed to take charge of the Pathological Laboratory during the past year and this unit is again functioning efficiently.

Mr. P. K. Hefferan commenced duty as Dentist on the 3rd October, 1949, following the previous resignation of Mr. W. McKenna.

Surveys of various patient groups were made during the past year under the direction of the Department of Health and Home Affairs, while a survey of the staff was made and Mantoux tests taken in the majority of cases.

The official visitors, Dr. F. C. Turnbull with Mr. G. A. Cameron in the early part of the year and Mr. T. R. Kennedy in the latter part following the retirement of Mr. Cameron, visited the hospital regularly. Their inspections covered the whole of the hospital and they expressed their satisfaction that the general welfare of patients is being safeguarded, that modern treatments of mental illness were being pursued, and that the Regulations generally were being observed.

There were 97 male, 78 female, making a total of 175, deaths during the past twelve months, giving a percentage of 9.02 males, 7.41 females, total 8.13, on the average number daily resident in the hospital.

The largest groups of patients in the hospital comprise those in the old-age and long-residence groups, and it might, therefore, be expected that cardiac degeneration and senility were, by far, the most common causes of death.

The death of one male patient was suicidal by hanging, and in this, as well as in several other cases of sudden deaths, coronial inquiries were held.

There were two births, one male and one female, during the year from pregnancies conceived prior to admission.

The general welfare of the patients is being maintained and standards of food and clothing progressively raised.

There is an abundance of fresh vegetables from the market gardens and fresh milk is provided from the dairy. The herd has been tested again recently and found to be still free from any tubercular infection.

Entertainments were held regularly in the recreation hall, comprising picture shows and concerts weekly throughout the year, with dances in addition during the cooler months. There were also occasional afternoon band concerts. Regular 'bus trips to the seaside were provided for patients, and parties of patients were also taken by 'bus to occasional sporting fixtures.

The religious interests of all patients were safeguarded and services of the various denominations held at the hospital regularly. Groups of patients are conveyed by 'bus to divine services in the nearby churches, while visits to individual patients were undertaken by representatives of the various religious denominations.

The maintenance of the buildings and plant and minor repair works is undertaken by our own artisan staffs, and the grounds and gardens are continually being improved in collaboration with the Superintendent of Institutional Gardens.

In keeping with modern concepts of mental hospitals, a number of worn fences have been removed allowing for greater freedom of movement.

The Red Cross Society makes regular visits to the hospital and supplies comforts to soldier patients of both wars. The local sub-branch of the R.S.S. and A.I.L.A. also provides for the comfort and entertainment of these patients by outdoor trips, concerts, and dinners.

The Repatriation Commission endows the entertainments in respect of the patients who are their responsibility, while arrangements for the 'bus trips to the seaside referred to above were considerably eased by the co-operation of the Manager, "Eventide," Sandgate.

The canteen continues to provide a very satisfactory and essential service.

The local branch of the Country Women's Association visits the hospital regularly and provides entertainment for the female patients, and

officers from the Silver Hut continue to pay regular visits to a number of ex-servicemen patients.

Daily newspapers and periodicals are provided to all of the wards throughout the hospital and each ward is also equipped with a wireless

receiving set. Nearly all of the wards in the female section have pianos and in the male section indoor recreation is provided by billiard and bagatelle tables.

The statistical tables relating to the hospital are as follows:—

TABLE XCVIII.
BRISBANE MENTAL HOSPITAL, GOODNA.
ADMISSIONS, READMISSIONS, DISCHARGES, AND DEATHS, DURING THE YEAR ENDING 30TH JUNE, 1950.

				Males.	Females.	Total.
On the books of the hospital on 30th June, 1949				1,122	1,104	2,226
		M.	F.	T.		
Admitted for the first time		282	269	551		
Re-admitted		57	78	135		
Transferred from Toowoomba		2	1	3		
Transferred from Ipswich		..	1	1		
				341	349	690
Total under care during year				1,463	1,453	2,916
Discharged, died, transferred:—						
Discharged, recovered		125	142	267		
Discharged, Section 49		31	54	85		
Discharged, relieved		11	14	25		
Discharged, not improved		..	1	1		
Voluntarily left		24	10	34		
Transferred to Toowoomba		30	14	44		
Transferred to Ipswich		..	2	2		
Died		97	78	175		
Total discharged, died, &c., during year				318	315	633
Remaining on the books of the hospital on the 30th June, 1950				1,145	1,138	2,283
Average number daily resident				1,075	1,053	2,128
Number on leave of absence on 30th June, 1950				50	66	116

TABLE XCIX.
BRISBANE MENTAL HOSPITAL, GOODNA.
ADMISSIONS, DISCHARGES, AND DEATHS, WITH THE PROPORTIONS OF RECOVERIES AND DEATHS PER CENT. DURING THE YEAR ENDED 30TH JUNE, 1950.

—	Admitted	Re-admitted.	Discharged.			Died.	Remaining on 30th June, 1950.	Average Number Daily Resident.	Per-centage of Recoveries on Ad-missions.	Per-centage of Patients Relieved.	Per-centage of Deaths on Average Number Resident.
			Re-covered.	Relieved.	Not Improved.						
Males ..	282	57	180	11	..	97	1,145	1,075	53.1	3.24	9.02
Females ..	269	78	206	14	1	78	1,138	1,053	59.37	3.17	7.41
Total ..	551	135	386	25	1	175	2,283	2,128	56.27	3.21	8.13

TABLE C.
BRISBANE MENTAL HOSPITAL, GOODNA.

FORMS OF MENTAL DISORDERS IN PATIENTS ADMITTED DURING THE TWELVE MONTHS ENDING 30TH JUNE, 1950.

	Males.	Fe- males.	Total.		Males.	Fe- males.	Total.
1. AFFECTIVE REACTION TYPES— (Manic Depressive Psychosis)				(c) Degenerative Brain Changes—			
(a) Manic Phase—				Senile Dementia	50	62	112
Acute	26	42	68	Senile Psychosis	13	11	24
Recurrent	..	1	1	Pre-senile Psychosis	1	2	3
(b) Depression Phase—				Arteriosclerotic Dementia ..	9	7	16
Acute Depression	24	24	48	Arteriosclerotic Psychosis ..	6	8	14
Agitated Depression	3	9	12	Arteriosclerotic Psychosis (Parkinson)	1	..	1
Recurrent Depression	..	1	1				
(c) Involutional Depression ..	1	18	19	4. EPILEPTIC REACTION TYPES—			
2. SCHIZOPHRENIC REACTION TYPES—				Epileptic Psychosis	4	8	12
(a) Schizophrenia	74	73	147	Epileptic Dementia	1	1	2
Schizoid personality	1	..	1	Epileptic Amentia	1	..	1
(b) Paraphrenia	28	28	56				
3. ORGANIC REACTION TYPES—				5. PSYCHONEUROTIC REACTION TYPES—			
(a) Organic Psychosis	1	1	2	Psychoneurosis	18	8	26
Organic Psychosis (Cerebral Tumor)	..	1	1				
Organic Dementia	..	1	1	6. MENTAL DEFICIENCY—			
Organic Dementia (Paget's) ..	1	..	1	(a) Mental Deficiency	27	16	43
Post Encephalitis Psychosis ..	1	..	1	Mental Deficiency with			
(b) Toxins—				Epilepsy	3	6	9
Alcoholic Psychosis	27	5	32	Mental Deficiency with			
Alcoholic Psychosis (Kor- sakov's)	3	..	3	Schizophrenia	..	3	3
Alcoholic Hallucinoses	2	..	2	Mental Deficiency (Mongol) ..	1	..	1
Confusional Psychosis	..	4	4	Mental Deficiency (Moron) ..	3	2	5
Neurosyphilis	1	1	2	Mental Deficiency (obsessional)	..	1	1
Dementia Paralytica	2	2	4	Mental Deficiency (Alcohol)	1	..	1
				(b) Moral Deficiency	3	1	4
				7. TRAUMATIC PSYCHOSIS	2	..	2
					339	347	686

TABLE CI.
BRISBANE MENTAL HOSPITAL, GOODNA.
CAUSES OF DEATHS WHICH OCCURRED DURING PERIOD
ENDING 30TH JUNE, 1950.

	Males.	Fe- males.	Total.
GENERAL DISEASES—			
Carcinoma of Cervix	..	2	2
Carcinoma of Finger	1	..	1
Leprosy	1	..	1
Suicide by Hanging	1	..	1
DISEASES OF NERVOUS SYSTEM—			
Dementia Paralytica	1	2	3
Status Epilepticus	1	1	2
Exhaustion	4	..	4
Senility	9	5	14
Cerebral Arteriosclerosis	2	1	3
Cerebral Haemorrhage	5	6	11
Cerebral Degeneration	4	5	9
Cerebral Thrombosis	3	2	5
Chronic Cortical Atrophy	2	1	3
Cerebral Tumor	1	..	1
DISEASES OF CIRCULATORY SYSTEM—			
Congestive Cardiac Failure	9	8	17
Myocardial Degeneration	19	12	31
Cardiovascular Degeneration	10	13	23
Cardiovascular Disease	..	1	1
Coronary Occlusion	1	2	3
Disseminated Sclerosis	2	..	2
Toxaemia	1	1	2
DISEASES OF RESPIRATORY SYSTEM—			
Hypostatic Pneumonia	..	2	2
Broncho-pneumonia	8	5	13
Lobar Pneumonia	1	1	2
Pulmonary Oedema	1	1	2
Pulmonary Tuberculosis	5	3	8
DISEASES OF ALIMENTARY SYSTEM—			
Colitis	1	2	3
Carcinoma of Oesophagus	1	..	1
Carcinoma of Colon	..	1	1
Peritonitis	1	..	1
DISEASES OF GENITO-URINARY SYSTEM—			
Uræmia	1	1	2
Nephritis	1	..	1
	97	78	175

TABLE CII.
BRISBANE MENTAL HOSPITAL, GOODNA.
BODILY HEALTH AND CONDITION OF PATIENTS ADMITTED
DURING THE YEAR ENDED 30TH JUNE, 1950.

	Males.	Fe- males.	Total.
In apparently good health and condition	194	186	380
In indifferent health and reduced condition	98	113	211
In bad health and exhausted condition	47	48	95
	339	347	686

TABLE CIII.
BRISBANE MENTAL HOSPITAL, GOODNA.
BIRTHPLACES OF PATIENTS ADMITTED DURING PERIOD
ENDING 30TH JUNE, 1950.

	Males.	Fe- males.	Total.
Queensland	193	255	448
New South Wales	32	17	49
Victoria	6	4	10
South Australia	2	2	4
Western Australia	1	2	3
Tasmania	4	..	4
New Zealand	4	1	5
England	30	24	54
Scotland	13	7	20
Ireland	10	7	17
India	1	..	1
United States of America ..	1	..	1
Italy	6	4	10
Germany	..	3	3
Spain	1	..	1
Switzerland	1	..	1
Denmark	1	..	1
Poland	2	1	3
Greece	2	1	3
Sicily	1	..	1
Ukraine	1	1	2
Latvia	1	2	3
Yugo Slavia	3	..	3
China	2	..	2
Unknown	21	16	37
	339	347	686

TABLE CIV.
BRISBANE MENTAL HOSPITAL, GOODNA.

DISTRICTS WHENCE PATIENTS WERE RECEIVED DURING THE YEAR ENDED 30TH JUNE, 1950.

	Males.	Fe- males.	Total.
Northern and North-western Districts	44	27	71
Central Districts	50	24	74
Southern and South-western Districts	245	296	541
	339	347	686

TABLE CV.
BRISBANE MENTAL HOSPITAL, GOODNA.

AGE GROUPS OF PATIENTS WHOSE ADMISSIONS, DISCHARGES, OR DEATHS OCCURRED DURING THE YEAR, AND OF THOSE WHO REMAINED IN THE HOSPITAL ON 30TH JUNE, 1950.

Age Group.	Admissions.			Discharges.						Deaths.			Remaining.		
				Recovered.			Relieved and not Improved.								
	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.
Under 5 years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5 years and under 10 years	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
10 years and under 15 years	2	..	2	1	..	1	..	..	..	..	..	..	11	3	14
15 years and under 20 years	13	11	24	9	1	10	1	..	1	..	1	1	29	13	42
20 years and under 30 years	54	35	89	42	36	78	..	3	3	5	5	10	139	115	254
30 years and under 40 years	64	69	133	47	55	102	4	1	5	7	2	9	219	204	423
40 years and under 50 years	52	63	115	28	37	65	..	3	3	13	7	20	228	250	478
50 years and under 60 years	57	54	111	27	41	68	2	1	3	10	10	20	233	229	462
60 years and under 70 years	39	45	84	14	20	34	1	1	2	22	13	35	174	159	333
70 years and under 80 years	38	41	79	9	14	23	1	3	4	24	20	44	86	108	194
80 years and under 90 years	18	26	44	3	2	5	2	3	5	15	16	31	21	51	72
90 years and over	1	3	4	..	..	..	..	..	..	3	3	1	6	7	7
Unknown	1	..	1	..	..	..	..	..	..	1	1	2	3	..	3
	339	347	686	180	206	386	11	15	26	97	78	175	1,145	1,138	2,283

TABLE CVI.
BRISBANE MENTAL HOSPITAL, GOODNA.

OCCUPATIONS OF PATIENTS ADMITTED DURING THE YEAR ENDED 30TH JUNE, 1950.

	Males.	Fe- males.	Total.		Males.	Fe- males.	Total.
Baker	1	..	1	Nil	19	15	34
Barman	3	1	4	Nun	..	1	1
Bricklayer	1	..	1	Nurse	..	3	3
Cabinet maker	6	..	6	Packer	1	..	1
Cane cutter	1	..	1	Painter	1	..	1
Cane farmer	1	..	1	Pensioner	58	53	111
Carpenter	5	..	5	Photographer	1	..	1
Cashier	..	1	1	Plasterer	1	..	1
Chemist	1	..	1	Plumber	4	..	4
Child	2	2	4	Postal employee	2	..	2
Clerk	5	1	6	Presser	1	..	1
Cook	1	1	2	Priest	1	..	1
Dealer	3	..	3	Process worker	2	..	2
Domestic duties	..	238	238	Railway employee	6	..	6
Dry cleaner	1	..	1	Receptionist	..	1	1
Electrician	1	..	1	Salesman	2	..	2
Electric welder	1	..	1	Sawmill worker	1	..	1
Engineer	3	..	3	School Teacher	..	2	2
Factory hand	..	2	2	Seaman	2	..	2
Farmer	21	..	21	Shearer	1	..	1
Farm hand	8	..	8	Shop assistant	..	2	2
Fisherman	1	..	1	Solicitor	1	..	1
Fitter	2	..	2	Station hand	4	..	4
Forestry worker	2	..	2	Stenographer	..	1	1
French polisher	1	..	1	Stockman	3	..	3
Furnaceman	1	..	1	Storekeeper	2	2	4
Gardener	3	..	3	Student	1	..	1
Grocer	1	..	1	Tailor	..	2	2
Labourer	119	..	119	Tiler	1	..	1
Laundress	..	3	3	Timber cutter	4	..	4
Linesman	1	..	1	Transport worker	1	..	1
Machinist	..	1	1	Typist	..	3	3
Meatworker	3	..	3	Unknown	2	5	7
Mechanic	1	..	1	Waitress	..	3	3
Metallurgist	1	..	1	Waterside worker	4	..	4
Miner	9	..	9	Yardman	1	..	1
Mining prospector	2	..	2				
Music teacher	..	4	4				
	339	347	686				

TABLE CVIL.—BRISBANE MENTAL HOSPITAL, GOODNA.

MARITAL STATUS OF PATIENTS WHOSE ADMISSIONS, DISCHARGES, AND DEATHS, OCCURRED DURING THE YEAR, AND OF PATIENTS WHO REMAINED IN THE HOSPITAL ON 30TH JUNE, 1950.

Marital Status.	Admissions.			Discharges.						Deaths.			Remaining.		
				Recovered.			Relieved and not Improved.								
	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.
Single	174	104	278	97	66	163	7	4	11	48	17	65	872	519	1,391
Married	124	167	291	71	114	185	2	7	9	37	27	64	206	433	639
Widowed	26	67	93	9	24	33	2	4	6	8	33	41	28	169	197
Divorced	7	6	13	3	2	5	..	..	..	..	..	..	17	12	29
Unknown	8	3	11	..	..	..	..	..	..	4	1	5	22	5	27
	339	347	686	180	206	386	11	15	26	97	78	175	1,145	1,138	2,283

TABLE CVIIL.—BRISBANE MENTAL HOSPITAL, GOODNA.

LENGTH OF RESIDENCE IN THE HOSPITAL OF THE PATIENTS WHO WERE DISCHARGED OR WHO DIED DURING THE YEAR AND OF THOSE WHO REMAINED ON THE BOOKS OF THE HOSPITAL ON 30TH JUNE, 1950.

Length of Residence.	Discharges.						Deaths.			Remaining.		
	Recovered.			Relieved and not Improved.								
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Under 1 month	10	5	15	1	1	2	9	6	15	20	21	41
1 month and under 3 months	19	16	35	1	3	4	16	13	29	52	44	96
3 months and under 6 months	68	71	139	..	4	4	12	10	22	61	67	128
6 months and under 9 months	31	46	77	4	2	6	4	7	11	48	49	97
9 months and under 12 months	12	26	38	..	..	..	3	6	9	33	51	84
1 year and under 2 years	25	25	50	4	4	8	9	14	23	119	106	225
2 years and under 3 years	6	8	14	..	1	1	10	7	17	81	96	177
3 years and under 5 years	6	5	11	..	..	..	5	3	8	102	137	239
5 years and under 7 years	3	..	3	..	..	..	2	5	7	89	99	188
7 years and under 10 years	..	4	4	..	..	..	6	1	7	110	126	236
10 years and under 12 years	..	..	..	..	..	..	3	2	5	75	81	156
12 years and under 15 years	..	..	..	..	..	..	2	2	4	84	80	164
15 years and under 20 years	..	..	..	..	..	..	5	1	6	103	83	186
20 years and over	..	..	..	1	..	1	11	1	12	168	98	266
	180	206	386	11	15	26	97	78	175	1,145	1,138	2,283

TABLE CIX.—BRISBANE MENTAL HOSPITAL.
QUANTITIES OF VEGETABLES AND FARM PRODUCE,
TWELVE MONTHS ENDING 30TH JUNE, 1950.

	Tons.
Garden Vegetables	115
Potatoes	43
Pumpkins and Turnips	20
Maize	15
Chaff	79
Ensilage	201
Green Feed	533
Milk	Gallons. 46,384

TABLE CX.—BRISBANE MENTAL HOSPITAL.
EXPENDITURE TABLE FOR TWELVE MONTHS ENDING
30TH JUNE, 1950.

Average number of patients daily resident during the year	2,128
	£ s. d.
Total expenditure	406,098 16 2
Maintenance collected by Public Curator	49,067 13 1
Sales	372 4 2
Net expenditure	356,658 18 11
Gross cost per patient per annum	190 16 8
Net cost per patient per annum	167 12 1
Gross cost per patient per week	3 13 5
Net cost per patient per week	3 4 5

REPATRIATION PAVILION, WACOL.

Medical Officer—J. E. ALEXANDER, M.B., Ch.M. (Sydney).

The Commonwealth authorities continue to exercise a benevolent interest in the welfare of patients in this section for the segregate accommodation of ex-servicemen patients. Medical and administrative officers of the Repatriation Commission maintain frequent visits to Wacol, and overseas visitors appear to have been very favourably impressed with the appointments and general setup of this modern block.

The Red Cross Society continues to pay regular visits and distributes comforts to the patients and during the year installed a library of 200 volumes.

The occupational and recreational therapies are being further developed in collaboration with therapists in these sections from the Repatriation Commission. Various handicrafts are followed under the instruction of the therapists and many useful and ornamental articles are produced. Indoor games of snooker, billiards, and table tennis are enjoyed and outdoor field games of cricket and tennis. A new cricket wicket is under construction and preliminary steps have been taken for the provision of a new tennis court. Inter-hospital games of cricket, tennis, table tennis, and snooker have been played between the patients in this section and patients in the other Commonwealth hospitals in Brisbane.

One of the billiard tables and also one of the pianos in this section were provided from a trust fund organised by the late Mrs. Edgar Robinson, who was an untiring worker in the interests of ex-servicemen.

A new stage has been constructed in the theatre where regular picture shows are provided by the Repatriation Amenities and occasional concerts conducted. Groups of patients from Wacol were guests at celebrity perform-

ances at Greenslopes Military Hospital, following arrangements which it is understood were made by the Red Cross Society.

Regular bus trips to the various north and south coast beaches have been enjoyed under the auspices of the local branch of the R.S.S. and A.I.L.A. with funds endowed from the Welfare Section of the Repatriation Commission.

The high standards of food and clothing are being maintained, and the general well-being of the patients leaves little to be desired.

The grounds of this area are being steadily developed, are well tended, and already present an attractive scene.

A table showing the movement of patients at Wacol during the past twelve months is attached hereto. A number of those shown as having been transferred to and from the Brisbane Mental Hospital is for specialised treatments as the occasions arise.

TABLE CXI.

WACOL REPATRIATION PAVILION.

MOVEMENT OF PATIENTS DURING THE TWELVE MONTHS ENDING 30TH JUNE, 1950.

On the books of the pavilion on 30th June, 1949..	86
Transferred from Brisbane Mental Hospital ..	57
	143
Discharged, recovered	7
Discharged, under Section 49	3
Discharged, relieved	1
Voluntarily left	5
Died	2
Transferred to Brisbane Mental Hospital..	23
Total discharged, &c., during the year	41
Remaining on books of pavilion on 30th June, 1950	102
Average number daily resident	89
Number on leave of absence on 30th June, 1950	5

TOOWOOMBA MENTAL HOSPITAL.

C. R. BOYCE, M.B., (Syd.), Medical Superintendent.

J. H. B. HENDERSON, M.B., B.S. (Syd.), Deputy Medical Superintendent.

The financial year 1949-50 comes to a close with a spate of activities in progress or soon about to be started, all centred upon better living conditions for the patients and working conditions for the staff.

1. *Canteen*.—Staff carpenters, painters, and plumbers have transformed an annexe of the recreation hall into a very handsome canteen, where patients and staff are offered a wide range of small goods. A number of the store staff work from 12 noon to 2 p.m. on week days excepting holidays and during this short selling period progressive gross cash takings since the opening of the canteen have been:—

	£	s.	d.
January	185	0	7
February	188	17	2
March	233	16	7
April	191	1	3
May	242	15	8
June	211	13	0

It is hoped that in the near future a full-time canteen attendant will be provided and the canteen open at week-ends and on holidays.

2. *Artisans' Block*.—The old pump house has been carefully dismantled and valuable timber and iron is now available for construction of an artisans' block. It is hoped that the coming year will see the carpenters, painters, and others comfortably placed. At the present time only the engineer, blacksmith, plumbers, and vegetable gardeners are adequately housed for their work.

3. *Ward Fences*.—Front and side fences of male ward F and a back fence of male ward D have been removed and, despite some misgivings at first, the change is now spoken of highly by staff and patients. Not one of the latter has wandered away despite the opportunity available to do so. With the further application of

real psychology to mental nursing it can be expected that many other restrictions will be found both irritating and unnecessary.

4. *Laundry*.—Extremely valuable equipment has been installed and greater efficiency of this most important department is confidently expected. It would be appropriate at this juncture to mention gratefully that the Department of Health and Home Affairs has refused nothing, whatever its cost, that has been asked for, when it has been shown that the requests would be of benefit to patients and staff.

5. *Gardens and Grounds*.—Valuable advice and help has been freely given by Mr. Rose, Acting Superintendent of Institutional Gardens, and the enhanced beauty of the patients' environment over the past few years has been marked.

6. *Ward Improvements, &c.*—

- (a) *Painting*.—Staff painters have transformed hospital and wards F and C; their dinginess and dripping walls in wet weather are gone and they are now bright, cheerful, and clean at all times.
- (b) *Furnishing*.—Wards 6 and F have all single rooms comfortably furnished and they are referred to by the staff as Pink Room, Blue Room, &c., and are much sought after by patients. Two hundred and fifty comfortable theatre chairs were a fortunate purchase and these have been done up and renewed and distributed to a number of wards. Clean washable table tops have been provided in most wards and tables for four persons with chairs have taken the place of the very old large tables and forms.
- (c) *Clothing*.—All patients are adequately clad for the climate; female patients are proud of their new woollen cardigans and rain coats and the men look contented in their woollen sweaters, jackets, and overcoats. Every patient is provided with five good warm blankets for the winter months.
- (d) *Dietary*.—Well-fed patients are contented patients and the nursing staff has frequently commented on the improved conduct of the patients consequent upon the sustained high level of well-cooked food that issues from the very modernly equipped kitchen.
- (e) *Ward Laundryettes*.—Laundryettes are on their way for each ward; ward sculleries are to be enlarged

and modernised; already hot and cold water mixers have been installed in ward bathrooms; and adequate lighting has been provided for all wards for patients who for any reason (reading, cards, sewing, music, &c.) wish to sit up at night after their ward's usual retiring hour. Now that rationing of butter has been lifted, it will be possible to provide patients who sit up, with a light supper of tea, coffee, or cocoa and sandwiches.

7. *Roads*.—A considerable sum of money has been granted for bitumen-surfacing all internal roads and as all surveys, &c., have been made it is hoped that very soon the work will be begun.

8. *Farm*.—Plans have been drawn up for the re-erection of dairy sheds, &c., burned in the fire last year and more modern machinery will be installed. Titles to the Police Paddock have been transferred to this hospital and a very valuable adjunct to dairying and general farming obtained. An experimental area of millet proved that a very fine type of straw for brooms, &c., can be grown here. An ample supply of various vegetables continues to enrich the patients' diet.

9. *Recreations and Religion*.—Pictures, concerts, dances, garden parties, jumble sales, 'bus trips, visits to town, to relatives' homes, to Toowoomba Show, and to sporting fixtures, as well as music, reading, and games in the wards continue to provide distraction and amusement for the patients. Thanks are extended to the Department for provision of a new player piano and 150 rolls of music and to the Salvation Army, Monty Bloom & Co., the Country Women's Association, to Miss Bourne for concert and ballets and to many others for their very praiseworthy efforts of entertaining.

Clergymen of various denominations are assiduous in their attendances and respond very promptly to calls to the dangerously ill and dying.

10. *Staff Shortage and Treatment*.—A recent addition to the nursing staff of 20 New Australians, bringing their total to nearly 40, has greatly alleviated the shortage of female staff. Most of these New Australians have entered enthusiastically into their new work and their new surroundings and are doing a good job. Shortage of trained staff severely limits the application of modern psychiatric therapy, but the results obtained here compare favourably with other hospitals.

11. *Hairdressing*.—A male hairdresser has been employed for a number of months and a salon is being prepared for him. It is hoped that a beauty specialist will be provided for the female patients shortly and a parlour is being constructed with that object in view.

12. *Psychiatric Clinic*.—The clinic is a well-established unit of the Toowoomba General Hospital and its services are sought by many private practitioners of the Darling Downs, besides being very valuable in solving problems that arise in the hospital itself. Dr. James Bell, Medical Superintendent, has been most helpful and co-operative and has made beds available for psychiatric in-patients. There can be no doubt that with the passage of years the Toowoomba Psychiatric Clinic will prove to be of extreme importance in the total health problem of Southern and Western Queensland. It is hoped that the Department will provide further personnel for the Clinic, for the General Hospital, and for the Mental Hospital during the coming year, for there is already ample material to engage the full-time attention of a medical officer, psychologist, and a social service officer. Occasional cases met could be benefited by a speech therapist.

The statistical tables relating to this hospital are as follows:—

TABLE CXII.
TOOWOOMBA MENTAL HOSPITAL.

ADMISSIONS, RE-ADMISSIONS, DISCHARGES, DEATHS,
DURING THE YEAR ENDING 30TH JUNE, 1950.

—	Males.	Fe- males.	Total.
On books of hospital on 30th June, 1949	580	615	1,195
Admitted for first time	53	37	90
Readmitted	20	16	36
Transferred from Brisbane	30	14	44
Transferred from Ipswich	..	..	..
	103	67	170
Total under care	683	682	1,365
Discharges, Died, Transferred:—			
Discharged, Recovered	27	32	59
Discharged, Relieved	12	7	19
Discharged, Not Improved	2	3	5
Discharged, Section 49	..	3	3
Transferred to Brisbane	2	1	3
Transferred to Wacol	..	..	..
Transferred to Ipswich	..	..	..
Died	29	24	53
Total Discharged, Died, &c.	72	70	142
Remaining on books on 30th June, 1950	611	612	1,223
Average number daily resident	589	605	1,194
Number on leave of absence on 30th June, 1950	9	10	19

TABLE CXIII.
FORMS OF MENTAL DISORDERS IN PATIENTS ADMITTED
DURING THE TWELVE MONTHS.

—	Males.	Fe- males.	Total.
1. AFFECTIVE REACTION TYPES—			
Acute Melancholia	4	10	14
Simple Melancholia	2	1	3
Involuntional Melancholia	1	1	2
Chronic Melancholia	1	..	1
Acute Mania	5	1	6
Simple Mania	..	1	1
M.D. Psychosis (mixed state)	1	..	1
2. SCHIZOPHRENIC REACTION TYPES—			
Schizophrenia	7	5	12
Schizoid Personality	..	1	1
Paraphrenia	3	3	6
3. EPILEPTIC REACTION TYPES—			
Epileptic Psychosis	5	3	8
4. ORGANIC REACTION TYPES—			
Dipsomania	1	..	1
Arteriosclerosis	1	1	2
Senility	7	10	17
Chronic Alcoholism	8	..	8
Alcoholic Acute Hallucinoses	4	1	5
Alcoholic Dementia	2	..	2
Toxic Exhaustive Psychosis	1	1	2
Dementia Paralytica	1	..	1
5. PSYCHONEUROTIC REACTION TYPES—			
Anxiety Neurosis	4	8	12
6. MENTAL DEFICIENCY—			
Imbecile	3	1	4
Feeble Minded	8	4	12
EMOTIONAL INSTABILITY	..	3	3
No Psychosis	1	..	1
SPASTIC DIPLEGIA	1	..	1
Total	71	55	126

TABLE CXIV.

CAUSES OF DEATH DURING THE TWELVE MONTHS ENDING
30TH JUNE, 1950.

—	Males.	Fe- males.	Total.
GENERAL DISEASES—			
Senility with Acute Myocarditis	7	7	14
Diabetes Mellitus	..	1	1
DISEASES OF NERVOUS SYSTEM—			
Cerebral Thrombosis	1	2	3
DISEASES OF CIRCULATORY SYSTEM			
Arteriosclerosis	2	2	4
Acute Myocarditis	3	2	5
Chronic Myocarditis	3	1	4
Coronary Occlusion	5	1	6
Angina Pectoris	1	..	1
DISEASES OF RESPIRATORY SYSTEM—			
Broncho Pneumonia	3	3	6
Pulmonary Tuberculosis	1	..	1
MALIGNANT DISEASES—			
Carcinoma of Stomach	1	..	1
Carcinoma of Tongue	1	..	1
Carcinoma of Face	..	1	1
Carcinoma of Pancreas	..	1	1
RENAL SYSTEM—			
Pyelonephritis	..	1	1
DISEASES OF BLOOD—			
Pernicious Anaemia	1	..	1
INFECTIOUS DISEASES—			
Diphtheria	..	1	1
DISEASES OF ALIMENTARY SYSTEM—			
Megacolon with Subacute Obstruction	..	1	1
Total	29	24	53

TABLE CXV.

TOOWOOMBA MENTAL HOSPITAL.

BODILY HEALTH AND CONDITION OF PATIENTS ADMITTED DURING TWELVE MONTHS ENDING 30TH JUNE, 1950.

—	Males.	Fe-males.	Total.
In apparently good health and condition	48	34	82
In indifferent health and reduced condition	20	16	36
In bad health and exhausted condition	5	3	8
	73	53	126

TABLE CXVI.

BIRTHPLACES OF PATIENTS ADMITTED DURING THE YEAR ENDING 30TH JUNE, 1950.

—	Males.	Fe-males.	Total.
Queensland	47	32	79
New South Wales	11	10	21
Victoria	3	2	5
South Australia	1	1	2
England	3	6	9
Scotland	1	..	1
Ireland	3	1	4
Canada	1	..	1
Italy	1	..	1
Unknown	2	1	3
	73	53	126

TABLE CXVII.

TOOWOOMBA MENTAL HOSPITAL.

DISTRICTS WHENCE PATIENTS WERE ADMITTED DURING THE TWELVE MONTHS ENDING 30TH JUNE, 1950.

—	Males.	Fe-males.	Total.
Northern and North-western Districts	..	..	..
Central Districts	..	..	..
Southern and South-western Districts	..	..	..
Toowoomba District	39	28	67
	34	25	59
	73	53	126

TABLE CXVIII.

PREVIOUS OCCUPATIONS OF PATIENTS ADMITTED DURING THE TWELVE MONTHS ENDING 30TH JUNE, 1950.

—	Males.	Fe-males.	Total.
Car agent	1	..	1
Carpenter	1	..	1
Clerk	1	..	1
Cowboy	1	..	1
Dairy farmer	2	..	2
Domestic duties	..	7	7
Farmer	8	..	8
Farm labourer	1	..	1
Fisherman	3	..	3
Garage attendant	1	..	1
Gardener	1	..	1
Governess	..	2	2
Household duties	..	9	9
Housekeeper	..	1	1
Housewife	..	20	20
Labourer	17	..	17
Machinist	1	..	1
Medical practitioner	1	..	1
Newsagent	1	..	1
Nil	13	2	15
Orchardist	1	..	1
Nurse	..	4	4
Panel beater	2	..	2
Pensioner	5	3	8
Priest	1	..	1
Ringbarker	1	..	1
Scale maker	1	..	1
Shed hand	1	..	1
Station hand	2	..	2
Teacher	1	1	2
Timber worker	1	..	1
Typist	..	2	2
Unknown	2	2	4
Wardman	1	..	1
Woolclasser	1	..	1
	73	53	126

TABLE CXIX.

AGES OF PATIENTS WHOSE ADMISSIONS, DISCHARGES, OR DEATHS OCCURRED DURING THE YEAR AND OF PATIENTS WHO REMAINED IN THE HOSPITAL ON 30TH JUNE, 1950.

Age Group.	Admissions.			Discharges.						Deaths.			Remaining.		
				Recovered.			Relieved and not Improved.								
	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.
Under 5 years	..	1	1	..	..	..	1	..	1	..	1	1	..	..	..
5 years and under 10 years	3	..	3	..	..	..	..	1	1	..	..	..	4	1	5
10 years and under 15 years	1	..	1	..	..	..	..	..	..	1	..	1	5	1	6
15 years and under 20 years	1	1	2	..	..	..	..	..	..	..	..	..	6	4	10
20 years and under 30 years	12	5	17	6	3	9	2	1	3	2	..	2	40	27	67
30 years and under 40 years	9	11	20	3	5	8	3	3	6	..	..	..	75	61	136
40 years and under 50 years	19	10	29	10	11	21	3	1	4	1	1	2	123	99	222
50 years and under 60 years	10	6	16	5	5	10	3	2	5	3	1	4	137	175	312
60 years and under 70 years	8	9	17	2	7	9	..	1	1	5	6	11	128	145	273
70 years and under 80 years	6	6	12	1	1	2	1	3	4	11	13	24	74	72	146
80 years and under 90 years	3	4	7	..	..	..	1	1	2	6	2	8	15	21	36
90 years and over	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2
Unknown	1	..	1	..	..	..	..	..	..	..	..	..	4	4	8
	73	53	126	27	32	59	14	13	27	29	24	53	611	612	1,223

TABLE CXXIII.—TOOWOOMBA MENTAL HOSPITAL.

LIST OF ARTICLES MANUFACTURED IN WORKROOM FROM 1ST JULY, 1949, TO 30TH JUNE, 1950.

Canvas Goods—					Petticoats	341
Straight jackets	52				Mosquito nets tops	24
Blinds	2				Shrouds	48
Mail bags	1				Dressing towels	482
Sheets	50				Table cloths	54
Ticks	61				Serviettes	17
Rugs	41				Towels, scullery	338
	— 207				Bibs and feeders	53
Uniforms (female)—					Wringers	2
Aprons	315				Jackets	703
Belts	223				Dresses	1,280
Collars	54				Hats	13
Capes	49				Overalls	34
Caps	189				Muff suits	2
Dresses	308				Blazers	175
Veils	75				Overcoats	2
Coats	4				Skirts	1
	— 1,217				Drawers	137
Barber's towels	96				Shirts	8
Pressing cloths	14				Dressing gowns	4
Altar cloth	1				Shifts	25
Dispensary coats	3				Slacks	3
Bed sheets	2,565				Pyjama coats	417
Piano covers	1				Pyjama trousers	424
Mangle sheets	6				Blouses	3
Runners	57				Blinds	6
Covers	124				Mosquito nets	24
Stockings bags	57				Shirts	7
Pillow slips	1,659				Curtains	34
Combinations	1,047				Sheets waterproof	241
Night gowns	1,506				Ticks	243
Aprons	296				Pillow cases	120
Bags, net and cord	18				Towels, hand	44
Doctor's gowns	6				Total	14,342
Quilts	153					

TABLE CXXIV.

EXPENDITURE TABLE FOR THE TWELVE MONTHS ENDING 30TH JUNE, 1950.

Average number daily resident, 1,194.			
	£	s.	d.
Total expenditure	200,474	0	2
Maintenance collected by Public			
Curator	4,164	18	8
Sales	182	5	6
Net expenditure	196,126	16	0
Gross cost per patient per annum	167	18	0
Net cost per patient per annum	164	5	2
Gross cost per patient per week	3	4	7
Nett cost per patient per week	3	3	2

IPSWICH MENTAL HOSPITAL.

W. P. H. PARKER, L.R.C.P. & S. (Irel.), Medical Superintendent.

The general health of the patients has been satisfactory, and there were no serious epidemics.

No magisterial inquiries were held during the year.

Patients have been entertained with dances, talking pictures, band and concert parties, and daily newspapers and periodicals are provided to the various wards throughout the hospital.

The Sandy Gallop Sub-branch of the R.S.S. and A.I.L.A. has provided hospitality to the returned soldier patients in regular fortnightly visits to the local picture shows, and with bus trips to the seaside and country centres.

The Red Cross Society continues to donate gifts to the ex-servicemen patients weekly.

The religious interests of all patients were cared for by visits from the clergy of the various denominations, and religious services were held regularly.

The local branch of the C.W.A. visits the hospital annually, and distributes fruit, cake, sweets, &c., to the female and children's wards, as well as supplying ice-cream each fortnight.

Miss Hinton and party have continued their periodic visits, and on each visit provide gifts to all patients.

The Ipswich Buffaloes have on several occasions visited the Hospital, and distributed cakes, ice-cream, sweets, &c., to the children patients here.

The visiting dentist attends to the patients each fortnight, and the chiropodist visits fortnightly.

A shortage of female nurses still exists, but the employment of male assistants in the female wards is relieving the situation.

Extensive improvements in the cooking utensils in the general kitchen have been carried out during the year, and the standard of food is being maintained with a mixed nutritious diet.

During the past year, Mr. F. B. Woodhead, Engineer and Electrician, retired from the service, and Mr. H. F. Curtis was appointed in his stead.

The statistical tables relating to this hospital are furnished herewith.

TABLE CXXV.
MENTAL HOSPITAL, IPSWICH.
ADMISSIONS, RE-ADMISSIONS, DISCHARGES AND DEATHS
DURING THE YEAR ENDING 30TH JUNE, 1950.

—	Males.	Fe- males.	Total.
On books of hospital on 30th June, 1949	358	177	535
Admitted for the first time	20	12	32
Readmitted	..	..	..
Transferred from Toowoomba	..	..	..
Transferred from Brisbane	..	2	2
Transferred from Townsville	..	..	..
	20	14	34
Total under care	378	191	569
Discharged, died, transferred—			
Discharged, recovered	..	..	..
Discharged, relieved	4	..	4
Discharged, not improved	..	2	2
Discharged, section 49	1	..	1
Transferred to Toowoomba	..	..	..
Transferred to Brisbane	..	1	1
Died	17	9	26
Total, discharges, died, &c.	22	12	34
Remaining on the books on 30th June, 1950	356	179	535
Average number daily resident	351	176	527
Number on leave of absence on 30th June, 1950	1	..	1

TABLE CXXVI.
MENTAL HOSPITAL, IPSWICH.
FORMS OF MENTAL DISORDERS IN PATIENTS ADMITTED
DURING THE YEAR.

—	Males.	Fe- males.	Total.
Congenital Mental Deficiency with Epilepsy	1	2	3
Congenital Mental Deficiency—Idiocy	1	..	1
Congenital Mental Deficiency—Imbecility	15	8	23
Congenital Mental Deficiency—Mongolism	2	..	2
Epilepsy and Mental Sub-normality	1	..	1
Imbecility	..	1	1
Mongolism	..	1	1
	20	12	32

TABLE CXXVII.
MENTAL HOSPITAL, IPSWICH.
CAUSES OF DEATHS DURING THE YEAR ENDING 30TH
JUNE, 1950.

—	Males.	Fe- males.	Total.
Acute Colitis	1	..	1
Acute Lobar Pneumonia	1	..	1
Broncho Pneumonia	2	2	4
Cerebral Haemorrhage	1	1	2
Congenital Heart Disease	1	..	1
Coronary Occlusion	..	1	1
Coronary Thrombosis	3	1	4
Epilepsy	1	..	1
Gastro-enteritis	4	1	5
Malignant Disease of Intestine	..	1	1
Malignant Disease of Uterus	..	1	1
Myocarditis	3	1	4
	17	9	26

TABLE CXXVIII.
MENTAL HOSPITAL, IPSWICH.
BODILY HEALTH AND CONDITIONS OF PATIENTS ADMITTED
DURING THE YEAR.

—	Males.	Fe- males.	Total.
In apparently good health and condition	14	9	23
In indifferent health and reduced condition	4	1	5
In bad health and exhausted condition	2	2	4
	20	12	32

TABLE CXXIX.
MENTAL HOSPITAL, IPSWICH.
BIRTHPLACES OF PATIENTS ADMITTED DURING THE YEAR.

—	Males.	Fe- males.	Total.
New South Wales	1	..	1
Queensland	14	9	23
Unknown	5	3	8
	20	12	32

TABLE CXXX.
MENTAL HOSPITAL, IPSWICH.
DISTRICTS WHENCE PATIENTS WERE RECEIVED DURING THE YEAR ENDING 30TH JUNE, 1950.

—	Males.	Females.	Total.
Northern and North-western Districts	..	..	..
Central Districts	..	..	..
Southern and South-western Districts	20	12	32
	20	12	32

TABLE CXXXI.

MENTAL HOSPITAL, IPSWICH.

AGES OF PATIENTS WHOSE ADMISSIONS, DISCHARGES, OR DEATHS OCCURRED DURING THE YEAR, AND OF THOSE WHO REMAINED IN THE HOSPITAL ON THE 30TH JUNE, 1950.

	Admissions.			Discharges.						Deaths.			Remaining.		
				Recovered.			Relieved and not Improved.								
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Under 5 years	11	8	19	..	..	..	..	..	..	6	3	9	11	10	21
5 years and under 10 years	5	2	7	..	..	..	2	1	3	..	..	..	33	15	48
10 years and under 15 years	4	2	6	..	..	..	1	1	2	..	..	..	22	11	33
15 years and under 20 years	..	..	..	..	..	..	..	..	..	..	..	..	8	13	21
20 years and under 30 years	..	..	..	..	..	..	..	..	..	1	..	1	9	13	22
30 years and under 40 years	..	..	..	..	..	..	..	..	..	..	..	..	27	24	51
40 years and under 50 years	..	..	..	..	..	..	1	..	1	2	..	2	59	24	83
50 years and under 60 years	..	..	..	..	..	..	..	..	..	3	2	5	82	26	108
60 years and under 70 years	..	..	..	..	..	..	1	..	1	..	2	2	54	28	82
70 years and under 80 years	..	..	..	..	..	..	..	..	..	1	..	1	38	11	49
80 years and under 90 years	..	..	..	..	..	..	..	..	..	4	2	6	11	3	14
90 years and over ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Unknown	..	..	..	..	..	..	..	..	..	..	..	..	2	1	3
	20	12	32	..	..	..	5	2	7	17	9	26	356	179	535

TABLE CXXXII.

MENTAL HOSPITAL, IPSWICH.

PREVIOUS OCCUPATIONS OF PATIENTS ADMITTED DURING THE YEAR.

	Males.			Females.			Total.		
Nil (Children)	17	12	29	3	..	3	..	..	..
Scholars	20	12	32	..	..	..	..	..	..

TABLE CXXXIII.

MENTAL HOSPITAL, IPSWICH.

CONDITIONS AS TO MARRIAGE OF PATIENTS WHOSE ADMISSIONS, DISCHARGES, AND DEATHS OCCURRED DURING THE YEAR AND THOSE WHO REMAINED IN THE HOSPITAL ON THE 30TH JUNE, 1950.

Condition as regards Marriage.	Admissions.			Discharges.						Deaths.			Remaining.		
				Recovered.			Relieved and not Improved.								
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Single	20	12	32	..	..	..	4	2	6	13	5	18	292	114	406
Married	..	..	..	..	..	..	1	..	1	4	4	8	47	51	98
Widowed	..	..	..	..	..	..	..	..	..	..	..	..	6	9	15
Divorced	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2
Unknown	..	..	..	..	..	..	..	..	..	..	..	..	11	3	14
	20	12	32	..	..	..	5	2	7	17	9	26	356	179	535

TABLE CXXXIV.

MENTAL HOSPITAL, IPSWICH.

LENGTH OF RESIDENCE IN THE HOSPITAL OF THE PATIENTS WHO WERE DISCHARGED OR WHO DIED DURING THE YEAR AND OF THOSE WHO REMAINED ON THE BOOKS OF THE HOSPITAL ON 30TH JUNE, 1950.

	Discharges.									Deaths.			Remaining.		
	Recovered.			Section 49.			Relieved and not Improved.								
	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.
Under 1 month	..	..	..	..	..	..	..	..	..	1	1	2	2	2	4
1 month and under 3 months	..	..	..	..	..	..	..	2	2	2	1	3	5	3	8
3 months and under 6 months	..	..	..	..	..	..	1	..	1	2	1	3	4	2	6
6 months and under 9 months	..	..	..	..	..	..	..	..	..	1	..	1	2	..	2
9 months and under 12 months	..	..	..	1	..	1	..	..	..	..	..	..	..	2	2
1 year and under 2 years	..	..	..	..	..	..	2	..	2	..	..	..	14	14	28
2 years and under 3 years	..	..	..	..	..	..	..	..	..	1	..	1	13	5	18
3 years and under 5 years	..	..	..	..	..	..	..	..	..	..	..	..	39	19	58
5 years and under 7 years	..	..	..	..	..	..	1	..	1	1	..	1	55	33	88
7 years and under 10 years	..	..	..	..	..	..	..	..	..	1	..	1	40	18	58
10 years and under 12 years	..	..	..	..	..	..	..	..	..	1	..	1	24	8	32
12 years and under 15 years	..	..	..	..	..	..	..	..	..	..	2	2	29	17	46
15 years and under 20 years	..	..	..	..	..	..	..	..	..	2	1	3	42	18	60
20 years and over	..	..	..	..	..	..	..	..	..	5	3	8	87	38	125
Totals	..	..	..	1	..	1	4	2	6	17	9	26	356	179	535

TABLE CXXXV.

MENTAL HOSPITAL, IPSWICH.

QUANTITIES OF VEGETABLES AND FARM PRODUCE.

	T.	C.	Q.	L.
Barley	11	0	0	0
Cow Cane	6	5	0	0
Cow Peas	11	0	0	0
Ensilage	44	5	0	0
Garden Vegetables	26	5	3	1
Grass Hay	138	0	0	0
Green Maize	27	5	0	0
Potatoes	0	3	0	24
Pumpkins and Turnips	4	19	0	13
Sorghum	96	15	0	0

TABLE CXXXVI.

MENTAL HOSPITAL, IPSWICH.

EXPENDITURE TABLE.

Average number daily resident during the year	527
	£ s. d.
Total expenditure	130,605 18 1
Maintenance collected by Public Curator	6,259 13 5
Sales	219 4 1
Net expenditure	124,127 0 7
Gross cost per patient per annum	247 16 7
Net cost per patient per annum	235 10 8
Gross cost per patient per week	4 15 4
Net cost per patient per week	4 10 7

CHARTERS TOWERS MENTAL HOSPITAL.

The construction of a mental hospital at Charters Towers is being undertaken to provide a psychiatric service to the northern regional area of this State.

The detailed planning of this hospital has been very thorough. It exemplifies the most modern concepts, which place remedial facilities and amenities before custody.

Several sites with the necessary essentials of area, aspect, water, light, power, &c., were inspected before that at Charters Towers was decided upon as being the most suitable, and plans for the complete layout were then prepared by an architect from the Public Works Department.

Roadways were constructed by the Main Roads Commission prior to the building construction being undertaken, thus enabling all buildings to have efficient service access and in addition enabling the haulage of materials over prepared surface roads.

Landscape work has been proceeded with under the direction of the Superintendent of Institutional Gardens. This comprises the necessary fencing and clearing, the preparation of parklands with the planting of flowering trees and shrubs.

The Irrigation and Water Supply Department have made an investigation into the quality and quantity of water available and submitted a full report thereon.

Electricity is being supplied by the local electric light authority.

The Department of Agriculture and Stock has had its experts cover the area and advisory reports submitted by the Director of Dairying, the Adviser in Agriculture, and the Senior Soil Conservationist. Areas have been set aside for agriculture and dairying, and the work of clearing these areas is under way.

Building construction of the male and female wards has been commenced, and this work is proceeding whilst the house for the Farm Bailiff, who is doing the landscape work, is nearing completion.

The completion of the Charters Towers Mental Hospital will provide a complete psychiatric service, augmenting the very excellent work now achieved by the Psychiatric Clinic of the Townsville General Hospitals Board.

EPILEPTIC HOME, WILLOWBURN.

The visiting medical officer attends bi-weekly and in any emergency.

The general health of the patients has been very good and there has been no serious illness or epidemic. The comfort of the patients and the general appearance of the Home has been greatly improved by the enclosure of all the verandas with glass louvres. This was a long-felt want and is greatly appreciated by all. The work could be further improved by painting the original building.

The diet is of a high standard and the kitchen is very well equipped with modern conveniences, the latest addition being the potato peeler. The cold room is now in use, operating as an adjunct to the storeroom.

The appearance of the grounds has been enhanced by the use of a motor lawnmower. We have been able to grow most of the vegetables required for the Home and at one period we were in a position to be able to supply another institution with one ton of vegetables. Unfortunately, the rain of the last few months destroyed quite a number of young plants.

The conversion of the Kettle residence into a temporary school still leaves a great deal of necessary work to be done.

A number of the patients are occupied in some manner of work under the guidance of the staff. It is felt that the services of a social welfare worker would be a considerable benefit in guiding this occupational therapy. The attendance to the poultry keeps some of

the male patients occupied. The home is fortunate in having plenty of eggs for the greater part of the year and birds for the table occasionally.

Assistant Psychologist.—For a portion of the year an Assistant Psychologist has been employed, during which time she was engaged in assessing the capabilities of the patients.

Entertainment.—A first-class orchestra from town supplies the music for a monthly dance to which patients may invite their friends. The radiogram is used for the weekly dance and it is a great success. Films are shown every week and the patients play cards and games, &c., in the evening. A small library is patronised by a number of patients. Daily papers and periodicals are distributed around the wards. Quite a number of the patients attended the Toowoomba Show, and occasional outings and picnics have been arranged, especially for the children. Mr. Monty Bloom and his party and the various churches gave concerts and entertained the patients.

Church services are held regularly and the Salvation Army Band visits the Home every other month.

Laundry.—The laundry is now equipped with two household washing machines, but negotiations are in progress re the sending out of the heavier articles to be laundered.

Staff.—The positions of Superintendent and a Sister are still vacant.

A table showing the movements of patients during the twelve months ended 30th June, 1950, is set out hereunder:—

TABLE CXXXVII.
PATIENTS AT 30TH JUNE, 1949: MALES, 51; FEMALES, 61; TOTAL, 112.
FOR YEAR ENDED 30TH JUNE, 1950.

Age.	Admitted.		Discharged.		To Ment. Hosp.		Deaths.		Remaining.		Total.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Under 5 years	..	..	..	..	..	..	..	..	..	..	..
5 years and under 10 years	..	1	..	..	..	..	..	..	4	2	6
10 years and under 15 years	..	..	1	..	..	..	..	..	5	6	11
15 years and under 20 years	..	4	..	1	..	..	..	..	4	7	11
20 years and under 25 years	1	..	..	..	..	..	..	..	9	5	14
25 years and under 30 years	..	..	1	1	..	..	..	..	5	5	10
30 years and under 35 years	..	1	..	1	..	..	..	..	4	7	11
35 years and under 40 years	1	..	..	..	1	1	..	..	6	7	13
40 years and under 45 years	..	..	..	..	..	..	..	..	4	7	11
45 years and under 50 years	1	..	..	..	..	..	..	..	4	7	11
50 years and under 55 years	..	..	..	..	..	..	..	..	..	3	3
55 years and under 60 years	..	..	..	..	..	..	..	..	4	3	7
60 years and under 65 years	..	..	..	..	..	..	1	..	..	3	3
65 years and over	..	..	..	..	1	..	..	..	6	..	6
Totals	3	6	2	3	2	1	..	1	50	62	112

PATIENTS RESIDENT—

Under 5 years	39
5 years and under 10 years	29
10 years and under 15 years	19
15 years and under 20 years	12
Over 20 years	13

CAUSES OF DEATH—

Female aged 64. Hypostatic Pneumonia, Epileptic Psychosis,
Chronic Epilepsy.

DEPARTMENT OF SOCIAL SERVICES.

Welfare Officer, Mrs. V. WILLS.

Until November, 1949, the Welfare Officer visited homes of patients notified as suffering from tuberculosis, and patients who were not hospitalised were instructed in personal hygiene in relation to the spread of the disease. Appointments were arranged—regarding Mantoux tests, B.C.G. vaccination, and transportation to the Brisbane Hospital for X-rays. Where possible, better accommodation was sought. This work was taken over by the Assistant Welfare Officer, following her appointment in November.

During the Sonne dysentery outbreak, specimens were collected from different parts of Brisbane and delivered to the Queensland Institute of Medical Research. This entailed two or three visits weekly to each place. The temporary housing areas were also visited at least three times weekly to see that hygiene was strictly observed so that spread of the epidemic could be prevented. Inspections of these areas are carried out weekly as routine duty.

Most of the tenants have a high standard of hygiene but there are a few who need to be watched constantly as they will readily lapse into bad habits.

For the welfare of the tenants in these areas arrangements were made for repairs in several instances, and these have been of benefit. Thanks are extended to the Housing Commission for their splendid co-operation in this regard.

At the request of the Deputy Housing Commissioner a visit was paid to the State rental houses, and an inspection made when difficulties were met in making the tenants adhere to hygienic practices. Good results followed these inspections.

Accommodation, both temporary and permanent has been arranged for people without homes or those who have been evicted and who had nowhere to go.

Periodic inspection of ladies' public conveniences both in the city and at the Exhibition grounds during the whole of Exhibition week has been carried out.

Appointments were made for persons needing medical attention, and others have been advised to visit the Psychiatric Clinic. The sick and infirm were also visited in their homes and in hospitals and appointments were made at the hospital for elderly people to receive treatment. A similar service was performed in respect of visits to the Dental Hospital.

All complaints have been thoroughly investigated and reports furnished to the respective departments. Those in distress have been helped in the alleviation of the problems causing such distress, and as far as circumstances allowed, the matters have been adjusted.

Assistance has also been given in the filling in and witnessing of claims for invalid and old age pensions.

LEGISLATION.

"The Food and Drug Regulations, 1939" were amended on 1st December, 1949, by allowing waste beer to be denatured by the addition of an approved emulsifying oil or other approved substance. The reason for this amendment was the damage done by methyl violet to hands and clothes.

Power is given to the inspector to take a sample of any waste beer for the purpose of analysis, and should a person be found guilty of a breach of the Regulations he may be liable to a penalty not exceeding £50.

Rubella (German measles) in females over the age of fourteen years was declared a notifiable disease by notification which appeared in the *Government Gazette* on 17th September, 1949. On receipt of a notification inquiries are made in regard to the possibility of the person notified being pregnant.

"The Poisons Regulations of 1947" were amended by the addition of 6-morpholino-4 : 4-diphenylheptane-3-one hydrochloride (known as C.B.11) to Schedule I (Poisons) and Schedule IV (Restricted Drugs.)

"The Health Acts, 1937 to 1948," were amended by Part VI. of "*The Sewerage, Water Supply and Gasfitting Act of 1949*," and they are now cited as "*The Health Acts, 1937 to 1949*." The definition of the word "drain" was repealed and a new definition of "storm water drain" inserted; where the words "drain" or

"drainage" occurred they were repealed, and the terms "storm water drain" or "storm water drainage" respectively inserted.

ACKNOWLEDGMENTS.

I desire to express my gratitude to all members of the staff for their unfailing and conscientious attention to duty. Thanks are also given to Government Departments, particularly to the Government Statistician (Mr. S. E. Solomon) for his assistance in preparing the statistical tables, to the Department of Public Works for their co-operation in expediting requests made to them, and to the Council of the Queensland Branch of the British Medical Association for their co-operation in bringing under the notice of their members requests from the Department.

I would also like to acknowledge the kindness shown to me by Dr. F. A. Johansen and the staff of the United States Marine Hospital, Carville, to Dr. J. A. Doull, Medical Director of the Leonard Wood Memorial (Hansen's disease), and Dr. George Payne of the Rockefeller Foundation; also the assistance given by them to me in my investigations into Hansen's disease and other conditions when I visited the United States.

ABRAHAM FRYBERG,

M.B., B.S. (Melb.), D.P.H., D.T.M., (Syd.),
Director-General of Health and Medical Services.

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