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

1957.

QUEENSLAND.

ANNUAL REPORT

OF THE

HEALTH AND MEDICAL SERVICES

OF THE

STATE OF QUEENSLAND

FOR THE

YEAR 1956-57.

PRESENTED TO PARLIAMENT BY COMMAND.

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ANNUAL REPORT OF THE DIRECTOR-GENERAL OF HEALTH AND MEDICAL SERVICES, 1956-57.

The Honourable the Minister for Health and Home Affairs.

SIR,—I have the honour to submit for your information the Annual Report of the Health and Medical Services Branch of the Department of Health and Home Affairs during the year ended 30th June, 1957.

ABRAHAM FRYBERG,
M.B., B.S. (Melb)., D.P.H., D.T.M. (Syd.),
Director-General of Health and
Medical Services.

STAFF.

Dr. D. Gordon, Director of Industrial Medicine, resigned as from 28th February to become the first Professor of Social and Preventive Medicine within the University of Queensland. The importance of preventive medicine was stressed as a reason why a Faculty of Medicine for the full training of medical students should be established and it was fitting that a Queensland graduate of the standing of Professor Gordon should be appointed to the newly established Chair. Professor Gordon joined the Department in 1946 and to him must go the credit of building the Division of Industrial Medicine to its present high standard. He held the respect of both employer and employee and an opinion given by him was accepted by both sides as quite unbiassed. Dr. E. M. Rathus was appointed Acting-Director of the Division.

The shortage of medical practitioners in the State was again evident. Action was taken to bring the excellent opportunities in medical practice under the notice of British doctors. Dr. I. Dickson has taken up the position of Chest Physician, Townsville, and Dr. G. Howells, who has been appointed Chest Physician, Toowoomba, should arrive later in the year. Other appointments from overseas doctors were made to Gladstone, Warwick, Dalby, and the Brisbane Mental Hospital and these doctors have arrived. Overseas doctors expected to arrive in the current year have been appointed to Ayr, Mareeba, Blackall, Charleville, Tully, and Cloncurry Hospitals, while Dr. I. R. McDonald was appointed part-time anaesthetist to the Toowoomba Hospital and Dr. G. T. Stockings was appointed part-time psychiatrist to the Rockhampton Hospital. It will be necessary to continue recruiting not only doctors but laboratory technicians from overseas, if hospitals are to be staffed. During the next three years, the maximum number of students who will graduate will be 67 in 1957, 65 in 1958, and 50 in 1959, respectively, and there will be fifty-four first year vacancies at the hospitals under the Brisbane and South Coast Hospitals Board and nine at the Mater Misericordiae Hospital each year.

Dr. I. Chapple completed his Fellowship service and left the Department to enter private practice. Dr. R. B. Cross, a Fellowship holder, who was Medical Superintendent of the Winton Hospital, was awarded a Wilkie Research Fellowship and he is proceeding overseas to study at the Edinburgh University. Fellowship graduates occupy positions in hospitals at Goondiwindi, Peel Island, Kingaroy, Tully, Cloncurry, Toowoomba Mental Hospital, Barcaldine, Augathella, Tambo, Hughenden, Collinsville, Bowen, Alpha, Winton, and Aramac, and Dr. R. L. Doherty will return from U.S.A. to the Queensland Institute of Medical Research next month.

Dr. Pamela Jackson resigned as Deputy Director of the Division of Maternal and Child Welfare and was succeeded by Dr. J. F. McFarlane.

It is with deep regret I record the death of Dr. O. S. Hirschfeld, late Chancellor of the University of Queensland and Senior Visiting Physician to the Brisbane Hospital. Dr. Hirschfeld was nominee of this Department to the Poison Schedules Committee of the National Health and Medical Research Council as well as being a member of the Advisory Committee on Hospital Drugs and Surgical Appliances and was only too happy at all times to assist the Department for the benefit of the people of this State.

INTRODUCTORY REMARKS.

Vital Statistics.

The population of Queensland is now increasing at a rate which approximates 2·1 per cent. per annum. This indicates a healthy population, but also means that the provision of medical services, housing and schools throws a heavy load on a developing State with many calls for developmental expenditure from its strictly limited income. In the years following World War II., the pressure for housing was such that many houses were erected without proper drainage. Sewerage extensions fell hopelessly in arrears, whilst rising costs have since made the difficulties of local authorities all the greater in providing amenities such as water supplies and sewerage. There lies ahead a great deal of work to provide for the people of this State the amenities (such as reticulated water, electricity, and water carriage of night-soil) of modern living to which they are entitled.

The birth rate remains high at 23·7 per 1,000 population. In a modern State the birth rate is a reliable index of the age of the population (countries with many aged people have fewer births) and of economic conditions generally.

The infantile mortality rate rose from 20·3 in 1955 to 22·7 in 1956. It is hoped that this is merely a temporary increase. It was due to an increase in deaths from prematurity and from pneumonia. The causes of prematurity are largely unknown. The increase in deaths of infants from pneumonia will be watched closely. Probably the increase from this cause was due to chance variation or to some unusual seasonal conditions, but, if it is not, there is a possibility that there is an increase in the number of organisms capable of causing pneumonia which are resistant to various antibiotics. In this connection, it might not be inappropriate to call attention to the increase in deaths from pneumonia in Queensland—the total deaths from pneumonias of all types rising from 307 in 1955 to 481 in 1956. Although the infecting organism is not quoted in these statistics, it is common knowledge that there is an increase in staphylococcal pneumonia and empyema and that the staphylococcus is the organism most likely to develop resistence to antibiotics.

Of the infectious (or rather, notifiable) diseases, deaths from diphtheria declined from 7 in 1955 to 5 in 1956, while whooping cough has caused no deaths in white children since 1954. It should not be assumed that whooping cough is no longer a disease to be feared and that therefore immunisation against it is not necessary. The history of whooping cough, as of other infectious diseases such as scarlet fever and diphtheria, is one of waxing and waning incidence and virulence. It is certain to return some time with renewed severity. There is little evidence yet of a significant decline in deaths from tetanus, in spite of widespread acceptance of the effectiveness of tetanus toxoid in preventing the disease. About a quarter of all Australian deaths from tetanus occur in residents of Queensland and the need for active immunisation should be obvious to all.

Deaths from tuberculosis have declined by 100 per cent. in four years, and in 1956 caused less than 7 deaths in every 1,000, compared with 118 per 1,000 at the turn of the century. This dramatic fall in the number of deaths can not be ascribed to modern drugs alone or to other special methods of treatment. It has been proceeding for many years. Development of racial immunity and elimination of susceptible persons are probably the two most important factors. Nevertheless, there is no doubt that treatment available today does prolong the lives of sufferers from tuberculosis.

Degenerative diseases of the heart and blood vessels, which includes vascular lesions of the brain, caused more than 40 per cent. of all deaths. Although the great majority of these deaths would have occurred in elderly people, there still remained a considerable number of deaths in middle-aged persons in the prime of life. No one can doubt that research into the causes of degenerative vascular diseases is urgently required. The role of dietary fat in particular needs to be elucidated. Too much fat and too many calories in the diet of middle-aged people appear to enhance the incidence of atherosclerosis.

Accidents accounted for 845 deaths (almost 7 per cent. of all deaths) in 1956, as compared with 782 deaths in 1955. Accidents now kill more children and young adults than all the infectious diseases combined. A survey into the causes of accidents in the home and at work is now in progress and it can be anticipated there will be some very significant findings. In the meantime, attention might be called to the prevalence of deaths from drowning. In spite of learn to swim campaign and swimming pools in schools, deaths from drowning are not being reduced.

A further interesting sidelight is that more people died from suicide in 1956 than from tuberculosis, diphtheria. tetanus, poliomyelitis, and measles combined. A survey of suicide in Queensland—the age groups, occupations, economic status, and apparent contributory factors involved would make an interesting study.

Communicable Diseases.

The immunisation of children in the age group six months to fourteen years inclusive with Salk vaccine was a great success and was an example of what can be achieved in the field of preventive medicine by co-operation. The Honourable the Minister (Hon. W. M. Moore) announced details of the campaign at a Press conference and the publicity given by both Press and Radio throughout the whole year has been a big factor in the success of the campaign. The organisation of the campaign was carried out by School Health Services and in this regard I would pay special tribute to Mr. W. Johnston who was seconded from the inspectorial staff of the Department to do this after the basic principles had been laid down by the Chief Medical Officer, School Health Services (Dr. P. R. Patrick).

The opportunity was given for practically every child in the State to have two injections by 30th June and as at that date 769,705 injections had been given to children. Although I have not yet received exact statistics, I estimate that 3,828 children have received three injections, 376,132 children have received two injections and 5,957 children one injection only or, in others words, a total of 385,917 children at risk have been given some degree of protection. Although it is too early to say definitely that immunisation with Salk vaccine is the answer to poliomyelitis, the reduction in incidence in a year when an increase in the number of cases, if not an epidemic, was expected, gives hope that poliomyelitis will soon be a preventible disease. The monthly notifications received for 1957 were (corresponding statistics for 1956 in brackets) :—

January	7	(16)
February	8	(16)
March	4	(15)
April	1	(29)
May	—	(12)
June	—	(3)

The campaign is the biggest undertaking in preventive medicine carried out in Queensland and its success was due to co-operation between members of the British Medical Association, officers of the Department of Public Instruction, the nurses and staff of the Division of School Health Services, Local Authorities, the Red Cross Blood Bank, St. John's Ambulance Brigade and the Press, Radio, and the Queensland Health Education Council. The vaccine was supplied to the State free of charge by the Commonwealth Health Department through the Deputy Director (Dr. D. A. Dowling). I would take this opportunity of giving thanks to all who contributed to the success of the campaign.

Hansen's Disease.

The number of white patients at Peel Island is now 20, of whom two patients eligible for discharge have been given approval to remain. At Fantome Island the number of patients is 24. These low figures are due to modern therapy as a result of which there were no re-admissions. The patients, appreciating the position, take great care to see they continue treatment after leaving the Island and the only patient who has been re-admitted since the sulphone treatment was established admitted that he had not availed himself of the free drugs after his discharge.

At both hospitals the outlook of patients is bright and their approach to the future is one of optimism.

Division of Food and Drugs.

It is pleasing to note that the relationship between industry and the Department during the past few years has been a happy one, the old feeling of the industry looking upon officers of the Department as interfering and unrealistic being replaced with the realisation that we desire the co-operation of the trade to improve food standards and to protect the public against unscrupulous manufacturers. Discussions have taken place at times with various trade representatives as a result of which mutually satisfactory decisions have been reached to the benefit of the people of Queensland. Much thought has been given to new Food and Drug Regulations. There has been delay in finalising these because of the desire to obtain as much uniformity as possible with other States but they are now ready for submission for gazettal.

The Poisons Regulations of the various States have been under review in an endeavour to obtain uniformity and these also should be ready for consideration within the next few months.

Supervision of the processing and sale of milk has proved that Queensland has a pure milk supply and it is now a relatively unimportant cause of disease. Frequent inspections to see this high standard continues are necessary as milk is the basis of many diets for invalids. The number of prosecutions for adulteration dropped from twenty-three to fourteen.

Despite repeated warnings there was an increase in prosecutions for adulteration of mincemeat with preservative from twenty-nine to thirty-four. Mincemeat is also used in the diet of convalescent patients and prosecutions of butchers will continue until it is realised that fresh meat must be used for this.

Environmental Sanitation.

Although the activities of this Section of the Department are the basis of public health, it is the least spectacular. Over the years the responsibilities for hygiene control have been delegated to the Local Authority. Departmental inspectors visit all areas in a supervisory capacity. The institution of water supplies and sewerage systems cost money and it is to be regretted that there are towns in Queensland where there is no running water or where no thought is being given to a sewerage system. Generally speaking, the disposal of human wastes by the pan system is, thanks for the supervision of the local health inspector carried out efficiently but nowadays this method must be considered primitive. There is a Government subsidy for new sewerage and water supply work.

Another important activity of this Section is mosquito control for which a £1 for £1 subsidy is paid. The malaria carrying mosquito, *A. faurati*, is found as far south as Ingham and should there be another war it can be anticipated that North Queensland will again be an Army base with an influx of malaria carriers. During the last war there was an epidemic of malaria in Cairns. The Army dug temporary drains which proved effective in the control of mosquito breeding. Unfortunately these earth drains, as a result of erosion, tend to become mosquito breeding grounds and it is only the control work carried out by the Cairns City Council which keeps breeding down.

Despite repeated requests the Commonwealth Government, which has some responsibility in making the drains permanent works, are only prepared to contribute £18,000 towards a scheme which to do properly will cost over one million pounds. The importance of having this work completed was emphasised by Sir Hamilton Fairley, the world famous malariologist who was Adviser to the Australian Armed Forces, and it is to be regretted that the Commonwealth will not contribute a greater amount.

With the expansion of secondary industries in Brisbane complaints are being received of atmospheric pollution, particularly by smoke and dust. The increase in motor cars and buses

has resulted in the discharge of a large amount of gas into the air. Atmospheric pollution is responsible for economic loss in the form of damage to buildings and clothing but these are outweighed by the harm done to members of the community. Atmospheric pollution is a cause of respiratory disease, particularly in the aged and may be a contributing factor to the increase in lung cancer.

It is appreciated it is difficult to control. Co-operation by industry in the development and application of mechanical devices to control aerial waste products and the development and application of new sources of heat and power will reduce pollution rather than legislation.

This Department has long appreciated the relation of lead to nephritis and for this reason has prohibited the sale of paint and toys containing lead. For many years industry has been warned regarding lead toys with little effect. Last year action was taken to withdraw lead toys from sale and a warning given that little leniency can be expected this year. It is hoped the trade will co-operate with the Department this year.

Division of Tuberculosis.

The modern approach to tuberculosis gives hope that this disease will eventually be eradicated. Mass X-ray finds the active case and by hospitalisation and treatment he becomes non-infectious thus removing a focus of infection. Every case of tuberculosis discovered means the slowing down of transmission so eventually the disease will be eradicated.

The thoracic annexe to the Toowoomba Hospital should be occupied within the next few months and action has been taken to appoint a Chest Physician to that centre. Work on the thoracic annexe to the Rockhampton Hospital has commenced and should be completed before the end of the present financial year. The thoracic annexe at Cherbourg for the hospitalisation of aboriginal patients is nearly completed and will be occupied within the next few months. With the completion of Chermside there will be adequate accommodation for tuberculosis patients in this State.

It is interesting to note that the incidence of tuberculosis in the coloured people of Queensland is lower than first estimated.

The Mantoux testing of children leaving primary school continues and B.C.G. vaccination is made available to negative reactors. This should help materially in the prevention of tuberculosis in this age group as they get older.

Division of Industrial Medicine.

The work of this Division of the medical services is mainly to solve the problems brought about by the conditions of work in industry. Surveys are carried out into environmental conditions likely to cause illness and suggestions are put forward to remedy them; attention is paid to safety measures, and the regulation of working conditions and investigations into atmospheric pollution by dust and gases are carried out. An important activity in co-operation with the Queensland Health Education Council, is health education. I would point out that it is difficult to educate adults set in their ways so health education should be given to students during their University and technical college years. Lectures were prepared by Professor Gordon and efforts will be made to have them given during the coming year.

It has been the policy of this Division to act in an advisory capacity only, enforcement of requirements being carried out under the law administered by the Department of Labour and Industry. This has allowed happy relationships between the Department, employer and employee, and the advice given by Professor Gordon was accepted by all concerned as unbiassed. Usually co-operation was given but it has been necessary to bring recommendations under the notice of the Department of Labour and Industry for implementation.

Professor Gordon, during his term as Director of Industrial Medicine, earned the respect of all persons with whom he was associated and he laid the foundations of industrial medicine in Queensland. In his present position of Professor of Preventive and Social Medicine, he will have the opportunity of teaching the future doctors of this State the importance of the prevention of disease in industry.

Division of Maternal and Child Welfare.

Remarkable progress has been made in reducing the maternal and infant mortality rates since the Division was established in 1918 with four centres and eight nurses. At that time the greatest cause of death in infants was infectious diarrhoea but thanks to modern treatment and a pure milk supply—96 per cent. of milk used in Brisbane is heat treated—deaths from this condition are rare. Over the period of forty years following the establishment of the first clinics, the maternal mortality rate has declined from 4·7 per thousand live births to 0·89 while the infantile mortality rate has declined from 56·9 per thousand live births under one year to 22·7. In this period the number of centres and subcentres has expanded to 232 staffed by 140 nurses.

Most maternal deaths may be divided into three categories: during the past year infections accounted for nil, toxaemias 7 and haemorrhage and trauma &c. 17. In 1946 these figures were 9, 22, and 23, respectively, and in 1936, 19, 17, and 24. The decline in deaths from infections has been due to the development of

antibiotics and the increased use of blood transfusions: better ante-natal care has been responsible for the reduction in the death rate from toxaemias of pregnancy while deaths from haemorrhage and trauma have decreased as the result of improved obstetrical management and the use of blood transfusions.

While there has been a big decrease in infantile mortality, much remains to be done as the number of deaths of infants under the age of one year—737—is too high. Of the total number of deaths, 189 were due to prematurity, and death from this condition has been reduced as a result of improved facilities and trained welfare nurses for the care of premature babies.

There was an increase in the deaths from pneumonia from 317 in 1955 to 481 in 1956. In the past ten years there has been a reduction from 520 or 4·8 per cent. of all deaths to 481 or 3·9 per cent. This may be mainly attributable to the use of antibiotics but although it is realised that there was an epidemic of upper respiratory tract infections during the year the problem of antibiotic resistance must be considered.

The incidence of infant deaths from gastro intestinal infections has undergone a big reduction as the result of improved hygiene, nursery techniques, and chemotherapy. The problem of prematurity is to be investigated by this Division, case histories of each death are to be obtained and a study made to see if the incidence can be reduced.

Division of Mental Hospitals.

One of the most pleasing features of the past year was the extension of facilities by Hospitals Boards to care for aged patients who have deteriorated mentally because of old age and who are in-patients of mental hospitals. Many also suffer from physical disabilities requiring nursing treatment and this is given better by a general hospital. In addition to the Wondai Hospital annexe of 20 beds, Mt. Lofty Hospital (an annexe of the Toowoomba Hospital) has had extensive alterations carried out and will admit 100 male patients; Oakey Hospital (also under the Toowoomba Hospitals Board) which at present has a daily average of 85 women, will admit up to 94 patients, while Jubilee Hospital (under the direction of the Dalby Hospitals Board) which now has 130 women patients, will have 154 as a result of alterations to buildings. I recently inspected these hospitals and it was a pleasure to see the happiness on the faces of the old folk. The service given by the nursing staff of these hospitals is an inspiration to all who are responsible for the care of the sick and I would suggest to anyone interested to avail themselves of the opportunity to see for themselves what is being done for these patients. Other accommodation being provided is a 40 bed annexe at Roma.

Much has been written in the medical literature about the "tranquilising" drugs and our experience has shown as expected that they are not a "cure-all" for mental disease. In selected cases they enable a patient to be discharged, while they settle down some chronic patients sufficiently to allow them to go on leave.

It is only of recent years that the opportunity to study for Part I. of the Diploma in Psychological Medicine has been available at the University of Queensland. This has been responsible for raising the standard of medical treatment in our hospitals. It is still necessary to go to Sydney or Melbourne to do Part II. and to enable the Staff to do this an allowance is made by the Department. At the present time, there are two doctors on the staff who are the holders of the D.P.M. and two who possess Part I. It is pleasing to see that the junior members of the staff are anxious to avail themselves of the chance to study for this qualification.

Division of Laboratory Services.

Early recognition was given to the important role played by laboratory procedures in the public health programme. This may be attributed to the realisation that scientific guidance was essential if disease was to be prevented. In the first report issued in 1901 by the first Commissioner of Public Health (Dr. Burnett Ham) he stated "Queensland has always led the way in the matter of food adulteration. Much praise is due to Mr. Henderson, the Government Analyst, for his long continued and untiring efforts to secure a wholesome food and drink supply to the community of this State. The Queensland Health Department was the first in the Commonwealth to issue regulations. . ." The need for laboratory help at a time when epidemic disease was prevalent resulted in the establishment of the Bacteriological Institute.

Laboratory of Microbiology and Pathology.—At the beginning of the century the work of the Bacteriological Institute consisted mainly of examinations for the causal organisms of communicable diseases, bacteriological examination of water, and examination of pathological tissues. To-day this laboratory, now known as the Laboratory of Microbiology and Pathology, carries out tests required as an aid to the prevention of disease as well as those required by doctors in public hospitals and private practice to aid them in diagnosis and treatment. The study of leptospirosis, for which the Laboratory has received commendation from overseas workers, has continued and approval was given to the request of the World Health Organisation to have it recognised as a Leptospiral Reference Laboratory.

Government Chemical Laboratory.—The services performed by the laboratories under the direction of the Government Analyst continue to expand and to carry out all chemical analyses required in implementing the provisions of the Health Act. An important activity is the examination of industrial dusts, gases. fumes, and other toxic substances to which workers might be exposed. As will be seen in the report of the Government Analyst, the Government Chemical Laboratory undertakes work for other government departments, both State and Commonwealth, as well as for private practitioners and the general public.

Vital Statistics.

Population.—The estimated population of Queensland at 31st December, 1956, was 1,378,947, an increase of 28,263 (or 2·1 per cent.) for the year. The estimated population living in the Greater Brisbane area was 531,000, an increase of 12,000 (or 2·3 per cent.) during 1956.

The population density per square mile is 2·06 persons for the whole of Queensland, 1,379 persons in the Greater Brisbane area, and 1·27 persons for the rest of the State; 38·5 per cent. of the population of the State reside in the Metropolitan area.

Births.—During 1956 births registered in Queensland totalled 32,409, an increase of 57 from the previous year, which was the highest number on record. The crude birth rate was 23·7, compared with 24·2 in 1955. The births comprised 16,702 males and 15,707 females, giving a masculinity rate of 106·3, which is slightly above the normal rate of about 105.

TABLE I.

Crude Birth Rate (per 1,000 Population).

——	1951.	1952.	1953.	1954.	1955.	1956.
Commonwealth of Australia	23·0	23·3	22·9	22·5	22·6	22·5
Queensland	**24·2**	**24·6**	**23·9**	**23·7**	**24·2**	**23·7**
New South Wales	22·0	22·2	22·1	21·3	21·3	21·3
Victoria	22·2	22·9	22·4	22·3	22·3	22·4
South Australia	23·8	23·7	23·4	22·9	22·5	22·3
Western Australia	25·5	25·7	25·5	24·9	25·2	25·0
Tasmania	25·5	26·5	25·3	25·0	25·6	25·2
New Zealand	24·4	24·8	24·1	24·7	24·9	24·7
United Kingdom	15·8	15·7	15·9	15·6	15·4	16·1
United States of America	24·5	24·7	24·6	24·9	24·6	24·9
Canada	27·2	27·9	28·2	28·7	28·4	28·1

The natural increase (excess of births over deaths) was 20,223, being equal to an increase of 1·5 per cent. of the population.

Deaths.—For the year 1956 deaths from all causes totalled 12,186, giving a crude death rate (deaths per 1,000 mean population) of 8·9 compared with 8·4 in the previous year, and still below the crude death rate of the Commonwealth of Australia. Table II. compares the crude death rates of Queensland, other States, and certain overseas countries since 1951.

TABLE II.

Crude Death Rate (per 1,000 Population).

——	1951.	1952.	1953.	1954.	1955.	1956.
Commonwealth of Australia	9·7	9·4	9·1	9·1	8·9	9·1
Queensland	**9·1**	**8·9**	**8·5**	**8·6**	**8·4**	**8·9**
New South Wales	9·7	9·6	9·4	9·5	9·3	9·6
Victoria	10·3	10·0	9·5	9·2	8·9	9·2
South Australia	9·8	9·3	9·0	9·0	9·2	8·9
Western Australia	9·1	8·7	8·2	8·4	8·2	8·2
Tasmania	8·9	8·6	8·3	8·7	7·9	7·8
New Zealand	9·6	9·3	8·8	9·0	9·0	9·0
United Kingdom	12·6	11·4	11·4	11·4	11·7	11·7
United States of America	9·7	9·6	9·6	9·2	9·3	9·4
Canada	9·0	8·7	8·6	8·2	8·2	8·2

The causes of death to residents of Queensland during 1956 are shown in Table III.

TABLE III.

SHOWING CAUSES OF DEATH OF RESIDENTS OF QUEENSLAND, 1956.

Causes of Death.	Males.	Females.	Persons.			
			1956.	1955.	1954.	1953.
Tuberculosis of Respiratory System	63	13	76	130	132	151
Tuberculosis, other	4	1	5	7	8	11
Diphtheria	..	3	3	10	4	12
Whooping Cough	..	..	..	..	3	4
Tetanus	9	16	15	10	14	20
Acute Poliomyelitis	4	1	5	5	5	12
Measles	5	5	10	2	7	2
Other Infectious and Parasitic Diseases	67	31	98	82	78	85
Malignant Neoplasms	964	732	1,696	1,601	1,558	1,504
Neoplasms, Benign and Unspecified	16	28	44	48	59	70
Hay Fever and Asthma	46	34	80	73	85	71
Diabetes Mellitus	52	81	133	137	135	129
Other Allergic, Endocrine System, Metabolic, and Nutritional Diseases	20	23	43	41	46	48
Pernicious and other Hyperchromic Anaemias	5	13	18	21	24	16
Other Diseases of the Blood and Blood-forming Organs	24	21	45	40	51	34
Mental, Psychoneurotic and Personality Disorders	65	22	87	87	71	77
Vascular Lesions affecting the Central Nervous System	719	848	1,567	1,404	1,421	1,351
Other Diseases of the Nervous System and Sense Organs	106	88	194	185	161	138
Diseases of the Heart	2,166	1,284	3,450	3,199	3,117	2,887
Hypertensive Disease	266	267	533	552	629	572
Other Diseases of the Circulatory System	149	122	271	296	245	246
Influenza	18	20	38	28	74	36
Lobar Pneumonia	77	46	123	98	111	106
Bronchopneumonia	113	123	236	149	156	142
Other and Unspecified Pneumonia	74	48	122	70	79	78
Bronchitis	121	28	149	103	117	105
Other Diseases of Respiratory System	149	69	218	196	181	153
Diseases of Stomach and Duodenum	83	24	107	103	114	114
Appendicitis	13	13	26	28	32	30
Diseases of Liver, Gallbladder, and Pancreas	77	63	140	132	127	124
Other Diseases of Digestive System	83	90	173	206	152	203
Nephritis and Nephrosis	159	142	301	271	275	325
Diseases of Male Genital Organs	90	..	90	88	114	102
Other Diseases of Genito-Urinary System	64	39	103	123	85	103
Deliveries and Complications of Pregnancy, Childbirth, and Puerperium	..	29	29	20	30	22
Diseases of the Skin and Cellular Tissue	14	14	28	25	19	26
Diseases of the Bones and Organs of Movement	22	25	47	40	51	41
Congenital Malformations	97	96	193	170	162	166
Intra-cranial and Spinal Injury at Birth	31	16	47	66	71	73
Other Birth Injury	27	18	45	43	37	39
Post-Natal Asphyxia and Atelectasis	33	28	61	66	67	81
Infectious of Newborn	18	9	27	23	24	31
Immaturity Unqualified	108	80	188	137	185	145
Other Diseases Peculiar to Early Infancy	37	36	73	63	69	98
Senility without mention of Psychosis	80	117	197	136	168	188
Symptoms Referable to Systems or Organs	9	4	13	14	19	20
Ill-defined and Unknown Causes	22	9	31	33	37	26
Motor Vehicle Traffic Accidents	242	74	316	276	259	257
Accidental Falls	72	108	180	188	191	223
Accidental Drowning and Submersion	62	11	73	60	62	67
Other Accidents	214	62	276	258	252	249
Suicide and Self-Inflicted Injury	105	40	145	151	150	179
Homicide and Injury Purposely Inflicted by Other Persons	15	3	18	16	21	14
Total from all Causes	7,079	5,107	12,186	11,307	11,344	11,006

TABLE IV.

INFANT MORTALITY RATES (DEATHS UNDER ONE YEAR PER 1,000 LIVE BIRTHS).

——	1951.	1952.	1953.	1954.	1955.	1956.
Commonwealth of Australia	25·2	23·8	23·3	22·5	22·0	21·7
Queensland	**25·7**	**24·9**	**25·0**	**22·3**	**20·3**	**22·7**
New South Wales	26·3	24·5	24·6	25·3	24·9	23·5
Victoria	22·6	22·3	21·2	19·3	18·4	19·3
South Australia	24·5	23·1	20·7	21·3	23·3	19·9
Western Australia	28·7	24·9	23·8	22·5	22·4	22·7
Tasmania	26·6	21·7	22·9	23·9	23·4	21·1
New Zealand	22·8	21·8	20·1	20·0	20·1	19·4
United Kingdom	31·1	28·1	27·6	26·3	25·7	n
United States of America	28·4	28·4	27·8	26·6	26·5	n
Canada	38·4	38·0	35·4	31·8	n	n

n Not available.

Marriages.—Registration of marriages during the year totalled 9,934, compared with 10,098 in 1955. The marriage rate was 7·3 per thousand mean population, compared with 7·5 in 1955. Marriages of minors during the year totalled 4,664 of whom 959 were males and 3,705 females.

Infantile Mortality.—The infantile mortality rate of Queensland, other States and certain overseas countries is shown in Table IV., while Table V. is a composite one showing the birth rates, infantile mortality, and reproduction rates of Queensland compared with the Commonwealth of Australia.

TABLE V.

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

	Crude Birth Rate.		Infant Mortality Rate.		Maternal Mortality Rate. (1)		Gross Reproduction Rate. (2)		Net Reproduction Rate. (3)	
	Queensland.	Australia.	Queensland.	Australia.	Queensland.	Australia.	Queensland.	Australia.	Queensland.	Australia.
1946	24·8	23·7	29·3	29·0	2·26	1·85	1·55	1·46	1·42	1·33
1947	25·6	24·1	30·8	28·5	1·62	1·87	1·64	1·49	1·54	1·36
1948	24·7	23·1	28·0	27·8	1·47	1·40	1·59	1·45	1·51	1·33
1949	24·0	22·9	24·7	25·3	1·44	1·21	1·56	1·46	1·48	1·33
1950	24·4	23·3	24·8	24·5	1·45	1·09	1·60	1·49	1·52	1·42
1951	24·2	23·0	25·7	25·2	1·18	1·05	1·62	1·49	1·54	1·21
1952	24·6	23·3	24·9	23·8	1·03	0·94	1·67	1·55	1·59	1·47
1953	23·9	22·9	25·0	23·3	0·71	0·62	1·65	1·56	1·57	1·48
1954	23·7	22·5	22·3	22·5	0·98	0·69	1·67	1·56	1·59	1·48
1955	24·2	22·6	20·3	22·0	0·62	0·64	1·71	1·59	1·62	1·51
1956	23·7	22·5	22·7	21·7	0·89	n	1·72	n	1·63	n

n Not available.

(1) *Maternal Mortality Rate.*—Deaths from puerperal causes per 1,000 live births.

(2) *Gross Reproduction Rate.*—Represents the number of female children born on the average to women living right through the child-bearing years if the conditions on which the rate is based continue.

(3) *Net Reproduction Rate.*—Is the gross reproduction rate corrected for deaths of females from birth to the end of the child-bearing period. It is a more accurate index than the gross reproduction rate. Unless it exceeds unity the population is not replacing itself.

The net reproduction rate is higher than the Australian average, whilst the maternal mortality rate declined from 5·77 in 1911 to 0·89 in 1956.

If the crude death rate had remained at the level prevailing in 1900 almost 3,800 additional deaths would have occurred in Queensland during 1956. In addition, the expectation of life has been increased by 15 years during that period.

DIVISION OF PUBLIC HEALTH SUPERVISION.

Deputy Director-General of Health and Medical Services: D. W. Johnson, M.B., B.S., (Syd.), D.T.M. & H. (Syd.).

Chief Inspector of Food and Drugs: W. H. Kelly.

Chief Sanitary Inspector: W. D. Pryor.

Secretary to Director-General of Health and Medical Services: T. O'Shea, M.R.San.I.

Microscopist-in-Charge, Hookworm Control: S. Thompson.

Inspectors in Charge of District Offices:

Townsville: H. P. Lowes.
Toowoomba: C. J. Murray.
Mackay: R. A. Burke.
Cairns: B. M. Keefe.
Rockhampton: G. W. Cuffe.

SECTION OF COMMUNICABLE DISEASE CONTROL.

Tables VI. and VII. show the reported incidence of notifiable diseases in the Metropolitan and extra-Metropolitan areas during 1956-57. Table VII. shows the incidence for the year 1956.

TABLE VI.

Communicable Diseases (exclusive of Venereal Diseases) 1st July, 1956, to 30th June, 1957. Metropolitan Area (Population at 1st July, 1956—527,500).

Diseases.	Months.												Total 1956-1957.
	1956.						1957.						
	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April.	May.	June.	
Anchylostomiasis	..	..	..	..	..	..	..	..	3	7	1	..	11
Anthrax	..	..	..	..	..	..	..	..	..	..	..	..	..
Bilharziasis	..	..	..	..	..	..	..	..	..	..	..	..	..
Cholera	..	..	..	..	..	..	..	..	..	..	..	..	..
Chorea	..	..	..	..	..	..	..	..	..	..	..	..	..
Coastal Fever	..	..	..	..	..	..	..	..	..	..	..	..	..
Diarrhoea (Infantile)	4	15	3	4	5	7	6	11	10	3	6	3	77
Diphtheria	1	..	..	1	..	..	..	..	1	..	..	..	3
Dysentery, Amoebic	..	..	..	..	..	..	..	..	..	..	..	..	..
Dysentery, Bacillary	1	..	..	3	6	12	16	17	10	3	3	1	72
Encephalitis Lethargica	..	..	..	..	..	..	..	..	..	..	..	..	..
Erythema Nodosa	..	..	..	..	..	..	..	..	..	..	..	..	..
Filariasis	..	..	..	..	..	..	..	..	..	..	..	..	..
Hansen's Disease	..	..	..	..	..	..	..	..	..	..	..	..	..
Lead Poisoning	..	..	..	..	..	..	..	..	1	..	..	..	1
Leptospirosis (Weil's Disease, Para-Weil's Disease, Seven-day Fever)	2	2	..	..	..	..	..	..	..	..	1	2	7
Malaria	..	4	3	3	3	2	..	2	2	2	..	2	23
Meningitis, Cerebro-spinal	3	4	1	1	1	2	2	..	..	..	1	..	15
Mossman Fever	..	..	..	..	..	..	..	..	..	..	..	..	..
Plague, Bubonic or Oriental	..	..	..	..	..	..	..	..	..	..	..	..	..
Plueral Effusion	..	..	1	..	..	..	..	..	..	..	..	..	1
Poliomyelitis, Acute Anterior	1	..	1	3	..	1	..	1	..	..	..	..	7
Puerperal Fever	..	..	..	1	..	..	..	..	..	..	..	..	1
Puerperal Pyrexia	..	..	..	..	1	..	..	..	..	1	..	..	2
Q. Fever	..	1	..	..	..	1	..	..	..	..	1	1	4
Relapsing Fever	..	..	..	..	..	..	..	..	..	..	..	..	..
Rheumatic Fever	15	4	9	5	5	5	4	5	7	5	5	3	72
Rubella	..	..	..	4	7	4	3	..	..	..	..	..	18
Sarina Fever	..	..	..	..	..	..	..	..	..	..	..	..	..
Scarlet Fever or Scarlatina	13	11	6	6	11	10	3	7	4	7	10	11	99
Smallpox (including Amaas or Alastrim)	..	..	..	..	..	..	..	..	..	..	..	..	..
Tetanus	1	..	3	1	1	..	1	2	1	..	..	1	11
Tuberculosis (all forms)	31	30	31	24	29	19	32	35	32	21	33	27	344
Typhoid Fever (including Paratyphoid Fevers)	1	..	..	..	..	1	..	..	..	..	..	2	4
Typhus Fever—													
Scrub	..	..	..	..	..	..	..	..	..	..	..	..	..
Tick	..	..	..	..	..	..	..	..	..	..	..	..	..
Murine	1	1	..	..	..	..	..	1	..	1	1	..	5
Undulant (Malta) Fever	..	..	..	..	..	..	1	..	1	..	..	..	2
Yellow Fever	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals	74	72	58	56	69	64	68	81	72	50	62	53	779

TABLE VII.

COMMUNICABLE DISEASES (EXCLUSIVE OF VENEREAL DISEASES) 1ST JULY, 1956, TO 30TH JUNE, 1957.
EXTRA-METROPOLITAN AREA (POPULATION AT 1ST JULY, 1956—843,197).

Diseases.	Months.												Total 1956-1957
	1956.						1957.						
	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April.	May.	June.	
Anchylostomiasis ..	16	45	7	201	9	1	..	24	9	52	2	4	370
Anthrax	..	..	..	..	..	..	..	..	..	..	..	..	..
Bilharziasis	..	..	..	..	..	..	..	..	..	..	..	..	..
Cholera	..	..	..	..	..	..	..	..	..	..	..	..	..
Chorea	..	..	..	..	..	..	..	..	..	..	..	..	..
Coastal Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diarrhoea (Infantile)	1	9	1	7	5	11	8	6	..	7	1	4	60
Diphtheria	..	4	..	..	..	1	1	1	1	2	3	3	16
Dysentery, Amoebic	..	..	..	2	..	..	..	..	..	..	..	1	3
Dysentery, Bacillary	1	1	..	3	101	3	2	2	4	14	1	3	135
Encephalitis Lethargica	..	..	..	..	..	..	..	..	..	..	..	..	..
Erythema Nodosa ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Filariasis	..	..	..	..	..	1	..	..	..	..	..	..	1
Lead Poisoning ..	1	..	..	..	..	1	..	..	1	..	..	1	4
Hansen's Disease ..	..	..	..	..	1	..	..	..	..	..	..	..	1
Leptospirosis (Weil's Disease, Para-Weil's Disease, Seven-day Fever)	24	4	14	17	9	10	11	19	6	15	11	19	159
Malaria	..	..	..	..	1	1	1	2	6	5	1	5	22
Meningitis Cerebro-spinal	6	9	6	3	1	2	2	1	3	2	1	3	39
Mossman Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Plague, Bubonic or Oriental	..	..	..	..	..	..	..	..	..	..	..	..	..
Pleural Effusion ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Poliomyelitis, Acute Anterior	1	2	2	2	7	2	8	7	4	3	..	..	38
Puerperal Fever ..	1	1	..	10	1	3	2	1	2	..	..	..	21
Puerperal Pyrexia ..	..	9	2	3	1	1	1	..	..	3	..	..	20
Q. Fever	1	..	1	..	..	..	..	2	1	..	1	..	6
Relapsing Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Rheumatic Fever ..	5	6	10	4	..	7	5	5	11	9	17	7	86
Rubella	1	..	1	..	..	..	2	..	..	..	..	..	4
Sarina Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Scarlet Fever or Scarlatina	20	13	11	24	21	16	11	7	7	10	8	3	151
Smallpox (including Amaas or Alastrim)	..	..	..	..	..	..	..	..	..	..	..	..	..
Tetanus	5	1	3	5	2	1	2	1	3	1	1	1	26
Tuberculosis (all forms)	30	19	59	29	34	35	36	32	36	30	39	27	406
Typhoid Fever (including Paratyphoid Fevers) ..	2	..	..	..	1	..	..	..	..	..	2	..	3
Typhus Fever—													
Scrub	..	1	2	6	..	1	2	4	3	2	2	3	26
Tick	..	..	..	..	..	..	..	..	..	..	..	..	..
Murine	..	..	..	..	..	..	2	3	..	1	1	1	10
Undulant (Malta) Fever	..	..	..	1	1	1	..	..	..	..	..	..	3
Yellow Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals	115	124	119	317	195	98	96	117	97	156	91	85	1,610

TABLE VIII.

NOTIFIED INCIDENCE OF COMMUNICABLE DISEASES IN QUEENSLAND (EXCLUSIVE OF VENEREAL DISEASES), SECTION 29 OF "THE HEALTH ACTS, 1937 TO 1955," DURING THE CALENDAR YEAR 1956.

Diseases.	Cases Reported on Prescribed Form.			
	Metropolis.	Outside Areas.	Total Whole State, 1956.	Total Whole State, 1955.
Anchylostomiasis	30	313	343	265
Anthrax	..	..	..	..
Bilharziasis	..	..	..	..
Coastal Fever	..	..	..	..
Cholera	..	..	..	..
Chorea	1	..	1	1
Diphtheria	6	14	20	68
Diarrhoea (Infantile)	113	60	173	222
Dysentery, Amoebic	..	7	7	5
Dysentery, Bacillary	162	146	308	206
Encephalitis Lethargica	..	1	1	4
Erythema Nodosa	..	..	..	2
Filariasis	..	1	1	..
Lead Poisoning	..	14	14	24
Hansen's Disease	..	1	1	6
Leptospirosis (including Weil's Disease, Para-Weil's Disease, Seven-day Fever)	13	186	199	191
Malaria (Infection not attributable to Queensland)	15	3	18	25
Meningitis, Cerebro-spinal	13	32	45	53
Mossman Fever	..	..	..	..
Plague, Bubonic or Oriental	..	..	..	..
Pleural Effusion	2	..	2	..
Poliomyelitis, Acute Anterior	62	50	112	180
Puerperal Fever	1	22	23	19
Puerperal Pyrexia	1	19	20	29
Q. Fever	6	6	12	15
Relapsing Fever	..	..	..	..
Rheumatic Fever	93	71	164	178
Rubella	15	4	19	14
Sarina Fever	..	..	..	..
Scarlet Fever or Scarlatina	90	167	257	716
Smallpox (including Amaas or Alastrim)	..	..	..	..
Tetanus	11	25	36	25
Tuberculosis (all forms)	343	383	726	685
Typhoid Fever (including Para-typhoid Fevers)	2	5	7	10
Typhus Fever—				
Scrub	..	13	13	26
Tick	1	3	4	..
Murine	9	8	17	29
Undulant (Malta) Fever	2	9	11	4
Yellow Fever	..	..	..	..
Totals	991	1,563	2,554	3,002

In the Greater Brisbane area, total notifications dropped from 1,252 in 1955-56 to 779 in 1956-57. Chief causes for the decline were bacillary dysentery (decrease of 140 notifications), scarlet fever (112), infantile diarrhoea (101), poliomyelitis (58), tuberculosis (23), and rheumatic fever (23). Total notifications for the calender year declined from 3,002 in 1955 to 2,554 in 1956 for the whole State. Declines were greatest in notifications of scarlet fever (459 fewer), bacillary dysentery (102), poliomyelitis (68), infantile diarrhoea (49), diphtheria (48) and tuberculosis (40). It is probable that these figures reflect a genuine decline in the incidence in some of the diseases mentioned, though in others (e.g. scarlet fever, bacillary dysentery and infantile diarrhoea) the fall is only temporary. Total notifications from country districts showed no decline compared with the total in 1955-56.

The reported incidence of notifiable diseases is not a good index of the state of the public health—although it is a reliable measure of the incidence of any particular infectious disease. For instance, diphtheria notifications exceeded 2,000 cases annually twenty-five years ago, when immunisation first became popular in this State. The fall to about 20 cases each year now is indeed a dramatic example of the waxing and waning of a disease and of the effects of widespread active immunisation. Some may think that diphtheria is now so rare that active immunisation is not worth while. Recent outbreaks of diphtheria in certain areas in America regarded as having high immunisation rates are warnings that diphtheria can still spread if people become lax and do not bother to have their children immunised.

Some comments on individual diseases are appended:—

Ancylostomiasis.—Notified cases increased from 179 in 1955-56 to 381 in 1956-57. All except 11 were from country districts, and the great majority were aborigines living in the northern parts of the State who were diagnosed in the course of surveys. Hookworm infestation is easily diagnosed and is readily treated. The aborigine in a settlement changes his personal habits very slowly, and re-infestation is the rule. Until he can be taught to refrain from polluting the soil with infected faeces we must expect a high infestation rate in mission stations and settlements situated on sandy soil in high rainfall areas.

Infantile Diarrhoea.—Notifications declined during the year, due probably ito the fact that no new species of infecting organism were introduced. Until washing of the hands after using the toilet becomes a universal habit we cannot expect any significant abatement in acute infective gastro-intestinal diseases. The installation of hand-washing facilities in school lavatories and in public lavatories should be encouraged.

Lead Poisoning.—The age distribution and the geographic location of 95 cases of lead poisoning notified over the last seven years is worth recording (Table IX). Fifty-nine notified cases were males, but male dominance of the notified cases is confined to persons more than 14 years of age, and most of these would have had excessive exposure to lead at work. Of 67 notified cases in children, 4 were less than 1 year of age, 24 were aged between one and 5 years, and 30 were between 5 and 10 years of age. Of the 95 cases, ony 15 were notified in the Greater Brisbane Area, but 50 cases came from Rockhampton city and the adjacent Livingstone Shire, where there has been marked public awareness of the risks of lead poisoning for several years. Many hundreds of samples of paint scrapings from homes in this area have been analysed, and results show very clearly the dangers of excess lead in paint. The figures afford justification (if any were needed) of this Department's unflinching opposition to lead paint in situations where children can have access to it. There is abundant evidence of the role played by lead in causing some types of chronic nephritis in children. As a result of an amendment of the Health Acts in 1955, it is now an offence to apply any paint containing lead to dwellings. It can be anticipated that other States and countries will soon follow suit.

TABLE IX.

LEAD POISONING.

SHOWING AGE DISTRIBUTION AND GEOGRAPHIC DISTRIBUTION OF 95 CASES.

	1950–51.			1951–52.			1952–53.			1953–54.			1954–55.			1955–56.			1956–57.			Totals.		
	M.	F.	P.	M.	F.	P.	M.	F.	P.	M.	F.	P.	M.	F.	P.	M.	F.	P.	M.	F.	P.	M.	F.	P.
0–1 years	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	..	..	..	1	1	2	3	1	4
1–4 years	..	..	..	1	..	1	..	4	4	3	3	6	2	5	7	3	2	5	..	1	1	9	15	24
5–9 years	..	..	..	1	..	1	1	2	3	1	1	2	4	4	8	8	6	14	2	..	2	17	13	30
10–14 years	..	..	..	..	..	..	2	..	2	..	..	..	1	1	2	2	2	4	..	1	1	5	4	9
15–29 years	..	..	..	..	..	..	..	..	..	1	..	1	1	1	2	1	..	1	2	..	2	5	1	6
30–44 years	3	..	3	..	..	..	2	1	3	1	..	1	2	..	2	6	..	6	..	..	..	14	1	15
45–59	..	..	..	1	..	1	..	1	1	..	..	..	3	..	3	..	..	..	..	..	..	4	1	5
60 and over	1	..	1	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	2	..	2
Totals	4	..	4	3	..	3	5	8	13	7	4	11	15	11	26	20	10	30	5	3	8	59	36	95
1. Metropolitan ..	3	..	3	..	..	..	2	..	2	3	2	5	1	3	4	..	..	..	1	..	1	10	5	15
2. Up State to Bundaberg ..	..	..	..	..	..	..	..	2	2	1	..	1	4	2	6	2	..	2	..	1	1	7	5	12
3. Up State to Broadsound	..	..	..	..	..	..	..	1	1	..	..	..	1	..	1	1	1	2	1	..	1	3	2	5
4. Rockhampton and Livingstone ..	..	..	..	1	..	1	3	5	8	2	2	4	7	6	13	13	8	21	2	1	3	28	22	50
5. North Queensland	1	..	1	2	..	2	..	..	..	1	..	1	2	..	2	4	1	5	1	1	2	11	2	13
Totals	4	..	4	3	..	3	5	8	13	7	4	11	15	11	26	20	10	30	5	3	8	59	36	95

Leptospirosis.—During 1956-57, 166 cases of leptospirosis were notified and only 7 of these were notified in Brisbane. The disease continues to affect people in certain occupations—meat workers, dairy industry employees, timber cutters, and cane cutters. Prevention is difficult —or, rather, prevention is difficult to apply. If every exposed worker wore proper footwear for the job there would be little leptospirosis. Cane cutters, however, continue to prefer sand shoes which afford little protection to the feet, while a depressing number of dairy farmers and farm workers attend cows and pigs without wearing gumboots in wet weather. When intelligent white persons change their habits so slowly, we can scarcely blame the aborigine for continuing to pollute the soil in the manner of his ancestors.

Malaria.—37 cases of malaria were notified in 1956-57 compared with 16 in the previous year. The apparent increase is no cause for alarm, as all were infected outside Queensland, the majority being residents of New Guinea. The continued introduction of malaria into this State is disquieting unless all practical means are used to control the vector mosquitoes. Many Local Authorities, particularly in North Queensland (where the risk of an outbreak is highest) have done a very praiseworthy job in draining swamps and in continuing to spray creeks and other bodies of water that cannot economically be drained. The State Government, for the past decade, has pursued the enlightened policy of giving 50 per cent. subsidy on approved mosquito eradication projects, and there is no doubt that the money has been wisely spent.

Poliomyelitis.—Annual and quinquennial notifications and rates for Queensland over the last 30 years are set out in Table X. It will be seen that only 37 cases of polimyelitis were notified during the year, compared with an average of 179 cases over the last 5 years. This is the lowest number of cases notified since 1949-50. It is not unnatural to attribute this to vaccination with Salk vaccine, and no doubt this may be a factor in the decline of notified cases. That is about all that can be said at this stage. The effect of vaccination is difficult, as yet, to assess with any degree of accuracy. In the first place only 50 per cent. of the child population (6 months to 14 years) had received two doses of vaccine before the Christmas vacation. By the end of June about 90 per cent. of all eligible children had had two doses of vaccine. There was, therefore, ample opportunity for the disease to spread in children had the virus been as prevalent as it is in an epidemic year. It is possible that the incidence of the disease would have remained equally low if no vaccine had been used. It is quite impossible yet to be dogmatic about the value of the vaccine. A proper assessment can only be made after two or three years. If the incidence of the disease in inoculated children remains low until 1960, then there is every justification for claiming a major victory against a crippling disease. Of the 37 notifiable cases (26 paralytic and 11 non-paralytic) of poliomyelitis, 23 cases were under the age of 15 years. Of these, two cases had received one dose of vaccine. The first of these patients developed paralytic poliomyelitis two days after receiving the first dose of vaccine. (Virus Type 2 was isolated from this patient). The second patient had one dose of vaccine in October, 1956. He received medical attention in March, 1957, because of alleged inability to ride a bicycle.

At the mid point of the year (1st January, 1957) about 50 per cent. of children had received two doses of vaccine. If the vaccine had been ineffective it would be expected that about half of the notified cases in children would have been in children receiving two doses of Salk vaccine. Actually, no child in Queensland who had received two doses of vaccine developed poliomyelitis.

Australia has every right to be proud of its anti-poliomyelitis vaccination campaign. The Commonwealth Serum Laboratories has overcome the great technical difficulties of vaccine production with a very low rejection rate. The Commonwealth Government has made the vaccine available free of cost to the States. The States have undertaken the vaccination of children and more than 90 per cent. of eligible children have received two doses of the vaccine during the year. The only acceptance rate by parents that can compare with ours is that of Denmark, where a particularly severe outbreak occurred in 1953. In the United States, the country which developed the vaccine, only 20,000,000 persons (or 12 per cent.) of the population had received three doses of Salk vaccine by July, 1957. If the vaccine is as good as overseas trials indicate, poliomyelitis should become rare in vaccinated children.

Poliomyelitis, however, is no longer a disease only of children. About 40 per cent. of Queensland cases are over the age of fourteen, and when the children have received three doses of the vaccine, certain major questions remain to be answered. The most important question is whether age groups other than those already protected should be offered the vaccine. The age group 15-19 years which comprises about 6·5 per cent. of the Queensland population has contributed about 13 per cent. of cases since 1950. The age group 20-24 years (7·5 per cent) has provided 11 per cent. of cases, and age group 25-29 years (8 per cent.) has furnished 8 per cent. of cases, while the age group 30-39 years (15 per cent. of population) has provided only 5 per cent. of cases. Thus there is evidence that vaccination of persons between 15 and 19 years of age, and to a lesser extent of persons between 25 and 29 years of age, could be expected to have a significant effect in reducing the overall incidence of poliomyelitis if the present age pattern continued. Certainly, the indications for vaccinating persons between 15 and 20 years of age are fairly clear.

One point to keep in mind, however, is that poliomyelitis may behave as diphtheria has done once the chief reservoir of the disease is controlled by active immunisation of children. Cases of diphtheria in adults have not increased in recent years, and the same may be true for poliomyelitis.

The degree and duration of immunity of Australian made Salk vaccine have not yet been determined, and the answer can not be expected for a few years. It is possible that a fourth dose of vaccine may be needed for children who have already received three. On the other hand, living virus vaccines, now being rapidly developed and which can be given by mouth, may take the place of the fourth dose.

From the point of view of preventive medicine, the future for control of poliomyelitis must be one of optimism, but it is too early yet to be wildly enthusiastic. It should be remembered that less than three years have passed since the vaccine was developed, and tested in America. Over enthusiasm about Salk vaccine at this stage would be misleading and unwarranted but ultimate control of the disease is reasonably assured.

TABLE X.

SHOWING NOTIFICATIONS OF POLIOMYELITIS FOR THE YEARS 1926–27 TO 1956–57, TOGETHER WITH NOTIFICATION RATES PER 1,000,000 POPULATION (MEAN OF FINANCIAL YEAR), AND FOR THE CORRESPONDING QUINQUENNIAL PERIODS.

Year.	Notifications.	Rate per million population.	Quinquennial period.	Notifications.	Annual Rate per million population.
1926–27	15	17	..	..	..
1927–28	4	5			
1928–29	22	25	1926–31	54	12
1929–30	10	11			
1930–31	3	3			
1931–32	312	335			
1932–33	20	21			
1933–34	11	12	1931–36	387	83
1934–35	30	31			
1935–36	14	14			
1936–37	4	4			
1937–38	160	161			
1938–39	36	36	1936–41	345	68
1939–40	14	14			
1940–41	131	127			
1941–42	13	13			
1942–43	10	10			
1943–44	9	9	1941–46	471	87
1944–45	10	9			
1945–46	429	396			
1946–47	23	21			
1947–48	26	23			
1948–49	28	25	1946–51	1,015	174
1949–50	14	12			
1950–51	924	788			
1951–52	357	288			
1952–53	242	190			
1953–54	68	52	1951–56	1,022	179
1954–55	248	185			
1955–56	107	78			
1956–57	37	27			

HANSEN'S DISEASE.

(1) HANSEN'S DISEASE IN THE WHITE POPULATION.

PEEL ISLAND.

Medical Superintendent: M. H. GABRIEL, M.B., B.S (Qld.), A.A.C.I.

TABLE XI.

COMPARISON OF STATISTICS FOR THE FINANCIAL YEARS 1954–55–56.

	1954–55.			1955–56.			1956–57.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Population at 1st July ..	18	6	24	16	6	22	16	5	21
Admitted	5	2	7	2	1	3	..	1	1
Discharged	6	2	8	2	2	4	2	..	2
Died	1	..	1	..	..	..	..	..	..
Population at 30th June ..	16	6	*22	16	5	*21	14	6	*20
Increase	..	..	..	..	..	..	..	1	..
Decrease	2	..	2	..	1	1	2	..	1

* These totals include two (2) patients (one male, one female) who have been granted special permission to remain in the institution, though eligible for discharge.

Only one patient (a female) was admitted during the year. She had not been previously admitted to this hospital. The disease in this patient was moderately advanced but marked signs and symptoms were of quite recent onset.

Both of the discharged patients were males.

In the last Annual Report, statistics were given to show that, judged on rates of discharge of patients, the sulphone and other drugs which have been in use since January, 1947, were at least twice as effective as chaulmoogra oil, its various derivatives, and other drugs in use prior to 1947. It was also shown that the trend of gradual increase of the population of the hospital had been converted to a very significant trend of decrease.

During the year studies of the records have been made with a view to comparing the efficiencies of the old and new treatments, judged on the bases of length of stay of patients in hospital and on readmission rates. (See Table XII.)

TABLE XII.

A COMPARISON OF THE RESULTS OF THE OLD AND NEW TREATMENTS.

Period Considered.	Old Treatment. 1916–1946.	New Treatment. 1947–1957.
Total New Admissions	181	40
Absconded	3	..
Transferred	3	..
Died soon after admission	35	6
Still patients	4	14
Discharged	136	20
Admitted Twice—		
Number	48	1
Percentage of Discharges	35·3%	5%
Admitted Three Times—		
Number	9	..
Percentage	6·6%	..
Total percentage of Cases with more than one Admission ..	41·9%	5%
Longest stay in hospital	29 years and 5 months	6 years and 7 months
Shortest stay in hospital	1 year	1 year
Average stay in hospital	8 years and 5 months	3 years and 3 months

It can be seen that the average length of stay in hospital has been cut to approximately one-third by the use of the newer treatment. More significant still, the readmission rate has dropped to less than one-eighth of the old rate. There can be no room for doubt that the newer treatment is vastly superior to the old treatment.

Medical Treatment.—This year a new sulphone derivative, "Avlosulfon Soluble," has been added to the specific drugs used. Only two patients have been treated with the new drug as the other patients are showing good progress on the drugs already in use. Symptoms of intolerance such as headache, nausea, and gastric pain appear to be less when "Avlosulfon Soluble" is used in patients who show these ill effects with other drugs. The use of the new drug has markedly reduced the frequency and severity of the symptoms in both cases and the therapeutic effect appears to be equal to equivalent dosages of Dapsone. Further trials will be necessary before a full assessment of the value of the new drug can be made.

Dapsone (a sulphone drug) and thiacetazone (a thiosemicarbasone drug) are the principal specific drugs in use, and are continuing to prove most effective.

Further use was made this year of A.C.T.H. in relieving very severe and prolonged "Lepra" reactions. This drug has proved effective when all others have failed to bring relief.

Occupational Therapy.—Valuable assistance has again been given by the Handcraft Section of the Red Cross Society in providing materials and instruction for handcraft work by the patients. Miss N. Ferrier, the Superintendent of the Red Cross Handcraft Section in Queensland made ten (10) visits to the hospital during the year to give handcraft instruction.

Other patients are employed as poultry farmers, barber, painter, truck driver, seamstress, &c., as a form of occupational therapy. No able-bodied patient need be idle since there is interesting and profitable work for all who are willing.

Medical Visits.—A number of medical students visited the hospital for clinical demonstrations of Hansen's Disease, and two doctors of the Formosan Health Service studied the treatment of Hansen's Disease as part of their training as Colombo Plan students.

Other Official Visitors.—A naturalisation ceremony took place at the hospital in September, 1956, when one of the patients became an Australian citizen.

Facilities were made available for the Zoology Department of the University of Queensland to carry out some research work on the coral reefs and sub-littoral facies surrounding Peel Island.

A dentist from the Brisbane Dental Hospital made eight (8) visits during the year to carry out dental work chiefly on the new patients and the optometrist made three (3) visits during the year to prescribe and fit spectacles for the patients.

Five patients were transferred to the Brisbane Hospital for specialist treatment and of these, two patients each made two visits.

Laboratory of Microbiology and Pathology.—Extensive use was again made this year of the facilities provided by the Laboratory of Microbiology and Pathology. The following table gives details of the numbers and types of specimens submitted for examination:—

	Specimens.
Venous Blood for Full Blood Examination	185
Tissue Smears (for *M. leprae*)	210
Blood for Serological Tests	3
Blood for ABO and Rh Groupings ..	3
Blood for Blood Sugar Estimations ..	3
Urine for Chemical and Microscopal Test	162
Urine for Culture and Sensitivity Tests	2
Biopsy Specimen for section	1
Total	569

Staff and Administration.—The staff remained the same in numbers and categories as in the previous year but there continues to be quite a number of changes in the personnel of the nursing staff. Many of our nurses are lost to the mission fields, some are married but there is also a number who seem to change their place of employment every three or four months. All of the nursing staff seem to be quite contented while they are on the Island despite the isolation.

Buildings and Grounds.—Many more improvements were made to the buildings during the year and some new buildings were erected. The new male staff quarters were completed and are now occupied. The new laundry was completed and has been in successful operation for some months. A new pump house was also built to replace an old one. The only major work now outstanding is the renovation of the kitchen-dining-room block, but I am hopeful of an early start being made on this work in the new financial year.

In general the buildings of the institution are in a good state of repair and the grounds neat and tidy. The roads to both jetties are now in good repair, and are trafficable in all weathers. The new jetty on the western side of Peel Island was completed early in August, 1956, and has been in constant use ever since. The launch can tie up at this jetty at all tides, thus obviating the use of dinghies for landing passengers and stores at low tide. In addition the use of this new jetty has cut the travelling time from Cleveland from 50 minutes to 20 minutes.

The old stone jetty on the south-eastern corner of the island was very extensively damaged by the bad weather early in 1956 and further damage was done during the cyclonic weather early in 1957. All of this damage has now been repaired and a new landing-stage erected at the end of the jetty. It was considered advisable to maintain this jetty in good order since it is far the better of the two for handling heavy stores such as drums, engines, stoves, &c., and it is a useful alternative jetty during heavy westerly winds when the approach to the new jetty is extremely rough and dangerous. The channel leading in to the old jetty is still further silting up but is navigable at half tide and above.

Launch Service.—The launch service is still carried out under contract and continues to be most satisfactory.

Patients' Visitors.—The numbers of visitors to the patients remain high but are well within the capacity of the transport available.

Regular visits were made by the clergy of the various denominations. The Wellington Point Methodist Choir visited the Island to conduct a concert of sacred music.

The Salvation Army made their regular quarterly visits to conduct concerts and a Christmas party. The Sisters of Mercy from the Mater Misericordiae Hospital in Brisbane distributed gifts to the patients at Christmas-time as has been their custom for several years now.

Members of the Toowong Sub-Branch of the R.S.S.A.I.L.A. conducted an Anzac Day service and provided an excellent concert at Christmas time.

The Relatives and Friends Association, with the assistance of the Elsie Kelly Concert Party, conducted a Christmas Party and distributed gifts to the patients. This Association was also

responsible for bringing nine (9) concert parties to the island to entertain the patients. The concert parties which visited were:—

Elsie Kelly Concert Party (2 visits and Xmas Party).

Fred Spann Party (2 visits).

Advacs Concert Party (2 visits).

Blue-Bird Concert Party.

Shell Company Concert Party.

In addition the Brisbane Municipal Concert Band paid their annual visit and entertained the patients with band music and a variety show.

General.—Again this has been a successful year closing with a population of 17 active cases and one arrested case for discharge early in the new financial year. There is good promise of still further reduction in population in the coming year.

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(2) HANSEN'S DISEASE IN THE ABORIGINAL POPULATION.

The response of the coloured patients suffering from Hansen's Disease to sulphone therapy has been similar to that of white patients. As will be seen in Table XIII., seven patients were released from the Fantome Island Hospital while six patients were admitted. The total population was 24 at 30th June.

TABLE XIII.

SHOWING STATISTICS OF ADMISSIONS AND DISCHARGES, FANTOME ISLAND.

—	Males.	Females.	Total
Inpatients at 1st July, 1956	21	5	26
Admitted	5	1	6
Discharged	7	..	7
Died	..	1	1
Remaining 30th June, 1956	19	5	24

As with the white patients the whole outlook of the coloured patients has altered as the result of modern treatment. Most of the patients take treatment regularly so that they might return home. It is interesting to note that while the disease progresses more rapidly than in white patients, the response to the sulphones, even in smaller doses, is quicker.

The patients are under the care of members of the Order of Franciscan Missionaries of Mary whose kindness and attention have earned the affection of all the patients. They encourage the patients to occupy themselves by keeping poultry, collecting shells, and growing flowers. The Sisters have also been responsible for establishing a film library obtained from friends in Canada and these, together with regular films from the various film companies, enable the patients to spend many happy evenings.

SECTION OF ENTHETIC DISEASES.

Medical Officer in Charge: Geoffrey Hayes, M.B., Ch.M. (Syd.).

Medical Officer: Beatrice Warner, M.B., B.S. (Melb.).

There were 995 cases of venereal disease notified during the year as compared with 807 in the previous year and 701 in 1954-55.

This represents an incidence of 0.721 per 1,000 mean population as compared with 0.597 and 0.559 for the previous years—thus indicating a steady increase since the lowest post-war year (1951-52) of 0.506. This trend is world wide and it has been suggested that Health Departments were lulled into a false sense of security by the dramatic results of antibiotics and slackened their publicity and educational campaigns.

Of these notifications 803 were males and 192 females as compared with 675 and 132 respectively in the previous year so that the sex ratio is about the same—indicating a general trend and not a temporary boost in the male attendances due to troop movements or to influx of seamen.

Eight hundred and thirteen were diagnosed as suffering from gonorrhoea and 71 from syphilis as compared with 607 and 105, respectively, in the previous year. The continued decline in the incidence of syphilis is very satisfying. The chronicity of the disease and the limitation of its infectivity to only a comparatively short phase of its clinical course renders it more valuable to the antibiotic campaign than is the neisserian infection.

Cases of early syphilis (primary and secondary) which represent the infectious stages amount to only 24 as campared with 54 in the previous year and 75 in 1954-55.

Table XIV. dissects the incidence of notified venereal disease in Queensland for the past 12 months.

TABLE XIV.

Notified Venereal Disease in Queensland, 1956–57.

—	Metropolitan.		Outside Centres.		Whole State.		Total.
	Males.	Females.	Males.	Females.	Males.	Females.	
Gonorrhoea—							
Unspecified	1	4	7	3	8	7	15
Acute	513	93	125	30	638	123	761
Sub-acute	1	..	2	4	3	4	7
Chronic	..	13	3	13	3	26	29
Ophthalmia	..	..	..	1	..	1	1
Vulvo-vaginitis	..	..	..	..	..	..	..
	515	110	137	51	652	161	813
Syphilis—							
Unspecified	..	5	..	1	..	6	6
Primary	10	..	3	..	13	..	13
Secondary	4	1	3	3	7	4	11
Tertiary	2	..	1	2	3	2	5
Latent	17	10	1	4	18	14	32
Neuro	..	..	..	..	..	..	..
Pre-natal (Congenital) ..	..	2	1	1	1	3	4
	33	18	9	11	42	29	71
Soft Sore	17	1	..	..	17	1	18
Venereal Warts	91	..	1	1	92	1	93
	656	129	147	63	803	192	995
	785		210		995		
	995						

Notifications from centres outside Brisbane, shown in Table XV. give some idea of the distribution. The northern seaports and the mining centre of Mt. Isa as would be expected account for the bulk—the exception being Cunnamulla and the possibility that certain industrial turmoil recently might have contributed to this is perhaps an explanation.

TABLE XV.

CENTRES OF NOTIFICATION OF VENEREAL DISEASES OUTSIDE THE METROPOLIS.

Centre.	Males.	Females.	Total.
Ayr	1	2	3
Beaudesert	1	..	1
Bundaberg	1	..	1
Cairns	21	5	26
Charters Towers	..	1	1
Cloncurry	6	1	7
Collinsville	1	..	1
Cunnamulla	19	1	20
Dalby	1	..	1
Dirranbandi	2	..	2
Emerald	2	..	2
Gladstone	1	..	1
Gordonvale	2	..	2
Gympie	..	1	1
Ingham	..	1	1
Inglewood	1	..	1
Innisfail	2	..	2
Ipswich	2	..	2
Longreach	1	..	1
Mackay	4	..	4
Maryborough	1	..	1
Millmerran	1	..	1
Mount Isa	15	3	18
Murgon	1	1	2
Palm Island	5	6	11
Quilpie	1	1	2
Rockhampton	4	1	5
Roma	1	..	1
Southport	2	1	3
Thursday Island	25	29	54
Toowoomba	2	..	2
Townsville	18	8	26
Torquay	1	..	1
Tully	1	..	1
Warwick	1	..	1
Winton	..	1	1
	147	63	210

Table XVI. shows the number of venereal disease notifications since 1914—when notification was introduced, and the incidence per 1,000 of population.

TABLE XVI.

SHOWING NUMBER OF NOTIFICATIONS OF VENEREAL DISEASE SINCE 1914.

Fiscal Year.	Notifications.	Mean Population.	Incidence per 1,000 Population.
1914–15	1,414	688,212	2·054
1915–16	1,946	690,494	2·818
1916–17	1,477	680,772	2·171
1917–18	..	688,946	...
1918–19	2,003	707,732	2·83
1919–20	2,848	737,463	3·861
1920–21	2,302	754,374	3·051
1921–22	1,815	769,180	2·359
1922–23	1,710	785,466	2·177
1923–24	1,521	804,442	1·889
1924–25	1,503	825,313	1·821
1925–26	1,401	847,757	1·652
1926–27	1,319	864,502	1·525
1927–28	1,373	877,753	1·564
1928–29	1,382	891,435	1·55
1929–30	1,541	903,703	1·705

TABLE XVI.—*continued.*

Fiscal Year.	Notifications.	Mean Population.	Incidence per 1,000 Population.
1930–31	1,552	917,830	1·69
1931–32	1,841	930,456	1·978
1932–33	1,464	940,628	1·556
1933–34	1,576	950,462	1·595
1934–35	1,248	961,200	1·298
1935–36	1,125	972,767	1·156
1936–37	1,211	984,056	1·23
1937–38	1,256	996,448	1·26
1938–39	1,147	1,008,207	1·127
1939–40	1,091	1,021,426	1·077
1940–41	1,328	1,032,122	1·286
1941–42	1,207	1,036,690	1·164
1942–43	3,101	1,040,433	2·98
1943–44	2,718	1,054,810	2·576
1944–45	2,391	1,068,630	2·24
1945–46	1,309	1,084,125	1·207
1946–47	1,373	1,097,303	1·251
1947–48	1,000	1,114,634	·897
1948–49	846	1,140,816	·742
1949–50	731	1,173,232	·623
1950–51	626	1,207,194	·519
1951–52	627	1,239,868	·506
1952–53	757	1,272,244	·595
1953–54	740	1,300,464	·569
1954–55	741	1,325,336	·559
1955–56	807	1,352,650	·597
1956–57	995	1,380,700(*r*)	·721

(*r*) Subject to revision.

Table XVIII. shows the alleged sources of the notified infections of which 19 were attributed to professional prostitutes (in known brothels), and 37 to clandestine prostitutes (street walkers).

That the "Profession" itself carries a fair occupational risk is shown by the 40 who contracted an infection in the pursuit of their occupation.

TABLE XVII.

SHOWING SOURCES OF INFECTION.

Amateurs	685
Occupational (prostitutes)	40
Prostitutes	37
Professionals	18
Husbands	6
Wives	4
Mothers	3
Parents	1
Aborginal	1
Brothel (New South Wales)	1
Unstated	199
	995

Tables XVIII. and XIX. show the marital status and age group of the cases notified and call for no comment other than to point out that 10 males over 65 years of age contracted the disease as compared with 2 in this age group in the previous year.

TABLE XVIII.

MARITAL STATUS.

——	Males.	Females.	Total.
Married	143	53	196
Single	638	73	711
Separated	18	7	25
Widowed	3	2	5
Divorced	1	5	6
Unknown	..	52	52
	803	192	995

TABLE XIX.

Showing Age Groups of Notified Cases.

Age Group.	Males.	Females.	Total.
Under 1 year	2	1	3
1–5 years	1	..	1
6–10 years	..	2	2
11–15 years	1	2	3
16–20 years	117	37	154
21–25 years	218	33	251
26–30 years	164	24	188
31–35 years	113	13	126
36–40 years	76	12	88
41–45 years	46	3	49
46–50 years	28	1	29
51–55 years	12	1	13
56–60 years	7	3	10
61–65 years	1	..	1
Over 65 years	10	..	10
Unknown	7	60	67
	803	192	995

Table XX. shows the courses of the notifications received; 8·4 per cent. from private practitioners, 10 per cent. from public hospitals and 81·6 per cent. from clinics, which parallel fairly closely the figures for last year, namely 9·3 per cent., 10·5 per cent. and 80·2 per cent. respectively.

TABLE XX.

Showing Sources of Notification.

—	Males.	Females.	Total.
Private Doctors—			
Brisbane	21	4	25
Outside Centres	48	11	59
Total	69	15	84
Hospitals—			
Brisbane	7	4	11
Outside Centres	47	41	88
Total	54	45	99
Clinics—			
Brisbane	628	121	749
Outside Centres	52	11	63
Total	680	132	812
Total all sources	803	192	995

Ad Hoc Clinics Brisbane.

These two clinics—Colchester Street for males and William Street for females—cater for the bulk of the cases notified. 74·2 per cent. in 1954-55, 76·2 per cent. in 1955-56 and this year 75·3 per cent. so that the ratio remains fairly constant.

The following statistical returns cover the activities of the male and female ad hoc clinics in Brisbane:—

Departmental Clinic for Males.

A. Record of Activities.			
New Cases			1,441
Total Visits			11,703
Notifications			628
Injections—			
Arsenic	0		
Bismuth	15		
Penicillin	764		
		779	
Blood samples for Wasserman tests			1,770
Smears to Departmental Laboratory			787
Smears examined at Clinic			4,987
Dark Ground Tests at Clinic			40
Prophylactic Treatments			1,118
B. Notifications (Dissected).			
Early Syphilis—			
Primary	9		
Secondary	4		
Latent	11		
Late Syphilis—			
Tertiary	..		
Latent	4		
		28	
Gonorrhoea—			
Acute			492
Venereal (Genital) Warts			91
Soft Sore (Clinical diagnosis only)			17
Total Venereal Disease cases notified			628

Departmental Clinics for Females.
Records of Activities, 1956–57.

A. Women's Clinic.			
Total Interviews			527
New Patients			170
Bismuth Injections			36
Penicillin Injections			182
Smears Taken			526
Bloods Taken			192
Dark Ground Examination			4
Trichomona Examination			3
Patients Cultured			199
Number of Cultures taken			519
B. William Street Rooms (Examination of Prostitutes).			
Examinations			2,028
Found Infected			36
Bloods taken			129
Smears taken			4,066
Patients Cultured			34
Number of Cultures taken			68
C. Notifications (Dissected).			
Acute Gonorrhoea	91		
Chronic Gonorrhoea	13		
Gonorrhoea treated	3		
		107	
Latent Syphilis	10		
Syphilis treated	3		
		13	
Soft Sore	1		
		1	
		121	
Of these 121 patients—			
35 were professional prostitutes—			
Acute Gonorrhoea	34		
Chronic Gonorrhoea	1		
		35	
18 were Her Majesty's prisoners—			
Acute Gonorrhoea	14		
Chronic Gonorrhoea	2		
Latent Syphilis	2		18

SECTION OF FOOD AND DRUGS.

This Section is charged with the implementation of the various laws which are necessary to ensure that food for consumption by the public is sound and wholesome, produced under proper conditions and correctly labelled and described and that persons and drugs are handled in the safest possible manner. The law involved includes the Health Acts, the Food and Drug Regulations, the Milk Sellers' Regulations, Health (Food Supply) Regulations, the Poisons Regulations and the Health (Insecticide) Regulations.

Milk.—Very close attention has been given by the staff to this important foodstuff and this has necessitated, besides regular sampling for quality, visits of inspection to pasteurising factories, other milk bottling premises, depots, &c. Excellent co-operation has been maintained with the trade and this has enabled faults to be corrected and desirable improvements made with a minimum of friction.

During the year one firm in Brisbane completed and put into operation modern premises and efficient pasteurising plant. A pasteurising plant has been completed in Gladstone and major improvements to pasteurising plant and premises in Rockhampton are nearing completion. In addition, further small plants for the bottling of processed milk have come into operation in some of the south-western towns. In connection with these plants, the system of forwarding bulk milk, which has previously been treated to a pasteurising temperature, and its subsequent bottling with approved plant on approved premises often hundreds of miles away has proved a boon in those portions of the State where climatic conditions are inimical to the production of an adequate local supply. The success of the scheme is mirrored by the fact that its adoption in other towns is being considered.

Sampling operations have been carried out in all parts of the State visited by our officers. These operations have included not only sampling for chemical analysis but also sampling with a view to ensuring that the bacteriological requirements for pasteurised milk are being met. Samples are regularly obtained from all pasteurising and bottling premises in the State and the overall results indicate a high standard of milk. The details of samples for anaysis are shown in the reports of the Government Analyst (chemical) and the Director of the Laboratory of Microbiology and Pathology (bacteriological).

Prosecutions for the sale of milk adulterated with water were successfully undertaken in fourteen (14) instances, resulting in the securing of £158 in fines and £31 16s. in costs (vide Table XXI.).

TABLE XXI.

PROSECUTIONS FOR SALE OF MILK ADULTERATED WITH WATER—1956–1957.

Date.	Place.	Fines.	Costs.
		£ s. d.	£ s. d.
1956—			
1st August	Brisbane	7 0 0	1 11 0
31st August	Cloncurry	10 0 0	1 11 0
2nd October	Dalby	10 0 0	4 14 0
9th October	Warwick	20 0 0	1 11 0
9th October	Warwick	15 0 0	1 11 0
14th November	Lowood	4 0 0	1 11 0
19th November	Mossman	8 0 0	4 14 0
3rd December	Charters Towers	19 0 0	1 15 0
30th December	Barcaldine	8 0 0	1 15 0
1957—			
21st January	Blackall	5 0 0	1 15 0
18th February	Innisfail	12 0 0	3 17 0
11th March	Hughenden	10 0 0	1 15 0
23rd April	Kuranda	22 0 0	2 1 0
14th May	Baralaba	8 0 0	1 15 0
Totals		158 0 0	31 16 0

All complaints in connection with milk have been promptly attended to and, where prosecution has been warranted and the necessary evidence has been able to be secured, complaints have been successfully launched. A list of prosecutions for offences in connection with milk, other than adulteration with water is appended herewith (Table XXII.).

TABLE XXII.

MISCELLANEOUS PROSECUTIONS OF MILKSELLERS—1956–1957.

Date.	Place.	Nature of Offence.	Fines.	Costs.
			£ s. d.	£ s. d.
1956—				
31st July	Innisfail	Selling milk without a license	3 10 0	2 1 6
31st July	Innisfail	Using a " dip " measure	3 10 0	2 1 6
21st August	Innisfail	Dirty milk vehicle	5 0 0	4 14 0
7th November	Brisbane	Bottling milk by hand	1 0 0	0 10 0
29th November	Brisbane	Milk in dirty bottle	1 10 0	0 14 0
1957—				
31st May	Cairns	Milk in dirty bottle	10 0 0	1 15 0
		Totals	24 10 0	11 16 0

Close liaison has been maintained with the Brisbane Milk Board and with the Department of Agriculture and Stock with mutual benefit, whilst schemes for a further extension of the Free Milk Scheme for school children have been examined and the necessary advice given to the Director-General of Education.

Ice Cream.—Continued sampling and testing of the ice creams on the local market have been carried out to ensure that both chemical and bacteriological standards were being met, whilst regular inspections of premises have also been undertaken. Co-operation with the trade has resulted in many desirable improvements at premises. It is pleasing to report that little has been found wrong with the quality of ice cream and similar frozen products.

Butter.—Samples of butter from the various factories in Queensland have been submitted to complete analysis. Where necessary, any failure to comply with prescribed standards has been reported to the Department of Agriculture and Stock officers for any necessary action with the factory for correction.

Preservative in Minced Meat, &c.—Despite a continual campaign by this department against the use of preservative in minced meat and the excessive use of preservative in sausages and in sausage meat, there are still traders who appear willing to run the risk of detection by adulterating their products. As a result of sampling activities thirty-five prosecutions were successfully launched in connection with the adulteration of minced meat with preservative (vide Table XXIII.) and four in connection with the excessive use of preservative in sausages (vide Table XXIV.).

TABLE XXIII.

PROSECUTIONS FOR SALE OF ADULTERATED MINCED MEAT—1956-1957.

Date.	Place.	Fines.	Costs.
1956—		£ s. d.	£ s. d.
9th July	Brisbane	7 10 0	1 11 0
24th October	Toogoolawah	5 0 0	1 11 0
25th October	Esk	3 0 0	1 11 0
23rd November	Innisfail	15 0 0	1 11 0
1957—			
1st March	Mackay	5 0 0	1 15 0
6th March	Brisbane	5 0 0	1 15 0
6th March	Brisbane	2 10 0	1 15 0
13th March	Brisbane	5 0 0	1 15 0
20th March	Brisbane	5 0 0	1 15 0
20th March	Brisbane	8 0 0	1 15 0
27th March	Brisbane	5 0 0	1 15 0
27th March	Brisbane	15 0 0	1 15 0
27th March	Brisbane	8 0 0	1 15 0
27th March	Brisbane	5 0 0	1 15 0
3rd April	Brisbane	10 0 0	1 15 0
3rd April	Brisbane	10 0 0	1 15 0
17th April	Townsville	4 0 0	1 15 0
17th April	Townsville	4 0 0	1 15 0
17th April	Townsville	4 0 0	1 15 0
17th April	Townsville	4 0 0	1 15 0
17th April	Townsville	4 0 0	1 15 0
17th April	Brisbane	25 0 0	1 15 0
1st May	Brisbane	5 0 0	1 15 0
1st May	Brisbane	7 10 0	1 15 0
1st May	Brisbane	7 10 0	1 15 0
8th May	Tinaroo	3 5 0	1 15 0
14th May	Innisfail	12 10 0	1 15 0
23rd May	Townsville	4 0 0	1 15 0
23rd May	Townsville	4 0 0	1 15 0
23rd May	Townsville	3 0 0	2 2 0
5th June	Brisbane	7 10 0	1 15 0
5th June	Brisbane	15 0 0	1 15 0
6th June	Brisbane	1 0 0	1 15 0
6th June	Brisbane	4 0 0	1 15 0
27th June	Brisbane	15 0 0	1 15 0
	Totals	248 5 0	60 16 0

TABLE XXIV.

PROSECUTIONS FOR ADULTERATED SAUSAGES—1956-1957.

Date.	Place.	Fines.	Costs.
1956—		£ s. d.	£ s. d.
2nd August	Cairns	12 10 0	1 11 0
16th August	Cairns	12 10 0	1 11 0
1957—			
2nd February	Mackay	5 0 0	1 15 0
6th February	Brisbane	7 10 0	1 15 0
	Totals	37 10 0	6 12 0

Liquor Testing.—This work is a permanent feature of the activities of this section and is carried out in all parts of the State. Where adulteration of liquor is detected, prosecution has followed. The appended Table XXV., reveals that only one publican was detected for this breach of the Health Acts during the year under review. Adulteration of liquor is declining rapidly compared with twenty years ago.

TABLE XXV.

PROSECUTIONS FOR ADULTERATED LIQUOR—1956–1957.

Date.	Place.	Nature of Offence.	Fines.	Costs.
			£ s. d.	£ s. d.
1957—				
31st May	Kuranda	Adulterated rum	8 0 0	1 15 0
		Totals	8 0 0	1 15 0

Hotels Generally.—Checking of the quality of the liquor sold is only one of many matters which engage the attention of the staff when inspecting hotels. Close attention is paid to glass washing and to the denaturing of waste beers. During the year mechanical glass washing apparatus was ordered to be installed at quite a few hotels and it is now rare to see a hotel without this amenity, provided that the facilities for its necessary operation are available. Trouble has sometimes been encountered by failure to use or maintain the machines properly and regular supervision will always be necessary to correct this.

Tests were made of new machines with a view to ascertaining whether their performance was adequate to warrant approval.

Sportsgrounds, &c.—It is with much pleasure that a very big improvement in drinking conditions at the metropolitan race-courses during the year is reported. Improvements to bars and the provision of mechanical glass-washers are responsible for the ameliorated drinking conditions and close co-operation with the clubs and licenses has been a big factor in securing this result. In this connection, it is also pleasing to report that mechanical glass-washing apparatus and improved bar conditions are projected for this year's Royal National Show.

Bread, Flour, &c.—Inspection of bakehouses and the regular sampling of bread were carried out and, where corrective action was indicated, it has been taken. Several prosecutions were successfully launched against bakers for breaches in connection with their premises.

The proper wrapping of bread has not been overlooked and remedial action taken where necessary.

Results of prosecutions in the above matters are shown in the list of miscellaneous prosecutions shown in this report (Table XXVII.)

Food manufacture and processing.—A great deal of work was done to improve food factories generally and firm action resulted in big improvements to quite a few premises. During the year several unsatisfactory premises were either closed or ordered to make major improvements to bring them into conformity with the relevant Regulations. The proper hygiene of premises where food is manufactured is a very important duty and it is hoped to pay much more attention to this phase of the work in coming years.

Soft Drinks, &c.—Premises used for the production of these popular food lines have been regularly inspected and many improvements secured thereby. The quality of soft drinks has not been overlooked and samples have been consistently secured to ensure that they are wholesome and correctly labelled. Necessary action was taken to deal with any breaches.

Labelling.—This is a very important phase of the work of this section. Labels are constantly under review to see that the description of a food is truly shown and is not mis-represented to the purchaser. Here again there is close co-operation with the trade, which eagerly seeks the opinion and advice of the staff on labelling requirements.

Check sampling.—Check sampling of food lines on the local market is regularly carried out and enables this section to detect irregularities in labelling or deficiencies in standard. A very wide range of samples, as is evidenced in the report of the Government Analyst, was secured and, where action was indicated, such remedial action was taken.

Complaints.—All complaints in respect of food matters have been promptly dealt with and, if where warranted, prosecution was carried out. In this direction, members of the public can and do play a big part in having breaches of the law corrected.

Food poisoning.—Two cases of food poisoning were brought under the notice of the department and complete investigations were made of the circumstances relating to each outbreak. In each case, samples of the suspected food were submitted to the Laboratory of Microbiology and Pathology for bacteriological analysis, and in each instance, the presence of organisms of the Shigella sonnei group were detected.

In the first outbreak, the offending food, a meringue tart caused illness in the three persons, who had partaken of it, whilst a fourth member of the party, who had none of the tart, escaped illness. In the second outbreak, four members

of a family, who ate some cooked meat, became ill, whilst the other member of the family, who did not eat any of the meat, was not affected.

In each instance, thorough inspection of the premises concerned was made in respect to cleanliness of storage and handling of food and to the personal hygiene of the staff, and all necessary advice given to prevent any further outbreaks.

Bacteriological sampling.—Much use was again made of the facilities of the bacteriological laboratory and not only were foods, for which certain bacteriological standards exist, tested for compliance with standards but also many other foods were examined for any possible pathogenic infection. Tests for the efficiency of disinfectants were carried out, whilst all bactericidal claims of soaps and other preparations were investigated by this laboratory.

Generally.—Close liaison has been maintained with the relevant authorities in respect of periodic sales of forfeited goods at the Queen's warehouse. Stocks have been checked at warehouses, whilst particular attention has been paid to foods offered for sale at auction marts. As a result of these and inspections of retail food premises, a large quantity of foodstuffs was destroyed under supervision during the year (vide Table XXVI.).

In addition, the following foods and drugs were destroyed during the year:—37¼ gallons of wines and spiirts (bulk and bottled); 450,800 cigarettes; 1 ton 19 cwt. and 3 qrs. of tobacco; and a quantity of proprietary medicines and cosmetics.

Miscellaneous prosecutions.—Table XXVII. indicates prosecutions for miscellaneous breaches of the Health Acts and Regulations, successfully undertaken during the year:—

TABLE XXVI.

PARTICULARS OF UNSOUND FOODS DESTROYED 1956–1957.

Food.	Weight.				
	T.	C.	Q.	L.	O.
Barley	0	0	0	4	0
Breakfast Food	0	0	0	4	0
Coconut	0	8	1	14	0
Confectionery	0	0	0	1	0
Curry Powder	0	0	0	2	8
Custard Powder	0	0	0	4	0
Dates	0	0	0	1	8
Essences	0	0	0	7	8
Fish—					
Fresh	0	14	1	25	0
Tinned	0	10	1	11	0
Fruit—					
Dried	0	12	0	0	0
Fresh	5	3	2	14	0
Preserved	7	1	3	6	8
Tinned	1	12	3	23	12
Honey	0	4	2	24	0
Jams	0	0	1	25	4
Meat—					
Cooked	0	0	2	0	0
Tinned	0	0	1	4	12
Milk—Condensed	0	3	1	0	0
Prawns	0	0	1	12	0
Sauces	0	0	0	26	8
Vegetables—					
Fresh	1	6	0	1	0
Tinned	0	6	1	25	0
Miscellaneous	0	0	0	16	4
Total	18	6	1	1	8

TABLE XXVII.

MISCELLANEOUS PROSECUTIONS—1956–1957.

Date.	Place.	Nature of Offence.	Fines.	Costs.
			£ s. d.	£ s. d.
1956—				
16th July	Mossman	Dirty food premises	4 0 0	1 0 0
13th August	Southport	Bakehouse not fly-proofed	2 0 0	0 10 0
13th August	Southport	Defective bakehouse floor	2 0 0	0 10 0
16th August	Brisbane	Foods exposed to contamination	5 0 0	0 10 0
16th August	Brisbane	Dirty equipment in bakehouse	5 0 0	0 10 0
16th August	Brisbane	Food not properly protected	5 0 0	0 10 0
16th August	Brisbane	Assaulting an Inspector	10 0 0	0 10 0
23rd August	Brisbane	Margarine on " buttered " roll	10 0 0	1 15 0
6th November	Proserpine	Bread not effectively wrapped	2 0 0	0 10 0
1957—				
14th February	Brisbane	Bread wrapped in newspaper	3 0 0	0 14 0
22nd February	Euramo	Dirty yard at food premises	10 0 0	0 14 0
19th March	Innisfail	Dirty bakehouse premises	8 12 0	1 8 0
14th May	Innisfail	Food exposed to contamination	6 0 0	7 14 0
		Totals	72 12 0	16 15 0

Fish.—The major task at the Fish Markets is the inspection of fish offered for sale and all fish found unfit for human consumption was condemned and destroyed. Inspections were carried out of fish vendors' vehicles and premises, whilst attention was also given to premises where prawns were being cooked for sale.

During the year a special room was constructed by the Fish Board for the proper processing of fish and prawns, whilst further alterations and additions in progress will effect a distinct improvement to these premises.

Inspections of fish were carried out by officers in other parts of the State. The major

centre being Townsville, where the quantity inspected was over 100 tons.

Details of fish condemned and destroyed at the Brisbane Fish Markets are given in Table XXVIII.

TABLE XXVIII.

SHOWING DETAILS OF CONDEMNED FISH, BRISBANE.

Class of Fish.	Weight.			
	T.	C.	Q.	L.
Batfish	0	0	1	10
Blackfish	0	1	3	17
Bream	4	6	1	27½
Catfish	0	4	3	13
Cod	0	0	3	9
Crabs, Mud	10 Crabs.			
Crabs, Sand	4,598 Crabs.			
Darts	0	6	2	22
Dory	0	4	3	7
Eel, conger	0	0	1	8
Flathead	0	7	1	0
Garfish	0	8	3	12
Jewfish	0	1	1	1
King	0	0	0	10
Leather Jacket	0	0	1	4
Lobster	0	5	2	23½
Long Tom	0	0	3	7
Mackerel	0	7	0	19½
Mackerel, Smoked	0	0	1	17
Miscellaneous	0	0	3	13
Mixed Fillets	0	1	1	19
Mixed Fish	0	13	2	26
Morwong	0	3	2	0
Mullet	28	9	3	21
Mullet Fillets	0	1	2	4
Mullet, Smoked	0	2	3	22
Oysters	1 bottle.			
Parrot	0	0	1	5
Pike	0	1	0	25½
Pink Eye	0	0	2	11
Prawns	11	2	2	4
Prawns, Peeled	0	3	3	0½
Salmon	2	19	1	22
Scallops	0	1	3	14
Schnapper	0	8	2	0
Shark	0	11	0	3½
Sole	0	1	3	18
Squid	0	9	3	18
Squire	0	0	2	0
Sweetlip	0	4	1	18
Tailer	0	9	3	6
Trevally	0	1	1	15
Trout	0	1	0	10
Trumpeter	0	0	1	2
Tuna	0	2	1	1
Turrum	0	0	0	22
Whiting	0	4	1	24
Total	**53**	**17**	**2**	**0**

Poisons and Drugs.—With the ever-increasing flow of new poisons and drugs on to the market, the work of the staff in this connection steadily grows. Much more attention was paid to this phase of the work during this year than previously.

Drug addiction is such a serious problem for the whole world that it is essential that every possible control on the handling and use of dangerous habit-forming drugs must be exercised. The checking of the uses of such drugs by hospitals, medical practitioners, veterinary surgeons, dentists, and other authorised persons was regularly carried out during the year and this has necessitated very many inspections and inquiries by the staff.

One person was convicted and fined on a charge of writing a prescription for a restricted drug when he was not authorised so to do. Inquiries into the activities of another person, who was attempting to obtain dangerous drugs under various aliases, caused his departure to another State.

With a view to preventing any loss in transit of dangerous drugs, a code was drawn up for wholesalers to follow in the forwarding of dangerous drugs to chemists. The code was drawn up after consultation with the trade and should ensure much safer delivery of dangerous drugs than obtained previously.

In regard to persons licensed to sell poisons, inspections have been regularly made and corrective action taken to ensure that poisons were safely stored on premises and that the conditions of their licenses in regard to sales were being observed.

It is necessary to secure an authority to obtain cyanide and strict law has been provided for its storage and use. Officers during the year have carried out numerous inspections to ensure that the necessary provisions of the law were being observed. It is pleasing to report that, in the main, the trade complied very well with these provisions.

Corrective measures were taken when necessary and advice given to ensure that the labels on poisons were as required by the law. The types of containers used for poisons also came under review. The proper labelling and the proper packing of poisons are two essential requirements which are provided for the protection of the public and it is essential that they should be observed by the trade.

Numerous samples of the more common drugs and proprietary medicines on the market were submitted for analysis. Apart from their quality, the claims advanced in the labelling and advertising were closely scrutinised and corrected where necessary. Patent medicines are widely advertised by manufacturers and the checking of such advertising is no small feature of the work of this Section.

Insecticides have been checked and packing and labelling adjusted to meet the requirements of the law. Here again the purpose of the law is the protection of the public.

In all, this is the main purpose of the regulations and every step is taken by this Section to ensure that every person who purchases poison is fully aware of its dangerous properties. In this, the work has been lightened to a marked degree by the general co-operation of the trade in seeking our advice on the proper packing and labelling of products before launching them on the market.

Local Authorities are given considerable powers and authority for superintending, enforcing, and executing the laws relating to environmental sanitation in this State. These powers are ample to allow the Local Authority to control preventable diseases within its area.

A Local Authority is required to employ a medical officer of health and a qualified health inspector. They should work as a team in co-operation with the Clerk of the Council.

Each Medical Officer of Health in a Local Authority is required by law to submit an annual report to the Director-General on health conditions in his area. Each Health Inspector in Local Authority service is required to submit a quarterly report to the Director-General on his activites and to comment on conditions as he finds them.

These activities include inspections necessary to locate nuisances and other factors affecting health and to advise the Local Authority of the action necessary for their abatement. If a health inspector can make routine house to house inspections, he can detect many troubles in the early stages and have them remedied before they become a real danger to health. Departmental inspectors visit the various Local Authority areas in a supervisory capacity and advise and assist the local inspector in any problems which present themselves.

The reports submitted indicate that most Local Authorities are accepting their responsibilites, but there is room for much more to be done yet. Local Authorities have many other responsibilites besides health but it is to be regretted that the health department often does not receive an adequate proportion of the money available to carry out its activities.

The distribution of health inspectors in the State is as follows:—

Brisbane City Council	31
Cities and Towns	36
Shires (1 or more inspectors)	31
Joint Areas (more than one Local Authority)	32
	130

This shows an increase of seven inspectors on last year but is little real improvement since the north and north-west areas of the State are still without inspectors. As there are a number of qualified men who are not serving as health inspectors, it would appear that there is a reluctance on their part to serve in the distant parts of the State.

This is to be regretted as the development which is taking place in the north-western part of the State is such that good men are needed there. A health inspector at a growing centre can do much to prevent faulty practices developing. The Local Authorities concerned are unable to attract men to accept employment in these areas where climatic conditions are trying and amenities are few.

Nightsoil Removal and Disposal.—More Local Authorities are becoming conscious of the advantages of the water carriage system over the pan system for nightsoil disposal, and more country centres are considering sewerage for the towns in their areas, for example, Herberton Shire Council for Ravenshoe, Balonne Shire Council for St. George, and Richmond Shire Council for Richmond.

Next to sewerage systems, the septic tank is perhaps the next best. Unfortunately this requires an ample water supply and a soil in which the effluent can be readily absorbed; two factors not always found together. To overcome these difficulties, certain septic tanks using much less than the three gallons of water required for a normal flush, are now permitted to be used. This type has not been as well accepted by the public as the vendors expected and only a few have so far been installed. They have not been in use long enough for any defects to develop.

Where sewerage or septic tanks are not available, the pan system is generally used. This method is far from being perfect and aesthetically it leaves much to be desired. Nevertheless, when it is properly operated, it is very effective in the prevention of fly-borne intestinal diseases.

Unfortunately cabinets are not kept properly flyproof and faulty disposal at the sanitary depot allows access of flies with subsequent epidemics of intestinal disease in the community. Constant inspections of the houses and the sanitary depot will prevent this.

Refuse Collection, Removal and Disposal.—This also is a responsibility of the Local Authority and is usually carried out by contract.

The refuse bin must be a weather-proof cylindrical metal container with a close-fitting lid to keep refuse away from flies and rats. Regular inspections will show whether this requirement of the law is being fulfilled.

The weekly collection of refuse appears to be satisfactorily carried out throughout the State.

The disposal of refuse is still generally unsatisfactory. The lack of covering material is the most noticeable defect. Unless refuse is covered immediately after being deposited at the tip, flies can breed prolifically in it. Local Authorities might give consideration to wider adoption of the sanitary land fill, which, by reclaiming swamps or gullies, creates an asset out of waste.

Plague Precautions.—Plague has not occurred in this State for many years, and while it is the duty of the Commonwealth Quarantine Service to prevent the entry of rats, some of which might be plague infected, into this State, Local Authorities are expected to keep the rodent population at a minimum. Most Local Authorities take measures against rats. These pests are also responsible for the spread of murine typhus and leptospirosis, which are endemic in parts of Queensland, so that, apart from the prevention of plague, they should be exterminated by all possible means. Trapping, poisoning, and hunting with dogs are methods used by some Local Authorities and all seem to observe the provisions of the Plague Prevention Regulations when new buildings are constructed and have them so constructed as to prevent harbouring rats.

Local Authorities on the coast, particularly the seaport cities and towns, employ rat gangs to keep a check on the rodent population particularly in regard to the presence or absence of plague. Smears from rats killed are examined for *Pasteurella pestis.*

The following Local Authorities report weekly on the number of rodents killed in their areas and Table XXIX. shows the results of their activities.

TABLE XXIX.

Town or City.	Rats.	Mice.
Brisbane	47,137	4,783
Townsville	3,512	298
Cairns	1,826	314
Maryborough	449	..
Bundaberg	434	..
Mackay	2,135	414
Ipswich	1,141	..
Rockhampton	3,131	..
Gympie	206	..
Total	59,971	5,809
Total all rodents ..	65,780	

Mosquito Eradication.—Some species of mosquitoes are known vectors of disease and others are suspect.

Local Authorities generally exercise some control on these. Most Local Authorities endeavour to control *Aedes aëgypti*, the vector of dengue, by the enforcement of the Mosquito Prevention Regulations. This species being a very domestic one, is relatively easy to control. *Culex fatigans*, a vector of filariasis, is a much more difficult species to control. It breeds in almost any water except salt water, but it prefers polluted water. It has a considerable range of flight. The improper disposal of sullage water allows this species to breed prolifically and makes it control difficult. By the treatment of drains or gully traps with larvacides many Local Authorities are making creditable attempts to reduce the numbers of this species.

Most mosquitoes are a nuisance, and as one species or another will breed in almost any collection of water, they should be eradicated by removing their breeding places, i.e., collections of water.

The Government has continued the payment of 50 per cent. subsidy on all works for the permanent eradication of mosquitoes. Table XXX. shows the amount of subsidy granted throughout the year.

TABLE XXX.

SHOWING TREASURY SUBSIDIES GRANTED TO LOCAL AUTHORITIES FOR MOSQUITO ERADICATION PURPOSES DURING THE FINANCIAL YEAR 1956–57.

Local Authority.	Amount		
	£	s.	d.
Brisbane City Council	48,335	0	0
Cairns City Council	5,200	0	0
Gympie City Council	1,280	14	0
Ipswich City Council	7,785	0	0
Mackay City Council	378	0	0
Rockhampton City Council ..	12,420	0	0
Toowoomba City Council	879	0	0
Townsville City Council	34,518	0	0
Bowen Town Council	75	4	10
Redcliffe Town Council	2,082	0	0
South Coast Town Council	2,797	0	0
Atherton Shire Council	400	0	0
Ayr Shire Council	3,389	0	0
Cloncurry Shire Council	50	14	7
Johnstone Shire Council	4,473	9	7
Mareeba Shire Council	11	0	0
Murgon Shire Council	1,000	0	0
Redland Shire Council	750	0	0
Total	125,824	3	0

Camping Areas and Seaside Resorts.—This State has many good beaches and during the holiday period thousands flock there to camp. The Camp Regulations set minimum standards for these camp sites. Departmental officers report that generally Local Authorities have now met these minimum requirements and some have provided far more amenities than are required by law. Sometimes it is difficult for the Local Authority to control the numbers arriving on camp sites and it has happened that sanitary conveniences have been overtaxed. One or two Local Authorities in the North do not appear to have done much in this respect.

Water Samples.—In its service to the people of this State the chemical and bacteriological examination of water for domestic purposes, as well as providing the means for routine tests of established reticulated water supplies, is the subject of heavy demand. This Section, therefore, has had to despatch the sampling bottles to various parts of the State, and collect them on return, meeting planes, trains and motor coaches at all times of the day to collect the bacteriological samples.

Hotel Licensing.—The inspection of premises licensed under the Liquor Act, by our officers has continued but each inspection is now restricted to what would be a normal inspection for a health inspector, except when a special inspection is required. This was made possible the Commission now having its own inspectors. Plans and specifications for new work or alterations to licensed premises are also submitted by the Licensing Commission for comment.

Paint.—The paint manufacturers of this State appear to have met the requirements of the law reasonably well, and several now advertise their paints as lead free.

But paint on old homes still presents a hazard to children and will for many years to come. Samples of paint scraped from these premises

have indicated that in some the soluble lead exceeded 5 per cent. The owners of such premises have been required to remove the paint; most have complied but in some cases the work has taken a long time to be completed.

Toys.—The efforts of Departmental officers to have the toys sold in this State free of lead, was supported by the Press who gave considerable publicity to these activities. This was most welcome as it accomplished in a very short time what might otherwise have taken years to achieve. It made wholesalers and retailers well aware of the requirements of the law. As a result several enquiries have been received from overseas manufacturers, and at least one has demonstrated that lead free paint can now be obtained for use on toys.

As most of the toys are imported it is hoped and expected that it will not be necessary to seize such large quantities of toys in the future as were seized during last year.

District Officers' Reports:—

Toowoomba District.—Nightsoil and refuse removal. These essential services were conducted in a safe and sanitary manner and generally in accordance with regulation requirements. As is usually the case, numerous minor faults were disclosed and appropriate action was taken on the spot for their rectification.

The chief fault in nightsoil disposal was, as in former years, the use of trenches greatly exceeding the permitted dimensions.

Other malpractices in collection and disposal were not numerous and recommendations made were chiefly concerning repair or replacement of depot sheds, equipment, access roads, and fencing.

The Dalby Town Council has completed the installation of pan washing and tarring machinery at its sanitary depot and this, in conjunction with the mechanical trench excavator already in use, has eliminated most of the heavy manual work usually associated with nightsoil disposal.

The useful life of the present disposal area at Dalby is strictly limited and no alternative site appears to be readily available. The Council is investigating the possibility of installing an incinerator and has included the project in its submission for the next loan programme.

A site for a new sanitary depot is being sought at Inglewood to overcome the difficulties associated with the existing depot in wet weather.

Refuse removal services have been well conducted but methods of disposal in many cases fall short of a reasonable standard. However, it is gratifying to record that considerable improvement has been effected in some instances, particularly at Goondiwindi, where a new refuse tip has replaced the troublesome ramp of former years, and at Texas, where some acres of scattered non-combustible material on the town common has been consolidated into a gully and formed into a properly controlled tip.

Sewerage.—No new systems have been commenced or opened during the year. The Toowoomba City Council has made good progress on the extension of its sewered area.

Water Supply.—The new potable water supply at Dalby (from the Condamine River) was completed during the year, and is now operating successfully.

Rockhampton District.—Many councils in this area have instituted either the sanitary land-fill trench or covered ramp method of disposal of refuse.

An overall improvement should result in the collection and disposal of nightsoil in the Town of Gladstone by the erection and equipping of a new depot building.

Rockhampton City Council has now a sewered area comprising 75 per cent. of the city and intends to increase this by the institution of a sewerage scheme embracing the whole of the residential area.

The Town of Blackall is now completely sewered.

Several Local Authorities in the Rockhampton district have become aware of the value of the allocation of camping reserves, properly equipped, to meet the demands of the increasing volume of motor travellers.

Mackay District.—The unsatisfactory sanitary depot at Proserpine cannot be improved as the the soil is unsuitable. The Local Authority has tentative plans to replace it with a sewage treatment works.

The two sanitary depots in Mirani Shire are being improved.

Garbage tips in the country towns show no improvement. The lack of covering material such as ashes and the heavy work to be done in covering garbage with earth are the two factors which prevent daily coverage from being carried out.

A recent case of filariasis at Mackay resulted in an intensive testing of all residents in the vicinity of the house in which the patient resided, with negative results.

A particularly large breeding ground for *Culex fatigans* is to be found in the area where the wastes from Racecourse Mill are allowed to run away. The Local Authority is now acting to have a fresh drain installed.

The gradual extension of the sewerage system at Mackay continues and a site has been decided on for the treatment works. The treatment

works at Bowen have been completed together with the pumping wells and it is hoped the laying of the mains will begin soon.

The water tower at Proserpine has been completed and the materials for the mains are on hand.

Townsville District.—Sanitary services appeared to have been conducted in a satisfactory manner throughout the year. Shortage of manpower has presented a big problem particularly in the western areas. Here it is often necessary to rely upon aboriginal labour necessitating constant supervision.

Apart from minor faults, the refuse services also appear to have been satisfactorily conducted.

In Townsville a gang is employed constantly in carrying out anti-mosquito measures. Those areas in which a qualified inspector is employed now have better mosquito control measures. The western shires without the services of an inspector are grossly defective in this respect.

Due to the prolonged wet season the township of Giru was plagued with mosquitoes and the Thuringowa Shire Council was assisted and advised in methods of destruction.

Various inspections and the perusal of building and septic tank plans and the taking of water samples have been undertaken for the Thuringowa Shire Council.

Cairns District.—Some improvement can be reported in the method of removal of nightsoil from most centres and lids and spring clips are now being used in more centres than formerly.

The method of disposal of nightsoil is not generally given sufficient supervision.

As reported in previous years the disposal of refuse is neglected in most centres.

In this district which is a mecca for tourists, unsatisfactory refuse disposal, with its untidy heaps of rubbish, papers, &c., on the outskirts of a town, creates an unfavourable impression in the minds of visitors. Civic pride appears to be of particularly slow growth in many Queensland country towns. A few prosecutions of illegal tippers of refuse would accelerate its growth. Local Authority inspectors could be more active in detecting those who dump refuse by night and at week-ends.

The Mulgrave Shire Council is continuing its progressive policy for the improvement of general sanitary standards at tourist and beach resorts and a good standard is now being attained in all centres under the Council's control.

SECTION OF HOOKWORM CONTROL.

This service, whose centre is at Cairns, is concerned with the diagnosis and treatment of hookworm and other worm infestations in the known endemic areas.

The staff consists of a microscopist, two field inspectors and two trained nurses. One of the latter is part-time only. During the year an additional field inspector was appointed to this unit. His principal task will be the diagnosis and treatment of infestations in aborigines and in Torres Straits Islanders. He will also furnish reports on the sanitation of the settlements and mission stations visited by him.

Hookworm is not very prevalent in the white population as is seen from Table XXXI. A total of 1,696 specimens was examined, of which 1,366 were from white school children. Only 10 of the school children were found to be infested.

Among aborigines, however, the pattern is very different. An intensive house to house survey carried out on Thursday Island in April-June, 1956, revealed 185 positive specimens in 1,414 samples. Later in the year surveys were carried out at Bamaga, Cowal Creek, and Red Island Point. Of 411 specimens examined 89 were positive for hookworm infestation. Early in 1957 a survey was carried out at Yorke Island, and of 169 specimens examined only 6 positive cases were detected. Kubin, Yam, and Maubaig Islands have been similarly checked. Hookworm disease was present at all of these.

Summing up, of 936 specimens from mainland aborigines examined during the year, 196 (29 per cent.) were positive, whilst of 476 specimens from Torres Straits Islanders 149 (31 per cent.) were positive. It is, therefore, clear that mass treatment of both islanders and aborigines must be continued. There is likewise an urgent need to teach the hitherto nomadic aborigine new habits of sanitation and hygiene now that he is congregated into settlements.

From all areas 4,412 specimens were examined, and 780 were found to be positive for hookworm. Other ova found included those of *Enterobius vermicularis, Hymenolepis nana,* and *Trichostrongylus orientalis.*

Mass treatment of aborigines has been carried out at Cairns, Bloomfield River, Cooktown, Bamaga, Cowal Creek, and various Islands in the Torres Straits.

Arrangements have been made with the medical superintendents of district hospitals to treat persons heavily infested with hookworm, and to carry out subsequent follow-up examinations. Children who are less than 3 years of age are also treated in hospital.

From time to time hookworm cultures were made, and the infesting worms were shown in all cases to be either *Ancylostoma duodenale* or *Necator americanus.*

There is a definite need to continue the activities of this unit which was first set up more than 30 years ago. As well as diagnosing and treating hookworm disease the officers of this unit are now giving increasing attention to the prevention of infection by improving sanitation, and by educating the natives in the manner of spread of this disease.

TABLE XXXI.

HOOKWORM.

SHOWING NUMBER OF PERSONS EXAMINED, AND RESULTS OF EXAMINATION AND TREATMENT—1956–1957.

Persons, Location.	Number Examined.	Number Positive.		Per cent. Positive.		Results of Treatment.		
		Hookworm.	Other Worms.	Hookworm.	Other Worms.	Cured.	Not Cured.	Unspecified
A. WHITE POPULATION—								
Pre-School Children—								
Cairns	79	1	1	1·2	1·2	1	..	..
Mona Mona Mission	1	..	..	..	..	..	..	..
Innisfail	8	..	1	..	12·5	..	..	..
Mossman	5	..	..	..	..	..	..	..
Daintree	1	..	..	..	..	..	..	..
Bloomfield River	8	..	..	..	..	..	..	..
Cooktown	4	1	..	25	..	..	..	..
Hopevale Mission	8	1	..	12·5	..	2	..	..
Laura	2	..	..	..	..	..	..	..
Bamaga Settlement	4	..	..	..	..	..	..	..
School Children—								
Cairns	798	4	44	0·5	5·6	4	..	..
Innisfail	46	..	3	..	6·5	..	..	..
Ingham	2	..	..	..	..	..	..	..
Mossman	319	4	13	1·2	4	6	..	..
Daintree	2	..	..	..	..	..	..	..
Bloomfield River	14	..	..	..	..	..	..	..
Cooktown	76	2	6	2·6	7·9	2	..	..
Hopevale Mission	2	..	..	..	..	..	..	..
Laura	4	..	..	..	..	2	..	..
Coen	..	..	..	..	..	1	..	..
Bamaga Settlement	3	..	..	..	..	..	..	..
Other Persons—								
Cairns	69	3	..	4·3	..	..	1	2
Innisfail	22	2	2	9	9	..	1	..
Ingham	3	..	..	..	..	..	..	..
Mona Mona Mission	10	..	..	..	..	..	..	..
Mossman	15	..	..	..	..	..	..	..
Daintree	7	..	..	..	..	..	..	..
Bloomfield River	34	..	..	..	..	..	..	..
Cooktown	8	..	..	..	..	..	..	..
Hopevale Mission	16	..	..	..	..	..	..	..
Laura	3	..	..	..	..	..	..	..
Bamaga Settlement	7	..	..	..	..	..	..	..
Yorke Island	2	..	..	..	..	..	..	..
Moa Island	3	..	..	..	..	..	..	..
Badu Island	2	..	..	..	..	..	..	..
B. ABORIGINAL POULATION—								
Pre-School Children—								
Cairns	58	12	..	20·6	..	5	7	..
Yarrabah Mission	1	..	..	..	..	..	..	..
Mona Mona Mission	87	1	20	1·1	23·1	..	1	..
Mossman	18	9	..	50	..	5	..	5
Bloomfield River	26	11	..	42·3	..	2	..	9
Cooktown	10	5	2	50	20	1	..	1
Hopevale Mission	94	38	7	40·4	7·4	14	24	..
Coen	2	1	..	50	..	..	1	..
Bamaga Settlement	40	11	..	27·5	..	..	..	11
Red Island Point	6	..	..	..	..	..	..	..
Cowal Creek Settlement	25	3	1	12	4	..	..	3
Hammond Island	15	..	..	..	..	..	..	..
Yorke Island	24	..	..	..	..	..	..	..
Yam Island	18	..	..	..	..	..	..	..
Coconut Island	19	..	..	..	..	..	..	..
Moa Island	34	8	..	23·5	..	..	..	8
Badu Island	48	23	1	47·9	2	..	..	23
School Children—								
Cairns	127	27	5	21·2	3·9	14	13	..
Innisfail	4	..	..	..	..	..	..	..
Mona Mona Mission	50	2	11	4	22	..	2	..
Mossman	34	21	1	61·7	2·9	20	1	..
Bloomfield River	28	17	..	60·7	..	..	..	17
Cooktown	10	5	..	50	..	..	..	5
Hopevale Mission	98	46	16	46·9	16·3	34	12	..
Coen	3	2	..	66·6	..	..	2	..
Bamaga Settlement	57	26	2	45·6	3·5	..	..	26
Red Island Point	18	2	..	11·1	..	..	..	2
Cowal Creek Settlement	43	7	9	16·2	20·9	..	..	7
Hammond Island	39	3	1	7·6	2·5	..	..	3
Yorke Island	36	2	..	5·5	..	1	..	1
Yam Island	29	2	..	6·8	..	2	..	..
Coconut Island	38	2	..	5·2	..	2	..	..
Moa Island	97	48	3	49·4	3	..	..	48
Badu Island	125	85	5	68	4	..	..	85

TABLE XXXI.—*continued.*

HOOKWORM.—*continued.*

SHOWING NUMBER OF PERSONS EXAMINED, AND RESULTS OF EXAMINATION AND TREATMENT—1956–1957.—*continued.*

Persons, Location.	Number Examined.	Number Positive.		Per cent. Positive.		Results of Treatment.		
		Hook-worm.	Other Worms.	Hook-worm.	Other Worms.	Cured.	Not Cured.	Unspecified.
Other Persons—								
Cairns	156	29	1	18·5	0·6	6	23	..
Mona Mona Mission ..	104	1	8	0·9	7·6	..	1	..
Daintree	2	..	..	..	..	..	..	..
Mossman	26	14	..	53·8	..	4	10	..
Bloomfield River	66	23	..	34·8	..	..	..	23
Cooktown	27	10	1	37	3·7	1	..	9
Hopevale Mission	219	76	9	34·7	4·1	44	32	..
Laura	10	3	..	30	..	3	..	..
Coen	1	..	..	..	..	..	..	..
Normanton..	3	..	..	..	..	..	..	..
Bamaga Settlement ..	87	23	..	26·4	..	..	..	23
Red Island Point	21	2	1	9·5	4·7	..	..	2
Cowal Creek	114	15	4	13·1	3·5	..	..	15
Hammond Island	32	3	1	9·3	3·1	1	..	2
Yorke Island	104	3	..	2·8	..	2	..	1
Yam Island	126	5	..	3·9	..	4	..	1
Coconut Island	50	1	..	2	..	1	..	..
Moa Island	152	53	1	34·8	0·6	..	..	53
Badu Island	164	82	..	50	..	..	..	82

DIVISION OF TUBERCULOSIS.

Director : E. W. Abrahams, M.D. (Melb.), M.R.C.P., (Lond.).

Assistant-Director: Cyril Evans, M.B., B.S., D.T.M., M.R.C.P. (Lond.).

Chest Physician, Thursday Island: G. Hales, M.B., Ch.B., T.D.D., (Wales).

Chest Physician, Cairns: T. G. Paxon, M.D., (Lond.), M.R.C.P., (Lond.)

Chest Physician, Townsville: I. Dickson, M.B., Ch.B.

The outstanding feature of this year has been the further reduction of the death rate from tuberculosis to 5·7 deaths per 100,000 estimated population. This is half the figure for last year (10·2) and compares with 19·8 in 1950 when the anti-tuberculosis campaign commenced.

Again, it is the impression of medical officers that an increased number of cases of carcinoma of the lung has been seen during the past year. The diagnosis of this condition has been considerably assisted by the introduction into the Laboratory of Microbiology and Bacteriology of the Papanicalaou technique of cystological diagnosis of malignant cells in sputum specimens.

The number of deaths from lung cancer in Queensland was 126 in 1950—in 1956 it was 167. These figures are in keeping with the 7 per cent. increase each year in deaths from this depressing disease throughout Australia.

Buildings.

Seven hundred and eighty-three beds are at present available for the treatment of tuberculosis throughout Queensland. (Table XXXII). The present state of the building programme is:—

Brisbane Chest Hospital, Chermside.—The work on the new main block and nurses' quarters is well forward and completion in approximately twelve months is anticipated. Experience has shown that there is a small number of asocial individuals who are unable to be controlled except under the compulsory provisions of the Tuberculosis Regulations of the Health Acts. Many of these patients are also chronic alcoholics. Plans for such a unit have been drawn up and tenders for its construction are now under consideration. The pavilion wards are proving extremely satisfactory and the appearance of the grounds is steadily improving as trees and shrubs grow.

In September, 1956, a welcome addition to the amenities of the Hospital was the donation by the Queensland Division of the National Association for the Prevention of Tuberculosis in Australia of a children's playground and shelter. This permits the total exclusion of infants and young children from the sanatorium wards during visiting periods when they can be left under care in the playground so provided.

TABLE XXXII.

Showing Number of Hospital Beds Exclusively Available for Tuberculosis Patients.

Chest Hospital, Chermside	186
South Brisbane Auxiliary Hospital ..	179
Westwood Sanatorium	75
Townsville Thoracic Annexe	60
Cairns Thoracic Annexe	50
Thursday Island	80
Repatriation Hospitals—	
Greenslopes	77
Kenmore	76
Total	783

Thoracic Annexes, Cairns and Townsville.—These are both in full use.

The Toowoomba Annexe is almost completed and the first patient should be admitted very shortly.

Rockhampton Annexe.—Work on the structure is proceeding steadily and it should be ready for occupation shortly.

Thursday Island, Waiben Sanatorium.—Buildings on this site are now complete.

Westwood Sanitorium.—These buildings are now complete.

Cherbourg Aboriginal Settlement.—A ward to house tuberculous natives under the care of the Director of Native Affairs is practically complete. This will permit the treatment amidst congenial surroundings of natives in the southern part of Queensland who develop tuberculosis.

Toowoomba Mental Hospital.—A unit of 70 beds to accommodate cases of tuberculosis among those suffering from mental illness in the grounds of the Toowoomba Mental Hospital is at present being designed. Sketch plans have been approved by both State and Commonwealth authorities and working drawings are now in course of preparation.

Chest Clinic, Brisbane.—Plans for extension are in an advanced stage but as yet no building has commenced. Congestion in the clinic continues to give rise to great difficulty as the number of patients under periodic review is steadily increasing and the consequent additional clerical staff cannot be managed except by further encroachment on the space originally designed for patients waiting and changing.

Staff.

Vacancies exist for two medical officers. The positions have been advertised but until such time as they are filled a heavy burden has been placed on the rest of the medical officers and routine radiological and clinical work has been coped with only with very considerable difficulty.

Considerable difficulty, too, is being experienced in recruiting trained tuberculosis visiting sisters for work at the Toowoomba and Rockhampton Thoracic Annexes.

The staff of the Mobile X-ray Unit has undergone fewer changes than usual during the past year with consequent increase in the efficiency of the unit.

Mass Radiography.—Mass radiography units are now situated at the Chest clinic and at Brisbane and Toowoomba General Hospitals. The unit installed at Cairns has been returned to Melbourne for complete refit and it is hoped to replace it with a more up to date unit as soon as possible.

Statistics (Table XXXIII.) show marked increase in the number of micro-films taken by the Mobile X-ray Unit. This is due to better serviceability of the unit throughout the year and secondly to its operating in more thickly settled regions of the State with consequently less time lost in travelling and setting up. The places visited and films taken are detailed. (Table XXXIV.). The larger number of cases labelled "under investigation" shows once more the difficulty of investigating cases in country areas and of acquiring data regarding cases whose subsequent investigation is undertaken privately.

TABLE XXXIII.

Showing Number of X-Ray Examinations carried out 1956–57.

Type of Film.	Chest Clinic.	Mobile Unit.	Brisbane Hospital.	Toowoomba Hospital.	Thursday Island.	Cairns.	Total.
Micro Film	48,377	48,124	19,261	2,116	..	1,093	118,971
Micro re-rays	2,482	1,619	415	98	..	203	4,817
Other large films	5,226	..	..	..	3,756	..	8,982
Total	56,085	49,743	19,676	2,214	3,756	1,296	132,770
Active cases (sputum positive) ..	246	27	77	..	8	5	363

TABLE XXXIV.

Showing Results of Mobile X-Ray Unit Survey 1st January, 1956, to 31st December, 1956.

Locality.	Number of Micro Films Taken.	Number of Active Cases Found.	Number of Cases per 1,000 Micro Films.	Number of Inactive Cases.	Old Cases Rediscovered.	Heart Lesions Noted.	Carcinoma Noted.	Benign Tumour Noted.	Other Lung Conditions.	Bronchiectasis Noted.	Pneumoconiosis Noted.	Under Investigation.
Eventide, Sandgate ..	863	15	17·39	3	..	..	..	..	..	..	3	17
Ipswich Mental Hospital..	592	2	3·38	..	..	..	..	..	..	..	..	21
Toowoomba Mental Hospital	1,650	6	3·63	4	..	..	1	1	2	1	..	30
Toowoomba	5,740	3	·52	3	..	1	..	1	5	1	..	16
Warwick	5,077	1	·19	..	1	1	..	1	4	4	..	6
Stanthorpe	1,400	..	..	..	..	..	..	..	1	..	..	3
Wallangarra	390	..	..	..	..	..	..	..	..	..	..	2
Inglewood	353	..	..	..	..	1	..	..	..	..	..	..
Texas	392	..	..	..	..	1	..	..	..	..	..	..
Goondiwindi	1,557	..	..	..	..	..	..	..	..	..	..	3
Killarney	500	..	..	..	..	..	..	..	..	..	..	3
Clifton	783	..	..	..	..	..	..	..	..	..	..	..
Pittsworth	600	..	..	1	..	..	..	1	..	..	..	..
Millmerran	600	..	..	..	..	..	..	..	2	..	..	..
Dalby	2,648	..	..	..	..	2	..	..	1	1	..	6
City Hall, Brisbane H/W	6,621	4	·6	..	..	..	..	..	..	..	..	21
Crows Nest	725	..	..	..	..	1	..	..	..	..	..	2
Allora	485	..	..	..	..	..	..	1	..	1	..	2
Oakey	979	..	..	..	..	..	..	..	..	1	..	7
Jandowae	694	..	..	..	..	..	..	..	..	..	..	4
Chinchilla	1,841	..	..	..	..	1	..	1	..	2	..	2
Miles	930	..	..	..	..	..	..	..	..	..	..	3
Roma	2,363	..	..	..	..	1	..	..	..	..	..	9
Mitchell	790	..	..	..	..	..	..	1	..	..	..	3
Surat	348	..	..	..	..	..	..	..	..	..	..	..
Tara	549	..	..	..	..	..	..	..	..	..	..	3
Yuleba	196	..	..	..	..	..	..	..	..	..	..	..
Gatton	1,181	..	..	..	..	1	..	..	..	..	..	1
Total	40,847	31	·76	11	1	10	1	7	15	111	3	164

TABLE XXXV.

SHOWING RESULTS OF MOBILE UNIT SURVEY IN CERTAIN QUEENSLAND CITIES AND TOWNS, JANUARY, 1956, TO DECEMBER, 1956.

Town.	Population 30-6-56.	Estimated Population over 13 Years of age.	Number of Films Taken.	Towns in Order of Cases Found.	
Toowoomba	45,000	32,610	5,740	Toowoomba	3
Warwick	9,540	6,630	5,077	Warwick	1
Stanthorpe	3,060	2,150	1,400	Stanthorpe	..
Wallangarra	670	450	390	Wallangarra	..
Inglewood	1,090	740	353	Inglewood	..
Texas	960	650	392	Texas	..
Goondiwindi	3,050	2,040	1,557	Goondiwindi	..
Killarney	1,120	760	500	Killarney	..
Clifton	1,000	670	783	Clifton	..
Pittsworth	1,440	990	600	Pittsworth	..
Millmerran	1,040	700	600	Millmerran	..
Dalby	6,620	4,500	2,648	Dalby	..
Crows Nest	880	590	725	Crows Nest	..
Allora	1,040	700	485	Allora	..
Oakey	1,700	1,210	979	Oakey	..
Jandowae	1,110	750	694	Jandowae	..
Chinchilla	2,810	1,860	1,841	Chinchilla	..
Miles	1,240	830	930	Miles	..
Roma	4,350	3,010	2,363	Roma	..
Mitchell	1,460	990	790	Mitchell	..
Surat	650	440	348	Surat	..
Tara	780	530	549	Tara	..
Yuleba	410	280	196	Yuleba	..
Gatton	2,320	2,040	1,181	Gatton	..
Total	93,340	66,120	30,121		

During the past few months some doubt as to the safety of mass radiography has been raised in some quarters because of the risks of X-radiation of the individuals concerned. As the National Health and Medical Research Council has set up a committee to enquire into this matter any detailed comment would be premature.

It can, however, be categorically stated that the risk, if any, is of a very low order and as yet largely theoretical, while the benefits accruing both to individuals found to have tuberculosis and to the general public by virtue of diminishing the number of infectious cases in the community are substantial.

Treatment.—No major innovations have occurred in the treatment of tuberculosis during the past year. Increasing use has been made in appropriate cases of the so-called "second line" drugs viomycin and pyrazinanide) to cover cases requiring surgery where resistence to the usual anti-biotic drugs, streptomycin, para amino salicylic acid and isoniazid, has been detected or was clinically suspect and it is felt that these drugs are of real, but limited, value in this field. No drug likely to supplant the usual three drugs from their pre-eminent position as the mainstay of treatment has, however, been produced.

The policy of continuing drug treatment for long periods after sanatorium inpatient care has been continued and has been apparently very successful in preventing relapse.

Notifications.—A further slight decrease in cases notified occurred this year. The increasing proportion of cases being reported by the Chest clinic and by private practitioners is noteworthy while the absence of deaths previously not notified during life underlines the co-operation of the general medical profession in tuberculosis control.

TABLE XXXVI.

SHOWING SOURCES OF NOTIFICATIONS OF TUBERCULOSIS, 1955–1956—1956–1957.

	1955–56.	1956–57.
Hospitals	231	199
Chest Clinic	235	248
Private Practitioners	76	91
Death Certificates	29	..
Sanatoria	45	36
Repatriation Department	38	33
Thursday Island Hospital	9	24
Post Mortem	21	4
Cherbourg Aboriginal Settlement	..	1
Palm Island Aboriginal Settlement	1	3
	685	639

TABLE XXXVII.

SHOWING INFORMATION FROM CASE REGISTER, 1956–57.

—	Brisbane.			Country.			State.		
	M.	F.	P.	M.	F.	P.	M.	F.	P.
Notifications, 1956–57 ..	198	108	306	233	100	333	431	208	639
Cases on Register 1–7–56 and still on Register	1,320	785	2,105	1,286	732	2,018	2,606	1,517	4,123
Cases added to Register 1956-57	189	106	295	216	97	313	405	203	608
On Register 30th June, 1957 ..	1,509	891	2,400	1,502	829	2,331	3,011	1,780	4,731

M.—Males ; F.—Females ; P.—Persons.

TABLE XXXVIII.

SHOWING BACTERIOLOGICAL STATUS OF PATIENTS WHEN NOTIFIED.

—	Brisbane.	Country.	State.
Pulmonary—			
Positive—			
Smear	60	66	126
Culture	84	62	146
Animal Inoculation	36	22	58
Negative—			
Smear	11	26	37
Culture	18	24	42
Animal Inoculation	5	2	7
Not Stated—Results Pending, Death Notifications.	79	106	185
Total Pulmonary	293	308	601
Non-Pulmonary—			
Positive	1	3	4
Negative	1	12	13
Not Stated	11	10	21
Total Non-Pulmonary	13	25	38
Total All Forms	306	333	639

TABLE XXXIX.

SHOWING DETAILS OF TUBERCULOSIS IN MIGRANTS, QUEENSLAND.

—	British.			Non-British.			Total.		
	M.	F.	P.	M.	F.	P.	M.	F.	P.
Cases prior to 1st July, 1956 ..	88	51	139	125	68	193	213	119	332
Cases, 1st July, 1956, to 30th June, 1957	7	4	11	16	8	24	23	12	35
Total	95	55	150	141	76	217	236	131	367

Rates :

1. Queensland total cases — Australian Population = 49 per 100,000 Australians.
2. Queensland Migrant cases — Australian Migrant Population = 41 per 100,000 migrants in Australia.
3. Queensland total cases — Queensland Population = 338 per 100,000 Queenslanders.

(These figures form the only available basis of comparison of the incidence of Tuberculosis among Post-war immigrants and Australians).

Death Rate.— As already mentioned this is only 5·7 per 100,000 population; a most encouraging figure and one which may be due to the present regime of prolonged chemotherapy.

TABLE XL.

SHOWING NUMBER OF DEATHS FROM TUBERCULOSIS AND DEATH RATE FROM TUBERCULOSIS (PER 100,000 MEAN POPULATION), QUEENSLAND.

Year.	Deaths.	Death Rate.
1950	236	19·8
1951	226	18·4
1952	216	17·2
1953	162	12·6
1954	140	10·6
1955	137	10·2
1956	81	5·7

TABLE XLI.

SHOWING NUMBER OF CASES ON REGISTER AND MORBIDITY RATE (PER 100,000 POPULATION), QUEENSLAND.

Year Ending.	Cases on Register.	Morbidity Rate.
30th June, 1952 ..	1,942	154
30th June, 1953 ..	2,569	198
30th June, 1954 ..	3,201	243
30th June, 1955 ..	3,746	279
30th June, 1956 ..	4,263	311
30th June, 1957 ..	4,731	343

Prophylaxis.—In country districts this has suffered during the past year owing to the difficulty of recruiting suitably trained sisters for domiciliary visiting work at Rockhampton and Townsville. Contact supervision in Brisbane and districts surrounding Cairns continues to be satisfactory.

Tuberculin Testing and B.C.G. Vaccination.—The policy of vaccinating the following groups has been continued:—

(*a*) Those whose occupation exposes them to tuberculosis, such as hospital workers, nurses, medical, and dental students and the like.

(*b*) Contacts of cases of all ages if tuberculin negative.

(*c*) Aborigines of all ages if tuberculin negative.

(*d*) Children of school leaving age.

(*e*) National Service Trainees.

(*f*) Australians intending to travel overseas, including families of troops being stationed outside Australia.

Details of numbers tested and vaccinated are set out in Table XLII.

TABLE XLII.

SHOWING TUBERCULIN TESTS AND B.C.G. VACCINATION 1956–57.

—	Tuberculin Tested.	Did not Return.		Positive.		Positive after Previous B.C.G.		Negative.		B.C.G. Given.		Refused or Absent for B.C.G.	
	No.	No.	Percentage.	No.	Percentage.	No.	Percentage.	No.	Percentage.	No.	Percentage.	No.	Percentage.
Chest Clinic	6,042	181	3·1	1,127	18·6	1,817	30·0	2,917	48·3	1,693	58·0	1,224	42·0
Schools	5,511	136	2·5	1,258	22·8	189	3·4	3,928	71·3	3,858	98·7	70	1·3
National Service Trainees ..	1,716	..	..	606	35·3	..	..	1,110	64·7	1,110	100·0	..	..
St. Joseph's College, Gregory Terrace	385	10	2·6	174	45·2	116	30·1	85	22·1	80	94·1	5	5·9
Cherbourg—													
White Population ..	41	..	..	25	61·0	..	..	16	39·0	15	93·8	1	6·2
Native Population ..	693	..	..	78	11·2	519	74·9	96	13·9	96	100·0	..	..
University Students	926	71	7·6	495	53·4	42	4·6	318	34·4	305	96·0	13	4·0
Teachers Training Colledge ..	482	21	4·3	188	39·0	151	31·3	122	25·4	108	88·5	14	11·5
Palm Island	1,164	..	..	455	39·0	..	..	709	61·0	709	100·0	..	..
Thursday Island	1,961	168	8·5	1,552	79·1	..	..	241	12·4	209*	86·7	32	13·3
Cairns	1,388	27	1·9	826	59·5	..	..	535	38·6	476	89·0	59	11·0
Total	20,309	614	3·2	6,784	33·4	2,834	13·9	10,077	49·5	8,659	86·0	1,418	14·0

* Plus 180 infants not Tuberculin Tested.

The tuberculin testing rate for Brisbane children of school leaving age persists at 22·8 per cent., a figure which is still very much higher than that of most other Australian capitals.

During the past year surveys undertaken by Dr. Hales in the Torres Straits area are of interest. His relevant findings are set out in Tables XLII. and XLIII. Rates for lugger crews and for island communities are disturbingly high and though it is to be hoped that the post war epidemic in this area is now waning a steady trickle of cases from such a heavily infected population is inevitable for some years to come.

Table XLIII. shows the tuberculin rates for a number of these isolated communities and that for Yam Island is particularly interesting. The recent X-ray survey of Yam Island uncovered a further 9 cases requiring investigation for chest lesions, probably active tuberculosis, which makes 27 known cases from this small community of 170 people. This is very important in showing how many cases, proportionately, can occur in the small isolated native communities where close contact and racial predisposition to the disease are very important factors.

TABLE XLIII.

THURSDAY ISLAND—Tuberculin Tests and B.C.G. Vaccinations, 1956–57.

Place or Location.	Tuberculin Tested.	Did not Return.		Positive.		Negative.		B.C.G. Given	Did not return or refused B.C.G.
	No.	No.	Percentage.	No.	Percentage.	No.	Percentage.	No.	No.
Chest Clinic	207	20	9·6	145	70·1	42	20·3	243	11
Crews of Pearl and Trochus Fleets	554	144	26·0	403	72·7	7	0·3	..	7
School Children Coloured	118	4	3·3	100	84·9	14	11·8	13	1
Yam Island	101	..	..	88	87·1	13	12·9	..	13
Coconut Island and Three Sisters Islands	170	..	..	140	88·1	30	11·9	30	..
Murray Island	433	..	..	394	91·0	39	9·0	39	..
Darnely Island	317	..	..	247	78·0	70	22·0	70	..
Stephen Island	61	..	..	35	57·3	26	42·7	26	..
Totals	1,961	168	8·5	1,552	79·1	241	12·4	421*	32

* Including infants not Tuberculin Tested.

TABLE XLIV.

Complications following Vaccinations, 1956–57.

Locality.	Age Group.	Given B.C.G. No.	Local Ulcer.		Glands Closed.		Incised-Draining.		Total Complications.	
			No.	Percentage.	No.	Percentage.	No.	Percentage.	No.	Percentage.
Chest Clinic Brisbane	0–2 years	245	..	..	5	2·04	2	0·81	7	2·85
	3–14 years	5,209	..	..	..	..	..	..	..	..
	Over 14 years	1,811	..	..	..	..	..	..	..	..
	Total	7,265	..	..	5	0·068	2	0·027	7	0·096
Thursday Island	0–2 years	217	12	5·5	6	2·6	4	1·8	22	10·1
	3–14 years	22	10	4·5	..	..	..	..	10	4·5
	Over 14 years	4	1	25·0	1	25·0	..	..	2	50·0
	Total	243	23	9·5	7	2·9	4	1·6	34	14·0
Cairns	0–2 years	162	Not Known		Not Known		1	0·6	1	0·6
	3–14 years	238	Not Known		Not Known		..	..	..	..
	Over 14 years	76	Not Known		Not Known		..	..	..	..
	Total	476	Not Known		Not Known		1	0·6	1	0·6

Tuberculosis Allowances.—A marked drop in the number of tuberculosis allowances paid occurred during the past year. This probably reflects the steady drop in notifications as many patients receive the tuberculosis allowance for upwards of two years and a drop in the allowance rate is consequently considerably delayed. An additional feature has probably been the use of prophylactic chemotherapy in keeping cases sputum negative who would otherwise continue to be infectious and therefore attract the allowance. The present rates of this allowance are:—

Single person without dependants—£6 2s. 6d. weekly.

Single persons in Hospital—£4 weekly.

Married persons with dependent wife—£9 12s. 6d. weekly plus 10s. per week for each dependent child.

The provision of the tuberculosis allowance is still of paramount importance in enabling persons infected to stop work, to enter hospital for proper care and so ensure their removal from their place of work and consequent diminution in the risk of infecting others.

TABLE XLV.

Showing Number of Tuberculosis Allowances Being Paid in Queensland, at 30th June, 1957.

——	Male.	Female.	Total.
Number accommodated in tuberculosis institutions	265	80	345
Number not so accommodated	171	64	235
Total on Allowance	436	144	580

DIVISION OF INDUSTRIAL MEDICINE.

Director of Industrial Medicine: Douglas Gordon, M.B., B.S. (Q'ld.) (to 28th February, 1957).

Acting Director of Industrial Medicine: E. M. Rathus, M.B., B.S. (from 1st March, 1957).

This report, due to the departure of Dr. D. Gordon to fill the chair of Professor of Social and Preventive Medicine at the University of Queensland, has been divided into two parts. The first (July to February) comprises activities of the Division under Dr. Gordon, and the second (March to June) deals with activities since the arrival of Dr. Rathus, the Acting Director.

PART A.

(Activities from 1st July, 1956, to 1st March, 1957.)

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

(1) Reports submitted on industrial premises, industrial health hazards, or to a less extent on administrative matters	61
(2) Clinical reports to medical practitioners, the Insurance Commissioner, &c.	303
(3) Clinical examinations performed on patients	100

Lectures.

Talk over A.B.C. Rural Hour on the Toxicity of Insecticides and Agricultural Sprays.

Investigations of Interest Carried Out.

During the period the following matters of interest were dealt with:—

1. One patient with very slight exposure to lead developed disseminated sclerosis. There did not seem to be any connection between the two, though a casual relationship was alleged.

2. Optic atrophy developed in a man who had had a good deal of proven exposure to lead as a rotary stereo-caster. Lead was probably the cause.

3. The question of industrial exposure in primary industries to two unusual diseases came up during the year, viz. to melioidosis and sparganosis.

4. Mr. D. F. Robertson of the University Radiation Physics Laboratory made an investigation into an alleged radio-activity hazard on behalf of this Division. Large petrol tanks were being constructed and a radio-active source was used to check welds. No hazard was found.

5. One unusual query concerned the dangers, if any, associated with drying out canaries with infra-red lamps.

6. A dental nurse after extensive investigation was found to be sensitive to various solvents used in her calling.

7. A brief survey of deaths during the last thirty years among members of the Painters' and Dockers' Union from lead poisoning and chronic nephritis was undertaken. No undue incidence was found.

8. Dermatitis in the margarine industry was investigated. In the trade it would seem to be a well recognised entity.

9. It was also noted that one or two patients handling timber treated with pentachlorphenol developed dermatitis and the evidence brought to light suggests that this is yet one more way in which pentachlorphenol may cause harm.

10. There was only one death from pentachlorphenol sprays but it is difficult to know whether or not this lower incidence was due to publicity on its dangers or to the fact that the summer was a dry one in the pineapple growing areas, with little weed growth.

11. In the case of a young man who developed epilepsy a short time after an attack of leptospirosis it was difficult to decide whether or not there was any connection between the two.

12. For the first time this Division was called to look into an alleged hazard from Vanadium residues in oil fired ships' boilers. Values above allowable concentrations were found.

13. A number of Railway Goods' Clerks working in a shed infested with pigeons developed a disease which was probably an upper respiratory infection. A scare of psittacosis arose but all investigations were negative.

14. Members of the Electrical Trades' Union who work on power transmission lines, particularly in North Queensland scrubs, became worried lest contact with various stinging trees would permanently damage their health. They were reassured.

15. A small pocket of garlic smelling gas—probably arsine—was noticed in a metalliferous mine. Subsequent investigations were equivocal. It has not recurred.

16. The use of chromium salts as an anti-rust agent in water used for cooling diesel locomotives was investigated for the first time. It had caused some skin lesions among maintenance staff.

17. One unusual "hazard" investigated was potential industrial trouble due to scabies among crew on a pilot vessel.

18. On behalf of the R.A.A.F. medical service carbon monoxide in service aircraft was investigated.

19. A good deal of "caisson work" was done during the year on the new Indooroopilly Bridge without any untoward happenings.

Future Activities.

At the moment there are four major projects which are of some importance now and in the future as far as this Division is concerned:—

1. (*a*) Legislation covering radio-active hazards.
   (*b*) Medical and laboratory supervision of potential hazards in the North-West mining districts. This will include housing and laboratory accommodation.

2. A preliminary investigation into the incidence of Smog in the metropolitan area. The Acting Director of Industrial Medicine has done some initial work on this.

3. A survey of industrial accidents. An officer of the Division is working on this matter in conjunction with the State Government Insurance Office.

4. The teaching of industrial safety in Technical Colleges. This was discussed previously with the Department concerned but nothing eventuated. A course of lectures in this subject would result in a reduction of accidents in industry and further approaches will be made.

PART B.

(Activities from 1st March to 30th June, 1957.)

During the above period this Division has in the main confined its attentions to matters requiring routine investigation, or to problems arising out of specific circumstances involving a potential hazard to health.

Investigations of Interest Carried Out.

1. Battery works in Brisbane were inspected on a general basis, and some suggestions were made in respect of added precautions necessary in at least two cases. This evolved out of the fact that several men showed evidence of excessively high lead absorption. Two men were advised to relinquish their trade in view of evidence of incipient lead poisoning. There appears to be an intrinsic hazard amongst furnace-men and in those handling quantities of finely powdered lead dross, which is not easily countered even by stringent efforts on the part of management in matters of control. Familiarity with the work leads to relaxation of preventive measures relating to matters of personal hygiene on the part of the men. In such cases it is only continual insistence on the regulations that reduces the incidence of excessive lead absorption.

An interesting investigation into the dissemination of lead dust on to properties adjoining a lead smelting works was carried out, but under present conditions no dangerous concentrations were found in water-tanks in residential areas 250-440 yards away.

2. During this period one death occurred in a young farmer from parathion spraying. Once again the extreme toxicity of this compound was demonstrated in tragic circumstances.

3. An interesting investigation was carried out on a battery works run by two families. The whole battery and its components were entirely made on the premises, apart from the case. No knowledge whatever of the dangers of lead absorption was apparent, and no precautions were taken at all. Investigations revealed clear evidence of excessive lead absorption in all members of the firm, and, as a result of suggestions from this Division, major alterations to plant are being undertaken.

4. On several occasions the irritating nature of vegetable fibres and dusts was demonstrated amongst men engaged in chaff-cutting and grain manufacture. Though no definite medical hazard exists in such occupations, there is little doubt of the capacity for such particles to aggravate conditions such as bronchitis, mechanical irritation being the responsible factor.

5. A follow-up survey of asbestos workers did not reveal any further cases of asbestosis.

6. A dust hazard was investigated at a firm of mattress-makers, but it was finally concluded that neither coconut fibre, kapok or flock fibres were present in significant quantity in the air, nor were there any complaints attributable to their presence.

7. The problem of Weil's disease control continues to be troublesome, and no measure of reduction in incidence of the disease amongst cane-cutters can be expected until full realisation of the necessity for the wearing of suitable protective clothing is accepted by employer and employee. The value of cane-burning as a deterrent to the rat population is debatable but is certainly a useful ancilliary measure, and may be useful in controlling leptospirae in the surface of the soil.

Reports and Examinations.

Clinical examinations and reports to medical practitioners, and other official matters attended to are summarised below:—

(1) Reports submitted on industrial premises, industrial health hazards, or to a less extent on administrative matters	32
(2) Clinical reports to medical practitioners, the Insurance Commissioner, &c.	228
(3) Clinical examinations performed on patients	46

Future Activities.

1. A report on dust suppression in mining is to be undertaken in collaboration with the Department of Mines, for the information of the International Labor Office.

2. A general survey of dusty occupations, such as coal-mining and quarrying, is in hand.

WEIL'S DISEASE CAMPAIGN.

During the past year control operations were carried out in the Tully, South Johnstone, Goondi, Mourilyan, Babinda, Mulgrave, and Hambledon Areas with visits to Mossman and Ingham Districts as required.

The 1956 cane harvesting season proved one of the most difficult from a field and industrial point of view following as it did the cyclone in March which badly damaged the crops throughout most areas. Tonnages were down on

previous years totals but field problems rose to a major degree. Heavy growth of vegetation through fields with almost continuous wet conditions militated against effective burning from the health point of view and greatly added to the problem of harvesting. In view of the difficult position prevailing it was recognised that considerable discretion had to be used in the implementation of control measures if harvesting was not to be totally disrupted and therefore control measures were considerably relaxed. The crushing season extended from the first week of June to the third week of January with all mills north of Tully completing their harvest before Christmas. There was no period of fine weather of long enough duration to thoroughly dry out fields. This is most desirable before and periodically through the harvesting period when approximately five thousand cutters are committed to employment within the control area. Of late years a large proportion of the cane-cutters are new-comers to the industry and are particularly prone to infection due to having insufficient time to become acclimatised and build up the same degree of resistance to infection as residents of longer duration appear to enjoy.

During the slack period, January to May, harbourage eradication was limited in most areas because of unfavourable weather and this afforded ample opportunity for rat infestation to occur and as such a build-up in rat population, unless adequately controlled, is expected.

Pest Board Activities.

The usual Pest Board rodent control activities continued throughout the year. Considering the estimated economic losses shown of the year's survey at the Cane Pest Conference a greater expenditure in rat control would appear to be more than justified.

With the claim that the sugar industry's number one pest, the cane grub, has been conquered with the advent of gammexane perhaps efforts will now be channelled in the direction of the conquest of the number two enemy, the rat population, which is responsible for heavy economic loss to the industry and a menace to all concerned with it.

Harvesting.

Once again the labour turnover was high but in some areas mechanical loading was resorted to to assist harvesting and this, to some extent, offset the shortage of cutters. The usual practice of the wearing of shorts and sandshoes was very prevalent despite repeated education of the cutters by staff officers in the need for wearing suitable protective clothing—long trousers, long-sleeved shirts and light leather boots. Washing of hands before partaking of food in the field, treatment of abrasions with antiseptic and covering of same was advocated, and finally proper sanitary conduct of barracks.

DIVISION OF MATERNAL AND CHILD WELFARE.

Director: H. C. Murphy, M.B., B.S.

Deputy Director: Pamela Jackson, M.B., B.S. (to 17 December, 1956).

Jean F. McFarlane, M.B., B.S. (from 4th February, 1957).

Part-time Pre-school Child Health Officer: A. E. Paterson, M.B., Ch.M.

Acting Superintendent: A. Jenkinson, A.T.N.A.

Table of Contents.

Staff.

Dr. Pamela Jackson, who occupied the position of Deputy Director since June 4th, 1951, resigned from that position on 17th December, 1956. Dr. J. F. McFarlane was appointed Deputy Director on 4th February, 1957.

The nursing staff is the same as in the previous year, being 140, of which 60 members are on the permanent staff and 80 on the temporary staff.

Vital Statistics.

BIRTHS.

During the year 1956, 32,409 births were registered, an increase of 57 over the previous year. There were 16,702 males and 15,707 females born, giving a masculinity rate of 106·3. The natural increase of 20,223 was equal to 1·50 per cent. of the population, compared with 1·59 in 1955. The birth rate for 1956 was 23·7 per 1,000 mean population, compared with 24·2 in 1955.

MARRIAGES.

Registrations of marriages in 1956 numbered 9,934, giving a marriage rate of 7·3 per 1,000 mean population, compared with 7·5 in the previous year. Minors married numbered 4,664 comprising 959 males and 3,705 females.

DEATHS.

Maternal.

The maternal mortality rate was 0·89 per 1,000 live births compared with 0·62 in 1955, the lowest ever experienced in Queensland. The lowest previous figure was 0·71 in 1953. There were 29 deaths during the year caused by diseases and accidents of pregnancy and childbirth. Of these, 12 followed childbirth and 12 were due to diseases and accidents of pregnancy (excluding five abortions). The causes of the 12 deaths due to disease and accidents of childbirth were as follows:—

Other accidents of childbirth, including Caesarian section	6
Delivery complicated by placenta praevia or ante-partum haemorrhage	2
Delivery complicated by retained placenta	1
Other post-partum haemorrhage	2
Puerperal eclampsia	1

The causes of the 12 deaths due to diseases and accidents of pregnancy were as follows:—

Toxaemias of pregnancy	6
Ectopic pregnancy	3
Other complications of pregnancy	3

Infantile Mortality.

Deaths of infants aged under one year numbered 737, comprising 407 males and 330 females, compared with 656 in 1955. The infantile mortality rate of 22·7 deaths per 1,000 live births compared with 20·3 in 1955, although disappointing, was considerably better than all rates recorded prior to 1954. In the metropolitan area the rate increased from 18·4 in 1955 to 19·9. The sub-tropical (non-metropolitan) area rate increased from 21·3 in 1955 to 23·3 in 1956, while in the tropical area the rate increased from 21·3 to 25·8 per 1,000 live births.

The main causes in the rise of the infant mortality are the increase in the number of deaths of premature infants and the increase in deaths due to bronchopneumonia in the 1 month to 1 year group.

The total number of deaths due to prematurity was 189 compared with 141 in 1955. Deaths from prematurity since 1949 were as follows:—

1948	294
1949	233
1950	155
1951	153
1952	187
1953	145
1954	185
1955	141
1956	189

The increase of 48 deaths in the present year is made up of increases in all areas. The metropolitan area showing an increase of 9, the sub-tropical an increase of 11, and the tropical an increase of 28 over the deaths in the previous year.

In 1955 the deaths from prematurity in the tropical area was 29, the lowest number on record, but in the present year this figure has increased to 57.

In 1956 there was an increase of 28 deaths from bronchopneumonia as compared with the previous year. The deaths from pneumonia for all ages increased from 317 in 1955 to 481 in 1956, and the greatest increase occurred in June, July, and August. This was approximately the same period during which the severe epidemic of upper respiratory tract infection occurred in Queensland. Even if this could explain the marked increase in deaths from pneumonia for all ages it cannot explain the increase in infantile deaths as this increase occurred in all of the four quarters of the statistical year.

Deaths of children aged one year and under five years.

(*a*) Deaths of children aged one year and under two years during the year 1956 numbered 79, representing a death rate of approximately 2·5 per 1,000 children in that age group. There were 87 deaths in 1955.

The chief causes of death were:—

Accidents		19
Pneumonia—		
Bronchopneumonia	6	12
Lobar Pneumonia	5	
Other Unspecified	1	
Congenital Malformations		8
Gastroenteritis and Colitis		4

Of the 19 deaths (14 males, 5 females) due to accidents, two were caused by burns and scalds, seven by drowning, three by accidental poisoning, four by traffic accidents, one by motor-vehicle (non-traffic) accidents, one by falling, and one cause was not specified.

Of the three deaths due to accidental poisoning, two were caused by petroleum products, and one by arsenic.

(*b*) Deaths of children between two and under five years during the year numbered 101, representing a death rate of approximately 1·13 per 1,000 children in that age group. Deaths in 1955 were 106.

The chief causes of death were:—

Accidents	30
Congenital Malformations	12
Pneumonia (all kinds)	9
Malignant Neoplasms	8
Gastroenteritis and Colitis	3
Bronchitis	4
Nephritis and Nephrosis	2
Tetanus	2

Of the 30 deaths due to accidents, eight were caused by motor traffic accidents, four by drowning, five by burns and scalds, three by poisoning, four by motor-vehicle (non-traffic) accident, two by animals, one by railway accident, one by falling, one by machinery, and one cause was not specified.

Accidental deaths of children aged one and under fifteen years.

Accidental deaths of children in this age group numbered 95 in 1956, compared with 94 in 1955, and an average of 88 in the seven years 1950 to 1956, inclusive. The total deaths of children in this age group from all causes were 317, of which 30 per cent were caused by accident.

TABLE XLIX.

CAUSES OF DEATHS IN INFANTS UNDER ONE YEAR—QUEENSLAND, 1956.

Cause.	1955.	1956.				Increase or Decrease.
		Metropolitan.	Sub-Tropical. (a)	Tropical.	Total.	
Immaturity (unqualified)	137	53	78	57	188	+48 (189)
Immaturity with mention of any other subsidiary condition	4	..	1	..	1	
Congenital Malformations	128	54	49	32	135	+ 7
Post-natal Asphyxia and Atelectasis	66	23	24	14	61	− 5
Intracranial and spinal injury at birth	66	18	14	15	47	−19
Other birth injury	43	8	22	15	45	+ 2
Pneumonia of newborn	22	1	11	5	17	− 5
Haemolytic disease of newborn(Erythroblastosis)	23	10	9	6	25	+ 2
Neo-natal disorders arising from Maternal Toxaemia	14	6	4	5	15	+ 1
Haemorrhagic disease of newborn	7	5	5	2	12	+ 5
Diarrhoea of newborn	1	1	1	2	4	+ 3
Other diseases peculiar to early infancy	15	9	14	2	25	+10
Total Diseases of early infancy	526	188	232	155	575	+49
Gastroenteritis and Colitis	21	1	13	8	22	+ 1
Bronchopneumonia, other and unspecified Pneumonia	28	10	27	19	56	+28
Lobar Pneumonia	8	2	3	5	10	+ 2
Whooping cough	..	..	..	..	..	..
Diphtheria	1	..	..	..	..	− 1
All other causes	72	23	34	17	74	+ 2
Total Deaths under 1 year	656	224	309	204	737	+81

(a) Excluding Metropolitan.

TABLE L.

CAUSES OF DEATHS IN INFANTS MORE THAN ONE MONTH, BUT LESS THAN TWELVE MONTHS OF AGE—QUEENSLAND, 1956.

Cause.	1955.	1956.				Increase or Decrease.
		Metropolitan.	Sub-Tropical. (a)	Tropical.	Total.	
Immaturity	..	..	1	..	1	+ 1
Congenital Malformations	59	15	17	17	49	−10
Post-natal Asphyxia and Atelectasis	1	..	..	..	..	− 1
Other Birth Injury	1	..	..	..	..	− 1
Haemolytic disease of newborn	1	..	..	..	..	− 1
Other diseases peculiar to early infancy	4	1	10	..	11	+ 7
Total Pre-natal Causes	66	16	28	17	61	− 5
Bronchopneumonia, other and unspecified pneumonia	28	10	27	19	56	+28
Gastroenteritis and Colitis	21	1	13	8	22	+ 1
Whooping Cough	..	..	..	..	..	..
Lobar Pneumonia	8	2	3	5	10	+ 2
Diphtheria	1	..	..	..	..	− 1
All other causes	52	16	25	17	58	+ 6
Total Deaths 4 weeks and under 1 year	176	45	96	66	207	+31

(a) Excluding Metropolitan.

TABLE LI.

CAUSES OF DEATHS IN INFANTS UNDER ONE MONTH OF AGE—QUEENSLAND, 1956.

Cause.	1955.	1956.				Increase or Decrease.
		Metropolitan.	Sub-Tropical. (a)	Tropical.	Total.	
Immaturity (unqualified)	137	53	77	57	187	188 +49
Immaturity with mention of any other subsidiary condition	2	..	1	..	1	
Post-natal Asphyxia and Atelectasis	65	23	24	14	61	− 4
Congenital Malformations	69	39	32	15	86	+17
Intracranial and Spinal injury at birth	66	18	14	15	47	−19
Other birth injury	42	8	22	15	45	+ 3
Pneumonia of newborn	22	1	10	5	16	− 6
Haemolytic diseases of newborn (Erythroblastosis)	22	10	9	6	25	+ 3
Neo-natal disorders arising from Maternal Toxaemia	14	6	4	5	15	+ 1
Haemorrhagic disease of newborn	7	5	5	2	12	+ 5
Diarrhoea of newborn	1	1	..	2	3	+ 2
Other diseases peculiar to early infancy	13	8	6	2	16	+ 3
Total Pre-natal Causes	460	172	204	138	514	+54
All other Causes	20	7	9	..	16	− 4
Totals	480	179	213	138	530	+50

(a) Excluding Metropolitan.

TABLE LII.

CAUSES OF DEATHS OF PREMATURE (IMMATURE) INFANTS.

——	1954.	1955.	1956.
Immaturity unqualified	185	137	188
Ill-defined diseases peculiar to early infancy, with immaturity	8	10	6
Post-natal Asphyxia and Atelectasis, with immaturity	33	40	38
Intracranial and Spinal injury at birth, with immaturity	10	13	12
Other birth injury, with immaturity	22	31	29
Neo-natal disorders arising from Maternal Toxaemia, with immaturity	20	14	11
Pneumonia of newborn, with immaturity	9	8	3
Haemorrhagic diseases of newborn, with immaturity	2	..	2
Erythroblastosis, without mention of nervous affection but with immaturity	..	6	7
Nutritional Maladjustment, with immaturity	..	..	1
Immaturity with mention of any other subsidiary condition	3	4	1
Umbilical Sepsis, with immaturity	..	..	1
Other Sepsis of newborn	..	..	..
Diarrhoea of the newborn	2	..	..
Totals	294	263	299
Total under one year	294	263	299
Total under one month	292	259	297

TABLE LIII.

ACCIDENTAL DEATHS OF CHILDREN (AGED 1 AND UNDER 15 YEARS) IN QUEENSLAND.

—	1951.		1952.		1953.		1954.		1955 (*r*).		1956.		Total.
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
Road Accidents ..	13	16	15	10	15	9	18	11	15	9	14	9	154
Firearms	7	..	1	1	3	1	5	..	2	..	3	..	23
Drowning	16	7	10	7	12	4	10	4	17	1	21	5	114
Falls	2	..	2	1	3	2	3	..	1	..	5	2	21
Other Accidents ..	21	16	29	12	22	19	21	13	21	18	19	17	228
	59	39	57	31	55	35	57	28	56	28	62	33	540
Totals	98		88		90		85		84		95		540

1955 (*r*) Revised since last report.

In 1956, twenty-three deaths in this age group were caused by road accidents, 14 males and 9 females. The total number of deaths was 95—11 more than the previous year—and the ratio of males to females was 2:1.

TABLE LIV.

BIRTHS AT BRISBANE WOMEN'S HOSPITAL, 1956.

Brisbane Women's Hospital.	Live Births.			Premature Births.			Percentage of Live Births.			Deaths of Premature Infants.			Percentage Mortality of Premature Infants.		
	1954.	1955.	1956.	1954.	1955.	1956.	1954.	1955.	1956.	1954.	1955.	1956.	1954.	1955.	1956.
Public Hospital ..	3,726	4,064	4,004	210	239	262	5·6	5·9	6·5	19	34	26	9·0	14·2	10·0
Intermediate ..	6,435	7,094	7,217	236	267	230	3·6	3·8	3·2	25	25	35	10·6	9·4	15·2
Totals ..	10,061	11,158	11,221	446	506	492	4·5	4·5	4·4	44	59	61	10·0	11·6	12·4

THE YEAR'S WORK.

Including the Director's Consultant Centre and the Social Service, there are now 232 centres and sub-centres throughout the State, 61 in the metropolitan area and 171 in country areas.

The following new sub-centres were opened during the year:—

(1) Belmont on 13th November, 1956, serviced from Woolloongabba;

(2) Chelmer on 10th September, 1956, serviced from Herschell Street;

(3) Ilfracombe on 24th January, 1957, serviced from Longreach;

(4) Kalbar on 11th January, 1957, serviced from Ipswich;

(5) St. George on 5th February, 1957, serviced from Goondiwindi.

Approval has been given for the establishment of a sub-centre at the Tully Falls Hydro-Electric Project at Koombooloomba, and this sub-centre will be visited by the sister from Atherton.

The total attendances for the year were 418,105, an increase of 16,277 over the record figure of the previous year.

ST. PAUL'S TERRACE HOME, BRISBANE.

Two hundred and forty-one babies and 103 mothers were admitted to the Home during the year, the daily average being 13·19 babies and 4·32 mothers.

Among the babies admitted were one set of triplets, seven sets of twins, nine cases of hare lip and cleft palate, four with cleft palate only, one case of milk allergy, and many others with feeding difficulties.

Babies have been admitted from the following places:—Rockhampton, Nambour, Redcliffe, Dirranbandi, Mount Morgan, Southport, Gympie, Allies Creek, Miles, Mundubbera, Tamborine, Palmwoods, Warwick, Gayndah, Stanthorpe, Beenleigh, Bundaberg, Guluguba, Warra, and Somerset Dam.

ST. PAUL'S TERRACE TRAINING SCHOOL.

In July, 1956, thirty-three successful candidates were presented with their certificates by Mr. T. Rasey, M.L.A. In January, 1957, thirty-six candidates were successful in gaining their certificates, and Mr. Rasey again presented them.

CLAYFIELD HOME.

A total of 220 babies and 86 mothers were admitted during the year, the daily average being 14·34 babies and 4·13 mothers.

Among the babies admitted were one set of triplets, nine sets of twins, cases of sudden weaning, failure to thrive, overstimulation, vomiting, difficult feeding, prematurity, hare lip and cleft palate, and pyloric stenosis. One baby with Hirschsprung's disease who had a colostomy performed at the Children's Hospital was admitted for feeding management prior to a second operation to be performed later. Another unusual baby admitted had double congenital cataracts.

As well as from the metropolitan area, babies were admitted from Ipswich, Cunnamulla, Brookstead, Longreach, Nambour, Maryborough, Gayndah, Wandoan, Winton, Woombye, Talwood, Springsure, Woodford, Proston, Tamborine, Toowoomba, and Port Moresby.

Clayfield Home Training School.

The trainees have proved satisfactory, and each grade achieved a one hundred per cent. pass. In all, 20 girls gained their certificates and were presented with them at the combined Ipswich and Clayfield graduation ceremonies held in January and June.

Toowoomba Home.

During the year 53 mothers and 132 babies were admitted to the Toowoomba Home, the daily average being mothers 1·7, babies 10·98.

Babies were admitted from over a wide area, including Texas, Inglewood, Goondiwindi, Stanthorpe, Warwick, Clifton, Dalby, Oakey, Crow's Nest, Chinchilla, Millmerran, and districts surrounding Toowoomba.

Babies admitted included a number of very frail and premature babies, twins, various types of vomiting and digestive disturbances, malnutrition, steatorrhoea, difficult behaviour and feeding problems in older babies, mental deficiency, mongolism, and congenital heart condition.

Toowoomba Home Training School.

Thirteen Child Welfare Assistants commenced training and two withdrew after some weeks. Eleven girls completed their training and gained their certificates.

Graduation ceremonies were held in December and May, the certificates being presented by Mr. L. Wood, M.L.A., and the Director respectively.

The Jefferis Turner Home, Ipswich.

The past year has been the busiest year since the establishment of this Home 5 years ago. Seventy-seven mothers and 122 babies were admitted during the year, the daily average being mothers 3·4, babies 6·76.

Babies cared for included 47 premature and frail infants, 22 being under 5 pounds and 25 under 6 pounds on admission. There were 1 set of triplets and 6 sets of twins. Other babies admitted included 3 with pylorospasm, one with hare lip and cleft palate, one with a congenital cardiac defect, others with fat intolerance, infantile eczema, malnutrition, vomiting, overstimulation, sudden weaning, and one with Cooley's anaemia who was admitted for feeding management.

Admissions were from Ipswich, Brisbane, Bundaberg, Charleville, Amberley, Haigslea, Lowood, Rosewood, Boonah, Tarampa, and Wulkuraka.

The Jefferis Turner Training School.

Eight trainees presented for examination during the year and all were successful. Certificates were presented at the combined Ipswich and Clayfield graduation ceremonies at Centaur House in December and June.

Rockhampton Home.

Ninety-one babies and 36 mothers were admitted during the year, the daily average being mothers 2·21, babies 7·88.

Twenty-seven premature babies and 8 sets of twins were admitted during the year. Of the premature babies, four were under 4 pounds, twelve were between 4 and 5 pounds, nine between 5 and 6 pounds, and two over 6 pounds. Other cases included leukaemia, 3 mongols, sudden weaning, malnutrition, hare lip and cleft palate, hydrocephalus and cystic fibrosis of the pancreas.

Babies were admitted from Rockhampton and suburbs, Yeppoon, Gladstone, Biloela, Blackall, Emerald, Bluff, Longreach, Bororen, Kokorunga, Gooro, Marlborough, Mount Morgan and Thangool.

Rockhampton Home Training School.

Of the four trainees who commenced their training in January, 1956, only two completed their course and received their certificates. Of the four who commenced in January, 1957, only three finshed their course and gained certificates.

Sandgate Home.

Six hundred and thirty children were admitted during the year. The admissions were made up as follows:—

Boys—		
1–5 years	.. .. ..	153
5–10 years	.. .. ..	154
10–12 years	.. .. ..	27
	Total	334
Girls—		
1–5 years	.. .. ..	125
5–10 years	.. .. ..	145
10–12 years	.. .. ..	26
	Total	296
Average duration of residence ..		28 days
Daily average		48·72

An outbreak of chicken pox occurred in June, and admissions were restricted to children who had previously had this infection until all contacts had been discharged.

A small outbreak of a mild bowel infection brought in by two children from the one home occurred in January. They were transferred to hospital but four other children developed the infection. The Home was closed for one week and the infection subsided.

The usual religious facilities were provided during the year and the children participated in the R.A.C.Q. picnic at Christmas time.

Sandgate Home—Baby Ward.

The Baby Home has been filled to capacity during the year.

One hundred and fifty babies were admitted, the daily average being 12·76 and the average duration of residence 30 days.

The usual feeding difficulties have been experienced, and it is difficult to establish a routine which is necessary for the Home to function adequately.

During the months of January and February, a bowel infection was introduced into the Home by a toddler. This unfortunately spread to the other children and a number of them had to be transferred to hospital.

Rail Car.

The attendances at the Rail Car during the year were 3,096, a slight increase on those of

the previous two years. The itinerary remains unaltered, namely Winton, Hughenden, Julia Creek, Maxwelton, Richmond, and many intervening sidings. Sister gave mothercraft lessons to pupils from the State and Convent Schools at Hughenden, Richmond, and Winton and to pupils of the Julia Creek Convent School.

Ante-Natal Section.

A total of 437 mothers have attended the three ante-natal clinics in the past year. The number of attendances 3,167 is an increase of 341 on the previous year. The average attendances at the centres are as follows:—

	Fortitude Valley.	Woolloongabba.	Caboolture.
July ..	16.7	38.8	8.5
August ..	20.4	35.5	7.5
September ..	22.2	42.7	12.0
October ..	21.5	40.4	11.0
November ..	18.8	41.0	15.0
December ..	16.0	37.0	15.0
January ..	16.6	40.3	16.0
February ..	22.0	39.0	15.0
March ..	21.0	36.0	15.0
April ..	24.6	40.5	12.0
May ..	21.8	30.7	13.5
June ..	24.0	38.2	11.5
Average	20.4	38.3	12.6

Of the 289 mothers whose files were completed by 30th June, 1957, 145 (approximately 50 per cent.) returned for a post-natal examination, this representing 60 per cent. response at Caboolture, 50 per cent. response at Woolloongabba, and 48 per cent. response at Fortitude Valley. These figures represent a decrease in response from last year's record 75·3 per cent. It is to be hoped that bi-weekly hospital visits to confined mothers, and the introduction of an appointment system at the City Clinics will increase this response in the coming year.

This year saw the introduction of Salk Vaccine to expectant mothers and 214 mothers have received at least one injection (205 have completed the course which now consists of two injections at monthly intervals). The attendances at both the physiotherapy classes and ante-natal lectures have been steadily increasing, and it is good to see increased interest being shown in this very important part of our work.

Conditions complicating pregnancy were as follows:—

Ante-natal	Cases completed by 30-6-57.	Cases incomplete by 30-6-57.
Non-pregnant	8	1
Primiparous	60	33
Multiparous	229	115
Rh negative	34	32
Rh negative (with antibodies)	4	2
Toxaemia requiring hospitalisation	36	7
Toxaemia requiring home treatment ..	31	30
Morning Sickness ..	52	37
Leucorrhoea	25	11
Theatened miscarriage	2	0
Miscarriage	7	2
Still-birth	2	0
Neo-natal death ..	2	0
Polyneuritis	1	0
Anaemia	39	8
Cystocoele	3	2
Rectocoele	2	1
Cystocoele and Rectocoele	2	1
Contracted pelvis ..	1	1
Twin pregnancy ..	2	0
Triplets	1	0
Caesarean section ..	4	0
Retroversion	10	6
Renal Glycosuria ..	1	1
Placenta Praevia ..	2	0
Hydramnios	0	1
Pyelitis	16	4
Essential hypertension	1	3
Thrombophlebitis ..	1	0
Pseudo-cyesis	1	0
Mastitis	1	0
Cervical erosion ..	6	0
Cardiac murmurs ..	1	1
Salk (have had at least one injection) ..	133	81

The triplets were three healthy boys who were breast fed for approximately 5 months and who are continuing to thrive. The patients classified as anaemic are those whose haemoglobin level was 10·8 grams per cent. (100 % — 15·0 G.) or less. This is the very lowest level on which to base the classification and all mothers whose haemoglobin is less than 13·0 grams per cent. receive iron therapy.

Post-natal.	
Number attended	145
Sub-involution	4
Retroversion	47
Cystocoele and Rectocoele	4
Cystocoele	5
Rectocoele	6
Cervical erosion	13
Vaginitis	4
Puerperal insanity	1
Breast abscess	1
Infected lochia	1
Bartholin's abscess	1
Hypertension	2

Since January the diets of 100 patients have been investigated in detail and from this survey the following observations were made:—

(1) Most mothers had sandwiches only for lunch, the reason for this being that it was easiest to prepare and that the toddlers in the family were having them.

(2) In the poorer families the only substantial meals were dinner on a week day and three meals on Saturday and Sunday, when, the husbands were home.

A survey was made of the duration of pregnancy at the first visit. Three hundred and sixteen mothers were considered—67 primipara and 249 multipara. On an average the mothers reported when they were 17·06 weeks pregnant —multipara at 17·15 weeks and primipara at 16·75 weeks, but in each group some reported as early as the sixth week and others as late as the thirty-eighth week.

Ante-Natal Section.

Attendances at Metropolitan Centres—

Fortitude Valley	1,035
Woolloongabba	1,844
Caboolture	288

The expectant mothers attend talks and demonstrations at Fortitude Valley and Woolloongabba centres.

The attendances at the lectures have increased but not the yearly total, as lectures were replaced at each centre one day each month by Salk vaccine immunisation.

Expectant mothers attending these talks—Total 405.

Salk vaccine immunisation was commenced in August and the number completing immunisation was 205.

Attendances at the metropolitan Ante-natal Clinics have increased.

Circular letters forwarded to expectant mothers	5,566
Circular letters forwarded to expectant mothers (other than above) re "The Expectant Mother" books	2,956
Response to circular letters	1,634
Serial letters to expectant mothers	9,736
Letters received from expectant mothers	425
Special letters of advice sent on request	109
Requests from country centres and hospitals for "The Expectant Mother" book	3,852
Copies of "The Expectant Mother" sent on request	1,402
Copies of "Ante-natal and Post-natal Exercises" sent on request to expectant mothers	1,527
Requests from country clinics for Ante-natal and Post-natal Exercises"	963
Copies of baby patterns sent on request	123
Copies of maternity belt patterns sent on request	60

Through the Correspondence Service, more expectant mothers have been able to receive the literature throughout the year. This has been due to the co-operation of country hospitals in sending lists of bookings of expectant mothers regularly.

Director's Consultant Centre.

Attendances during the year ended June, 1957, were as follows:—

Number of children examined for admission to Sandgate Home	1,437
Number of children examined for admission to Red Cross Home, Margate	124
Number advised by phone	276
Attendances at Director's Consultant Centre for advice	2,128
Total number of children examined or advised at Centre	3,965

This shows a slight decrease in the number of infants and toddlers whose feeding, management, or behaviour has proved difficult and who were referred to the Director by sisters in charge of metropolitan and country centres, and by medical practitioners.

There has been a slight increase in the number of children medically examined and swabbed for admission to the Sandgate Home. Children admitted to the Red Cross Home, Margate, between 1st July, 1956, and 15th January, 1957, were examined and had throat swabs taken by the Director or Deputy Director. Throat swabbing of children prior to admission to the Sandgate Home was ceased on 15th January, as the great majority of the children have been immunised against diphtheria. In the case of those children who were not immunised, parental consent for immunisation to be carried out at the Home is secured before the children can be admitted.

Again this year many families were unable to have their children admitted to Sandgate Home during the mother's hospitalisation owing to the shortage of beds. These families were referred to the Red Cross Home and, where possible, were admitted.

A number of children living out of the metropolitan area were medically examined by their own doctors.

One hundred and eighty-nine blood counts (131 babies and 58 toddlers), 53 urine specimens, 8 cellophane swabs, 16 specimens of faeces for fat analysis, 106 rectal swabs (71 children) were examined at the Laboratory of Microbiology and Pathology.

Sixty-six children and babies were referred to hospital, 22 to their own doctor, 14 to the Radium Clinic, 6 to the X-ray Department, 5 to the Child Guidance Clinic, and 1 to the Speech Therapy Clinic. Of the 131 babies and 58 toddlers who had blood counts done, 22 babies and 4 toddlers had haemoglobin levels below 10 gm. per 100 mls. Of the rectal swabs examined, 5 gave positive swabs for Salmonella, 19 positive swabs for *Alpha coli.*, 1 positive swab for *E. coli.*, and 1 positive swab for *Beta coli.*

Pre-School Health Centres.

At the sixteen centres and seven kindergartens, children from the age of one to six years were examined twice during the year at most centres. Appointments at Woolloongabba and the Valley clinics are now at seven or eight monthly intervals; at Ipswich centre appointments are still at eight or nine monthly intervals.

The total number of examinations made during the year was 5,073, of which 2,172 were first examinations and 2,091 were subsequent examinations. The total examinations during the previous year numbered 4,912.

In September a Toddlers' Clinic was opened at Inala. Because of small attendances at West End and Paddington, Clinics were held monthly instead of fortnightly commencing in September. The attendances at these two clinics have improved, particularly at Paddington.

Despite an epidemic of measles and mumps in August and September, overall attendance has been satisfactory. During the year the daily average per clinic was 16·1. Clinics were closed between 14th December, 1956, and 14th January, 1957.

Table LV. shows the main abnormalities found at half-yearly examinations:—

TABLE LV.

Knock knees	1,244
Enlarged tonsils	1,204
Bow legs	233
Carious teeth	174
Adenoiditis	155
Flat feet	136
Tonsilitis	96
Umbilical hernia	76
Skin rash	75
Cardiac murmur	50
Intoeing	48
Allergy	41
Squint	38
Thread worms	23
Birth mark	18
Pilonidal cyst	12
Cyst	7
Postural defects	7
Congenital heart	7
Hydrocele	7
Geographical tongue	6
Inguinal hernia	5
Anal fissure	5
Naevus	4
Ringworm	4
Congential deformities	3
Bronchitis	3
Talipes	3
Conjunctivitis	3

TABLE LV.—*continued.*

Epigastric hernia	2
Impetigo	2
Undescended testes	2
Mentally retarded	2
Otitis media	2
Spasticity	2
Chalky teeth	2
Fat Intolerance	2
Miscellaneous	15

One hundred and seventy-three blood counts, 31 specimens of urine, 4 rectal swabs, and one specimen of faeces for fat analysis were examined at the Laboratory of Microbiology and Pathology.

Thirty-six children were referred to hospital for treatment, 32 to their own doctor, 9 to the X-Ray Department, 8 to the Radium Clinic, one to the Speech Therapy Clinic, 3 to the Child Guidance Clinic and 7 to their own dentist.

Of the 173 toddlers who had blood counts done, 16 had haemoglobin levels below 10 gm. per 100 mls.

Country Centres.

The total number of examinations of toddlers at country centres is as follows:—

Centre.	New Patients.	Subsequent Visits.	Total Visits.	Number of Clinics.	Average per clinic.
Cairns	187	157	344	32	10·7
Rockhampton	153	29	182	21	8·6
Toowoomba	30	62	92	18	5·1
Townsville	177	153	330	21	15·7

Table LVI. shows the main abnormalities found at half-yearly examinations:—

TABLE LVI.

Knock knees	33
Umbilical hernia	22
Tonsilitis	20
Flat feet	13
Bow legs	13
Intoeing	5
Squint	4
Cyst	4
Tinea	2
Impetigo	2
Cardiac murmur	2
Inguinal hernia	1
Hydrocele	1
Naevus	1
Skin rash	1
Undescended testes	1
Allergy	1
Phimosis	1
Bronchitis	1
Ustilago	1
Nystagmus	1

Seventeen children were referred to their own doctor for treatment, 7 to hospital, one to X-ray Department and one to own dentist.

Kindergartens controlled by the Creche and Kindergarten Association.

Children attending Valley, Paddington, West End, and Rosalie were medically examined twice during the year.

Kindergartens affiliated with the Creche and Kindergarten Association.

Children attending Wynnum and Holland Park were examined at the Kindergarten twice during the year. Children from Ashgrove Kindergarten, Devoy street, were medically examined at Ashgrove Toddlers Clinic.

Kindergartens directed by Department of Public Instruction.

Children attending West Ashgrove Kindergarten were medically examined twice during the year. Children from Ipswich Kindergarten attend Toddlers Clinic, Ipswich, for half-yearly medical examinations.

Correspondence Section.

This year there was a slight decrease in the birth notifications received, but on an average the responses remained fairly steady compared with previous years.

A very marked increase was shown in the number of letters sent to mothers regarding their babies' feeding and management, and the majority of mothers seem to be very appreciative of the help given to them by this service.

As of previous years, this section has forwarded to the Health Department of the Brisbane City Council, the lists of births received from the Brisbane Women's Hospital and also those received giving all babies born in private hospitals. The deaths of children under one year in the metropolitan area have been sent to the City Council as well. However, now that Triple Antigen immunisation is given at three months of age, the Triple Antigen pamphlets are enclosed in the first circular sent to mothers on receipt of birth notification, instead of the second, which is sent out at four or five months.

Long distance telephone calls from mothers seeking advice regarding their infants' feeding and care have increased considerably over the year.

TABLE LVII.

—	Year Ending 30-6-57.	Year Ending 30-6-56.
Number of birth notifications received	6,151	6,311
Number of circulars posted—		
(1) Within reach of a centre	1,964	1,979
(2) Not within reach of a centre	4,187	4,305
Number of follow-up circulars posted	3,882	4,543
Letters to correspondence in response to circular No. 2	975	1,007
Visits to centres in response to circular No. 1	479	463
Letters of advice re feeding and management sent on request	1,956	1,749
Number of " Care of Mother and Child " sent on request	976	988
Number of extra " Care of Mother and Child " sent on request	95	259
Number of pamphlets sent advising Triple Antigen immunisation	8,252	5,898
Number of birthday cards sent during year	222	168
Number of telephone calls received re feeding and management	185	115

Social Welfare Service.

A sub-centre at the Colmslie Hostel was commenced on the 13th February, 1957, and is held on the alternate Wednesday from 10 a.m. to 12 midday—Total Attendances, Babies 17; Toddlers 77.

There has been a decrease in the number of Social Service visits during the year, while there has been an increase in the number of home visits.

Social Service visits 1955-1956	4,358
Social Service visits 1956-1957	3,444
No. of Newborns visited at home 1955-1956	650
No. of Newborns visited at home 1956-1957	885
No. of Newborns visited in Brisbane Women's Hospital	10,697
No. of test feeds given	140

Lecture Demonstrations to School Girls.

The mothercraft teaching in the schools for the year 1956-57 was satisfactory. The opening of new high schools in the Brisbane area has increased the number of girls having mothercraft lessons, and will increase further as new schools are opened. The new high school at Camp Hill will be having the mothercraft lessons after the August vacation. The principals have been very co-operative in making suitable times available.

In spite of the large classes in some schools, over forty in some, the girls showed great interest in the teaching, which is evident by their attention and interest during the lessons and the work they put into their mothercraft books. Some of the mothercraft books sent in are works of art.

The examination results on the whole were satisfactory, 88·9 per cent. gaining certificates. Nine hundred and sixty-one (961) examination papers and mothercraft books were examined in the metropolitan area, and fifty-four (54) examination papers from the country centres.

TABLE LVIII.

Results of Examinations in Mothercraft for School Children, School Year Ending 1956.

Time.	Name	Number in Class.	Number sat for Examination.	Number obtaining over 60 per cent.
February–April	Indooroopilly State High School	68	62	58
	Cavendish Road State High School	136	115	97
	Brisbane High School for Girls	30	26	25
	Milton State School	64	59	49
	Rainworth State School	12	11	11
	Petrie Terrace State School	23	23	20
May–August	Salisbury State High School	142	116	105
	Banyo State High School	108	95	79
	Wynnum Intermediate and High School	116	97	85
	Domestic Science High School—			
	Sub-Seniors	29	29	29
	Juniors	16	15	13
	State Commercial High School	62	49	46
August–December	Mitchelton State High School	55	51	49
	Kedron State High School	123	105	91
	Ipswich State High School	84	68	62
	Brisbane State High School	56	40	37
		1,124	961	856
	Country Centres.			
	Hughenden State School	13	5	5
	Hughenden Convent	..	2	2
	Richmond State School	17	6	4
	Richmond Convent	..	1	1
	Julia Creek Convent	5	2	2
	Winton State School	14	3	3
	Winton Convent	..	5	3
	Charters Towers High School	32	30	27
		81	54	47

The sister on the rail car gave mothercraft lessons at Hughenden, Richmond, and Winton to pupils from the State and Convent schools, and from Julia Creek Convent. The sister from the Charters Towers Centre again had her class at the State High School.

The usual function, at which the prizes and certificates are presented, was held at most of the schools. Some principals presented the prizes on their speech day, and the certificates were presented later by the superintendent.

Medical Students.

Final year medical students attend metropolitan centres one day each week for four consecutive weeks as in the previous year.

Publications of the Service.

The revised "Expectant Mother" booklet is now available and a request for a supply of these booklets was received from the Commonwealth Health Department, Lae, New Guinea.

"Problems of Prematurity" has been revised, particularly with regard to feeding.

"Care of Mother and Child" is distributed on request to mothers, either through the correspondence service or by those attending the centres. The Commonwealth Health Department, Darwin, requested a supply of these booklets.

"Ante-natal and Post-natal Exercises" is distributed to expectant mothers through the centres.

Newspaper Articles.

Articles dealing with infant and pre-school child management were forwarded each month to 60 newspapers in the State. Subjects dealt with included:—"Lack of Appetite," "Your Baby is Normal," "Infant Feeding—General Principles," "Infant Feeding—Breast Feeding," "Infant Feeding—Artificial Feeding," "Infant Feeding—Educational Diet," "Disturbances of Sleep," "Be Careful of Those Medicines," "Has your Child been Immunised," "Allergic Diseases in Childhood," "The Problem of Tonsilitis."

Baby Clinic Social Club.

Meetings held during the year have been well attended and interest maintained. An enjoyable Christmas party was held at Centaur House in late November, 1956. At the Annual Meeting in June, 1957, Miss McKey showed some very interesting films of her recent trip overseas. Christmas parcels and contributions are still being sent to Helga Koller in Austria (our sponsored child) through the "Save the Children Fund."

TABLE LIX.

Visits to Newborns, Subsequent and Total Visits.

Year.	Visits to Newborns.	Subsequent and other Visits.	Total Visits.
1954–55	26,348	951	27,299
1955–56	26,513	1,451	27,964
1956–57	27,111	1,442	28,553

Attendances at Centres.

Number of Cases seen at the Centres.

	1954–55.	1955–56.	1956–57.
Infants—			
Under one year ..	18,565	19,368	19,858
One to two years	4,653	5,152	5,531
Over two years ..	1,857	1,976	2,335
Total	25,075	26,496	27,724
Expectant mothers..	977	951	1,069
Total new cases	26,052	27,447	28,793

Attendances of Infants and Children at Maternal and Child Welfare Centres and Sub-centres.

Metropolitan.

—	1954–55.	1955–56.	1956–57.
Fortitude Valley ..	16,230	16,504	15,933
Branches—			
Clayfield	1,020	1,198	891
Hamilton ..	1,411	1,317	1,728
Hendra	1,245	1,280	1,522
Newmarket-Grange	1,049	937	956
Wacol Immigration Centre	1,222	853	535
West Stafford (opened 15–2–56)	..	275	1,178
Windsor	3,177	3,077	2,477
	25,354	25,441	25,220
Herschell Street ..	13,984	15,962	17,045
Branches—			
Chelmer (opened 10–9–56) ..	..	..	628
Corinda	2,046	2,049	2,531
Darra	1,419	821	1,150
Enoggera ..	2,085	2,405	2,942
Graceville.. ..	1,885	1,969	1,899
Inala (opened 23–9–55) ..	..	1,486	2,294
Indooroopilly ..	1,149	1,241	1,427
Mitchelton ..	3,030	3,212	3,000
Oxley (opened 14–3–55) ..	165	872	1,325
St. Lucia	577	812	694
Toowong	1,508	1,883	1,859
	27,848	32,712	36,794
Nundah	5,265	5,424	4,532
Branches—			
Banyo (opened 16–5–55) ..	43	564	580
Chermside ..	2,292	2,694	2,631
Geebung	918	1,298	1,215
Kedron	1,662	1,669	1,666
Northgate ..	260	218	416
Wavell Heights	405	440	397
Zillmere	1,769	2,195	2,134
	12,614	14,502	13,571

Metropolitan—continued.

—	1954–55.	1955–56.	1956–57.
Paddington	3,411	3,005	3,299
Branches—			
Ashgrove	3,117	3,222	3,734
Bardon	1,044	1,195	998
Kelvin Grove ..	808	1,065	865
Rosalie	1,145	1,325	1,166
	9,525	9,812	10,062
Sandgate	5,474	6,347	5,971
Branches—			
Bald Hills (opened 4–4–56) ..	..	57	204
Caboolture ..	1,142	1,292	1,310
Cribb Island ..	357	307	302
Dayboro	360	343	326
Redcliffe	2,901	2,794	2,538
	10,234	11,140	10,651
South Brisbane Sub-centres—			
Archerfield ..	581	497	715
Bulimba	2,451	2,199	2,355
Camp Hill ..	2,365	2,089	1,993
Holland Park ..	2,087	2,347	2,545
Morningside ..	2,077	1,878	2,480
Stones Corner ..	746	997	924
	10,307	10,007	11,012
West End	6,240	6,811	6,760
Branch—			
Beenleigh ..	1,096	1,022	862
	7,336	7,833	7,622
Woolloongabba ..	18,155	18,852	19,303
Branches—			
Belmont opened 13–11–56 ..	..	..	685
Coopers Plains ..	1,163	1,846	2,197
Ekibin	1,747	2,107	2,215
Holland Park (closed 31–8–54)	47	..	..
Ipswich Road ..	1,491	1,588	1,992
Rocklea T.H.E. ..	1,191	1,474	727
Salisbury	1,101	1,475	1,977
Upper Mount Gravatt (opened 7–9–54).. ..	559	1,276	1,653
Yeronga	1,586	1,669	1,636
	27,040	30,287	32,385
Wynnum	7,901	7,709	7,665
Branches—			
Cleveland ..	753	681	832
Manly	545	954	1,189
	9,199	9,344	9,686

Country.

—	1954–55.	1955–56.	1956–57.
Atherton	1,697	1,648	1,568
Branches—			
Herberton ..	191	128	284
Malanda	438	575	564
Millaa Millaa ..	630	670	422
Ravenshoe ..	610	644	485
Tinaroo Falls (opened 19–7–54)	113	189	259
Yungaburra ..	221	147	67
	3,900	4,001	3,649

Country—continued.

—	1954–55.	1955–56.	1956–57.
Ayr	3,430	3,782	3,986
Branches—			
Clare	214	335	296
Giru	785	837	722
Home Hill ..	1,888	1,924	2,495
	6,317	6,878	7,499
Barcaldine	1,235	1,339	1,602
Branches—			
Alpha	188	267	321
Aramac	142	202	308
Jericho	129	144	127
	1,694	1,952	2,358
Biloela	4,431	5,138	5,739
Branches—			
Baralaba	461	371	717
Goovigen	357	220	335
Jambin	119	83	102
Moura	190	220	315
Thangool	352	273	296
Theodore	433	465	583
Wowan	466	536	751
	6,809	7,306	8,838
Bowen	1,920	2,534	2,297
Branches—			
Collinsville ..	1,158	1,250	1,591
Proserpine ..	1,049	1,459	1,760
Queen's Beach ..	343	517	401
	4,470	5,760	6,049
Bundaberg	7,339	9,481	9,130
Branches—			
Gin Gin	417	119	269
Miriam Vale ..	283	180	324
	8,039	9,780	9,723
Cairns	7,941	10,230	11,229
Branches—			
Cooktown.. ..	178	159	138
Earlville	365	430	373
Edge Hill ..	964	655	707
Edmonton ..	547	302	378
Gordonvale ..	933	994	1,206
Kuranda	181	160	185
Mossman	1,296	1,544	1,622
	12,405	14,474	15,838
Charleville	4,213	3,752	3,345
Branches—			
Cunnamulla ..	950	1,093	1,507
Morven	153	148	115
Quilpie	301	278	418
	5,617	5,271	5,385
Charters Towers ..	2,927	3,002	3,307
Dalby	2,324	3,351	3,323
Branches—			
Chinchilla ..	945	1,176	1,193
Miles	643	670	526
	3,912	5,197	5,042
Emerald	1,095	1,611	1,608
Branches—			
Blair Athol ..	140	131	233
Capella	121	117	140
Clermont	420	543	414
Springsure ..	144	253	301
	1,920	2,655	2,696

Country—continued.

—	1954–55.	1955–56.	1956–57.
Gayndah	1,688	1,862	1,821
Branches—			
Eidsvold	449	271	312
Monto	1,208	1,609	1,791
Mulgeldie ..	154	118	216
Mundubbera ..	931	841	896
	4,430	4,701	5,036
Gladstone	4,597	4,118	5,062
Branches—			
Calliope	152	101	252
Mount Larcom ..	456	330	331
	5,205	4,549	5,645
Goondiwindi ..	1,129	1,161	1,831
Branches—			
Dirranbandi ..	348	260	502
Inglewood ..	461	335	456
St. George (opened 5–2–57) ..	..	..	171
Texas	340	271	474
Yelarbon	126	145	233
	2,404	2,172	3,667
Gympie	5,509	5,475	5,386
Branches—			
Cooran	197	232	393
Cooroy (transferred from Nambour 7–3–56)	..	80	374
Imbil	361	471	576
Kandanga ..	140	117	187
Pomona	464	211	383
Tewantin (opened 14–3–56) ..	..	79	349
	6,668	6,665	7,648
Ingham	2,848	3,401	3,258
Branches—			
Cardwell	237	338	489
Halifax	748	567	844
	3,833	4,306	4,591
Innisfail	5,862	6,174	4,944
Branches—			
Babinda	1,313	998	943
El Arish	41	111	214
Mourilyan ..	307	280	341
Silkwood	124	184	235
South Johnstone..	221	249	276
Tully	1,498	1,575	1,991
	9,366	9,571	8,944
Ipswich	11,091	11,658	12,578
Branches—			
Boonah	1,041	1,601	1,613
Esk	452	536	629
Kalbar (opened 11–1–57 ..	..	..	184
Laidley	525	758	676
Lowood	305	376	505
Rosewood ..	908	793	762
Somerset Dam (closed 12–4–55)	59	..	..
Toogoolawah ..	741	576	719
	15,122	16,298	17,666
Kingaroy	2,317	3,187	3,058
Branches—			
Kumbia	283	251	264
Nanango	274	464	682
Yarraman ..	152	143	190
	3,026	4,045	4,194

Country—continued.

—	1954–55.	1955–56.	1956–57.
Longreach (reopened 21–1–55) ..	608	1,518	1,520
Branches—			
Blackall (reopened 21–1–55) ..	374	999	827
Ilfracombe (opened 24–1–57) ..	..	..	19
Muttaburra (reopened 29–7–55)	..	9	16
	982	2,526	2,382
Mackay	6,895	7,726	7,758
Branches—			
Calen	216	278	263
Finch Hatton ..	336	388	286
Koumala	288	231	258
Marian	272	406	369
North Mackay ..	1,894	2,253	2,295
Sarina	1,804	1,916	1,806
West Mackay ..	1,614	2,011	2,044
	13,319	15,209	15,079
Mareeba	2,804	3,369	2,972
Branches—			
Dimbulah (reopened 8–7–55)	..	261	347
Mount Mulligan ..	173	182	99
	2,977	3,812	3,418
Maryborough ..	7,243	6,453	6,871
Branches—			
Biggenden ..	833	662	666
Childers	702	516	780
Howard	559	448	349
Pialba	458	449	531
	9,795	8,528	9,197
Mount Isa	3,272	3,861	3,938
Branches—			
Camooweal ..	72	63	30
Cloncurry ..	614	990	903
	3,958	4,914	4,871
Mount Morgan (transferred to Rockhampton 5–3–56)	2,559	1,722	..
Branches—			
Baree (closed 7–2–56)	183	189	..
Red Hill (closed 9–2–56)	30	37	..
	2,772	1,948	..
Murgon	1,437	1,417	1,259
Branches—			
Goomeri	319	660	750
Hivesville ..	79	82	41
Kilkivan	85	95	175
Proston	73	199	231
Wondai	740	682	494
	2,733	3,135	2,950
Nambour	3,200	3,884	4,925
Branches—			
Buderim	107	118	151
Caloundra ..	323	423	387
Cooroy (to 7–3–56)	684	451	..
Eumundi	169	145	145
Landsborough ..	215	164	264
Maroochydore ..	397	408	528
Palmwoods ..	251	264	188
Yandina	278	233	213
	5,624	6,090	6,801

Country—continued.

—	1954–55.	1955–56.	1956–57.
Railway Car—			
Winton	616	773	617
Hughenden ..	1,056	946	1,132
Julia Creek ..	588	562	737
Maxwelton ..	212	241	172
Richmond ..	512	414	438
	2,984	2,936	3,096
Rockhampton ..	11,256	11,449	12,058
Branches—			
Mt. Morgan (from 5–3–56).. ..	..	443	1,761
North Rockhampton	1,278	1,544	1,220
Ogmore	188	198	180
Park Avenue (opened 18–11–54) ..	459	818	725
St. Lawrence ..	171	130	161
Yeppoon	825	1,034	744
	14,177	15,616	16,849
Roma	2,470	2,819	2,775
Branches—			
Dulacca	141	176	107
Jackson	158	200	67
Mitchell	1,290	1,271	1,487
Surat	228	311	428
Wallumbilla ..	95	133	185
Yuleba	284	232	249
	4,666	5,142	5,298
Southport	3,357	3,740	4,668
Branches—			
Beaudesert ..	1,583	1,506	1,645
Burleigh Heads ..	944	950	1,063
Coolangatta ..	2,693	3,131	3,018
	8,577	9,327	10,394

Country—continued,

—	1954-55.	1952-56.	1956-57.
Toowoomba ..	7,556	7,903	7,262
Branches—			
Crow's Nest ..	484	627	648
Forrest Hill ..	75	57	33
Gatton	975	1,005	1,036
Harristown ..	699	610	549
Millmerran (opened 22–7–54) ..	466	632	677
Oakey	785	826	672
Pittsworth ..	1,152	999	1,022
	12,192	12,659	11,899
Townsville	12,304	11,988	12,144
Branches—			
Garbutt (opened 29–11–54) ..	130	520	652
Gulliver (opened 21–3–56)	..	368	1,985
Rising Sun (opened 30–11–54) ..	965	1,991	2,178
	13,399	14,867	16,959
Warwick	4,574	4,739	4,468
Branches—			
Allora	584	579	614
Clifton	223	280	213
Killarney ..	360	586	478
Stanthorpe ..	2,666	2,388	2,505
	8,407	8,572	8,278
Social Welfare Services ..	4,015	4,358	3,444

TOTAL ATTENDANCES OF INFANTS AND CHILDREN AND EXPECTANT MOTHERS.

1954–55.	1955–56.	1956–57.
370,680	401,828	418,105

TABLE LX.

ATTENDANCES AT ANTE-NATAL CLINICS.

—	1954–55.		1955–56.		1956–57.	
	New Cases.	Attendances.	New Cases.	Attendances.	New Cases.	Attendances.
Fortitude Valley	98	801	91	991	109	1,035
Woolloongabba	179	1,634	188	1,587	187	1,844
Caboolture	34	209	28	248	38	288
Totals	**311**	**2,644**	**307**	**2,826**	**334**	**3,167**

DIVISION OF SCHOOL HEALTH SERVICES.

Chief Medical Officer: P. R. Patrick, M.B., B.S. (Q'ld.).

Chief Dental Inspector: G. O. Hosking, L.D.Q.

SALK VACCINE CAMPAIGN.

Liaison Medical Officer: V. M. O'Hara, M.B., B.S. (Sydney).

Campaign Organiser: W. T. Johnston.

Adviser-in-Nursing: D. Bardsley, A.T.N.A., F.C.N.A.

General Outline of Year's Activities.

The year 1956-57 has been a memorable one in the annals of School Health Services in Queensland. During the year, the division carried out the important public health measure of immunising children throughout the State against poliomyelitis using Salk vaccine. The task involved the necessity of cancelling many of the usual activities of School Health Services to enable the medical and nursing staff to be engaged almost full time in the Salk Vaccine Campaign. The normal staff was augmented considerably to cope with the amount of work that the campaign involved. Dr. V. M. O'Hara, School Medical Officer, acted as Liaison Medical Officer and her duties included the rostering of private medical practitioners engaged in the campaign in the metropolitan area in addition to administrative and medical work. Two important additions to the staff for the purpose of the campaign were Mr. W. T. Johnston of the State Health Inspectorial staff and Miss D. Bardsley, Adviser-in-Nursing. Mr. Johnston's position of campaign organiser involved the detail planning of the work and Miss Bardsley gave the campaign great help on the nursing side, giving valuable advice in general nursing administration and through her efforts the city and country staff has been kept at full strength throughout the campaign.

Routine medical inspections of school children were not performed but the division managed to continue many of its previous activities despite the pressure of work brought about by the Salk campaign. These included the examination of handicapped children needing special schooling, examination of students attending the Teachers' Training College and immunisation against Tetanus of Gatton College students.

Despite a depleted staff the School Dental Service under the direction of the Chief Dental Inspector, Mr. G. O. Hosking, continued to give a good dental service to children in country districts of Queensland.

Salk Vaccine Campaign.

General.

The recommended course of immunisation against poliomyelitis using Salk vaccine consists of an initial immunisation of two injections at an interval of four to six weeks followed by a third injection seven to eighteen months after the second injection. Before the campaign commenced the Commonwealth Serum Laboratories' target of production was 440,000 doses per month. It was decided that this supply should be distributed to States on a population basis. The rate of production would be sufficient to offer two injections to all children in the age range of six months to fourteen years inclusive, within a period of twelve months. In Queensland the number of children in the eligible age range on 16th July, 1956, when the campaign commenced in Queensland was 400,000. It was planned that all these children should be offered the first two injections within twelve months. This entailed a State-wide coverage to give, if necessary, 800,000 injections. The subsequent paragraphs of this report reveal the extent to which this planning was realised.

Supplies of vaccine.

The production of Salk vaccine involves many intricate technical processes and the vaccine is subjected to stringent safety tests. Great praise must be attributed to the Commonwealth Serum Laboratories for the manner in which supplies of vaccine came forward. During 1956, Queensland was fortunate in obtaining additional supplies of vaccine above the normal quota. This helped the State to meet the heavy demand for vaccine. Two breaks in supply occurred, each as a result of sickness in testing animals. It was fortunate for Queensland that both these hold-ups in supplies came at times when breaks in the campaign in this State had been planned and no appointments for parents of pre-school children had to be cancelled due to lack of vaccine. The first hold-up in supplies occurred during the Christmas school vacation and the second just at the stage when initial immunisation throughout the State had been completed. When supplies were recommenced after the first break this State was fortunate in again obtaining extra vaccine. The weekly quota of 15,300 doses was raised to 21,000 for several weeks. It was thus possible to include all children desiring vaccination in the programme before the end of June, 1957.

Distribution of vaccine.

The short life potency of Salk vaccine, even at the optimum temperatures, presents special problems in distribution. The co-operation of various agencies, the excellent air services in Queensland and the use of suitable insulated containers made it possible to distribute vaccine throughout the State without its losing potency. After arrival of the vaccine at the Commonwealth Health Department in Brisbane, its distribution becomes the responsibility of the State

Health Department. A week's supply of vaccine is drawn at a time and taken to the Red Cross Blood Bank cold room. Here the vaccine is packed into aero-jablex boxes to be forwarded to thirteen country centres by the quickest possible means of transport. The next week's supply for use by Brisbane vaccinating teams is drawn at the same time and transferred to a special refrigerator in School Health Services building. It is pleasing to report that not once has vaccine missed the transport and praise must be given for this to the organiser and the cadet inspectors who had to rise early continuously throughout the year to ensure the vaccine was placed on early morning transport. The co-operation of airline companies, newspaper deliveries, and other transport companies throughout the year was very pleasing. The safe receipt of the vaccine in the country and its storage in suitable refrigeration was ensured by the ready manner in which Local Authority health inspectors co-operated to meet transport in the country areas. In several instances these officers made possible the storage of vaccine overnight and its further despatch without loss of potency.

Equipment.

The choice of equipment which ensures satisfactory sterilisation, mobility and independence of outside agencies proved a sound one. Satisfactory sterilisation by pressure cooker was borne out by the absence of infected arms after injections. Throughout the campaign the mobility of the equipment has been demonstrated on many occasions. The equipment has been carried without mishap throughout the State on every possible means of transport. During November, 1956, a minor outbreak of poliomyelitis occurred at Ayr and it was decided to vaccinate children there at short notice. Within twenty-four hours of this decision, a vaccinating team with equipment had travelled by air from Brisbane and with the aid of local medical and nursing staff, commenced vaccinating at top speed, thus amply demonstrating the mobility and independence of equipment.

Vaccinating Teams.

For the purpose of the campaign, the State was divided into eighteen districts, each having approximately the same child population. Each of the thirteen country districts had a smaller number of children than five city districts to allow country teams time for travelling. Each vaccinating team consists of two trained sisters and a medical practitioner. The sisters are full-time School Health personnel and the strength of this nursing staff throughout the year has been kept at thirty-eight. This enabled the eighteen teams to maintain full nursing strength. For a great part of the year, two extra nurses in Brisbane formed a relieving team which helped to increase the vaccinating rate, particularly when extra vaccine was available.

The medical personnel consisted mainly of private practitioners who were employed on a sessional basis. It is pleasing to report that the attendance of these private practitioners at over 2,500 sessions throughout Queensland was excellent.

In addition the School Health Services medical staff was employed at many vaccinating sessions. Dr. E. L. Thomas, School Medical Officer at Townsville, travelled many miles to carry out vaccinations in Central, Northern, and North-Western Queensland at centres where local practitioners were not available. The Royal Flying Doctor Service co-operated in giving injections in remote areas of the State.

Subsidiary Organisation.

The Queensland plan where vaccination of children is carried out at schools had to be shaped to coincide with the school year and to take into consideration school holidays. This curtailed the vaccination time available and, in order to complete primary injections of school children by 30th June, supplementary measures were necessary. Therefore, at Isisford, Aramac, Muttaburra, and Thursday Island where there was a hospital and doctor available, and where the Head Teachers of the State Schools accepted responsibility for the records, children were vaccinated at the local hospital. The vaccine was taken from Blackall to Isisford by the Medical Officer. In the other areas vaccine was received and delivered to the hospitals by the Local Authorities. The number of children vaccinated under this scheme was 1,242.

Children in those most remote parts of the State where the Royal Flying Doctor provides medical service were vaccinated by the Flying Doctors based at Charters Towers, Cloncurry, and Charleville. The children vaccinated by this Service included many aboriginals. Dr. T. O'Leary based at Charters Towers visited missions on the western coast of Cape York Peninsula where all children in the eligible age range received injections. The incidence of clinical poliomyelitis is not high amongst aboriginals, but it does occur. In 1954 ten cases occurred at Cherbourg Settlement with one death. Altogether, doctors of the Flying Doctor Service gave 4,011 injections.

The Cairns Aerial Ambulance provided transport for an officer of School Health Services to visit Georgetown, Einasleigh, and Forsayth districts.

Special arrangements were made for children at institutions to be included in the campaign. The following institutions came under this Scheme:—Spastic Centre, New Farm; Montrose Crippled Children's Home; Wooloowin Receiving Depot; Xavier Crippled Children's Home, and Willowburn Epileptic Home. In this way 336 children received injections.

Parental Response.

Due to the unfortunate occurrence in America when some 200 cases of poliomyelitis occurred as a result of vaccine containing live virus there were many misgivings regarding the safety of the vaccine prior to the commencement of the campaign. However when it was realised that new stringent safety tests would prevent a similar occurrence, the Queensland Health Education Council organised a publicity campaign which resulted in a parental response of well over 90 per cent. When the campaign commenced in July, 1956 the number of children

in the eligible age-range in Queensland was estimated to 400,000. As the campaign for the initial immunisation was spread over twelve months, the children in the eligible age-range was no doubt increased. In twelve months approximately 30,000 births occur in Queensland and thus children under six months at the beginning of the campaign would reach the minimum eligible age of six months as the campaign progressed. On the other hand children who were under fifteen years at the beginning of the campaign would in some cases pass out of the eligible age-range before the campaign reached them. The policy in this matter allowed for all children who were under fifteen years at the date of signing the consent form to be included even though they reached that age before they actually received their injections It is therefore difficult to assess the exact number of children who were in the eligible age-range during the campaign. At the most the number would be 430,000. Of these 385,917 attended for primary immunisation. It can be stated with certainty that at least 90 per cent. of eligible children had received one or more injections by the end of June, 1957. It is probable that the percentage is higher. By this time the only children in Queensland who had not been offered the opportunity of receiving injections were native children living in the Torres Strait Islands. Arrangements were made for these children to receive their first injections during July, 1957.

Missed Injections.

In order that the campaign should cover the whole State as quickly as possible, two visits only were made to each school. Special arrangements were made for those children who, due to illness or other reasons, were absent at the time schools were visited. In Brisbane and headquarters towns in the country, special clinics were arranged for such children to have injections they had missed. Children reaching the age of six months were also included in these clinics. In other country centres, arrangements have been made for medical superintendents of public hospitals to carry out these missed injections. In Brisbane 20,098 injections were given at special clinics on Saturday mornings and during the Christmas school vacation when many country children who would have had to travel long distances in their own areas, received their vaccinations. At these clinics 5,643 first injections were given.

Injections in Older Age Groups.

Expectant Mothers.—When the Commonwealth-wide policy was decided pregnant women who are at increased risk to poliomyelitis were included on an equal priority with the children. In Queensland, Salk vaccine was released to private practitioners as well as public ante-natal clinics for this purpose. Private practitioners apply to the Director-General for the release of the vaccine for their patients and, in the Greater Brisbane and surrounding areas, vaccine is collected from the Commonwealth Health Department. Supplies for country practitioners are sent forward packed with mass supplies for school children. Lists of patients for whom Salk vaccine is required are sumbitted by the medical officer in charge of each public clinic. The Director-General allocates sufficient vaccine to meet these needs and clinics draw their supplies directly from School Health Services, Brisbane. During the year 9,443 ante-natal cases received injections.

A study was made of all case histories of women confined at the Women's Hospital during the first six months after the commencement of Salk vaccinations at the Hospital's Ante-Natal clinic. A comparison was made of the premature birth rate and congenital abnormality incidence amongst who received Salk vaccine and those who did not. It was concluded that Salk vaccine given during pregnancy has no ill-effect on mother or infant.

Other Adults.—The bulk of Salk vaccine used during the campaign has been received in five mils. ampoules, that is in ten dose containers. Every care is taken to ensure that only sufficient ampoules are opened at each session, but it is impossible to arrange numbers so that the last ampoule opened is used solely for children. There is frequently a small number of doses left in the last ampoule. These doses are always used, usually to give injections to young school teachers. In this way some 7,220 injections were given to adults at schools.

Special Adult Vaccination at Ayr.

During November, 1956, four cases of paralytic poliomyelitis occurred at Ayr. As three of these cases occurred in patients above the eligible age-range a special issue of vaccine was made available for the immunisation of persons fifteen years and over. The Local Authority at Ayr arranged for 3,000 people to receive injections using this vaccine.

In addition some 200 patients in the age-range 15 to 25 years were given Salk vaccine in a special serological survey during which blood samples were forwarded to the Commonwealth Serum Laboratories for antibody level estimation.

Reactions.

Before the campaign commenced Dr. P. L. Bazeley, Director of Commonwealth Serum Laboratories, advised that Salk vaccine was almost reaction-free. The experience in over 700,000 injections in Queensland has borne this out. It has been found that the giving of Salk vaccine is followed by fewer reactions than any other immunising agent. Any reactions that did occur did so in children with previous history of reaction to other injections or allergy. In children with a history of severe asthma or similar condition a skin test is performed. Severe positive reactors were given their injections in divided doses at intervals of half an hour under the cover of an antihistaminic drug.

Third Injections.

During June, 1957, arrangements were made for the commencement of third injections to all children throughout the State who have received the initial immunisation of two doses. It is intended that the vaccinating teams will work through their districts in the same order that was followed for the first injections. The delay in supplies of vaccine that occurred towards the

end of June will not hinder the programme greatly and provided vaccine comes forward regularly after the recommencement of supplies it is anticipated that some 300,000 children will have completed their full course before the end of the 1957 school year. A further 80,000 children will receive their third injections early in 1958. The necessary seven months will not have elapsed after the second injection for these latter children to receive their third injections during 1957. During May and June, 1957, a study was made of the most practical method to keep the records of these third injections. During this pilot study 3,828 children received third injections.

Co-operation of many Agencies.

The Salk Vaccine Campaign in Queensland has run very smoothly. Its success has been due in no small measure to the ready co-operation received from many other departments and agencies outside School Health Services. The following list gives briefly the way in which the various agencies helped the campaign and grateful thanks is hereby given:—

The Commonwealth Director of Health in Queensland and his staff:
For co-operation in every possible way in the handling of supplies of vaccine.

British Medical Association (Qld. Branch):
For the support of the campaign generally and the participation of individual members.

The Director General of Education:
For the help and advice given by himself and his officers in the general administration of the campaign and the enormous assistance given by individual school teachers throughout the state in distributing consent forms, writing rolls, and marshalling children.

The Director of Catholic Education and the teachers under his control:
For similar services in Catholic schools throughout the State.

The Queensland Division of the Australian Red Cross Society:
For the advice of the Director of the Red Cross Blood Bank on refrigeration and the use of the cold room for the despatch of vaccine.

The Royal Flying Doctor Service (Qld.):
For the assistance of their Medical Superintendent and their doctors at Charters Towers, Cloncurry, and Charleville who vaccinated many children in outback Queensland.

Trans-Australia Airlines and Australian National Airways:
For their co-operation in transport of the vaccine.

The Courier-Mail and Telegraph Newspaper Companies:
For their assistance in delivering to country centres per medium of their delivery cars.

The Radio and Press throughout the State:
For the excellent publicity given the campaign.

The St. John's Ambulance Brigade:
For the excellent assistance of their members at Brisbane and country special clinics.

In addition numerous Government Departments gave willingly, advice and assistance without which great difficulty would have been experienced in running the campaign.

Table LXI. contains the various statistics regarding the campaign.

TABLE LXI.

Number of children in the eligible age range of six months to fourteen years inclusive at 16th July, 1956	400,000
Total number of children in Queensland who had received one or more injections by 30th June, 1957	385,917
Number of children who have received three injections	3,828
Number of children vaccinated by Flying Doctor Service	2,074
Number of children vaccinated at Hospitals	1,242
Number of children vaccinated at Institutions	336
Number of expectant mothers who received injections	9,443
Number of other adults who received injections	10,220
Total number of injections given in Queensland	789,368

SPECIAL EDUCATION.

School Health Services plays an important role in the solution of problems in children necessitating special education. In this regard, there is a dual liaison between School Health Services and other agencies dealing with this problem such as the Research and Guidance Branch of the Department of Public Instruction, the Remedial Education Centre of the University of Queensland and the Commonwealth Acoustic Laboratory. All cases requiring a determination as to the type of special education to fit a certain handicap receive a full medical investigation. In Brisbane such cases are examined at School Health Services Building in William street. In addition many country children travel to Brisbane for this purpose. The Chief Medical Officer is a member of the Ascertainment Committee for the Oral School. During the year forty-five children were examined at School Health Services for the purpose of determining whether a medical defect was causing lack of school progress.

The Teachers' Training College.—Teachers plan an important part in the School Health Programme. Health education in schools and the supervision of the school physical environment is the direct responsibility of teachers. To fit them for the role they have to play in this regard, student teachers undergo a health course during their general training. Part of this course is undertaken by the Chief Medical Officer. All students are medically and dentally examined at the beginning of their course. During the year 728 student teachers were examined by School Health Services Staff.

Communicable Diseases in Schools.—The incidence of communicable disease in school children during 1956-57 was not alarming. In the winters of both 1956 and 1957 there was much absenteeism due to upper respiratory infection, but otherwise the incidence of communicable disease was lower than usual. It is interesting to note that in the first year of the Salk Campaign, the incidence of poliomyelitis in the school children was the lowest since 1949-50. Only twelve proved cases of poliomyelitis occurred during the year in school children.

The Division of Tuberculosis continued its testing of primary school leavers in the metropolitan area. Mantoux tests were carried out in 5,511 children, of which 1,258 or 22·6 per cent. were positive. A pleasing percentage of 97 of parents gave permission for negative reactors to receive B.C.G. vaccine.

In the Cairns and Innisfail districts, the Hookworm Campaign investigated 1,912 children (both white and aboriginal) for the incidence of hookworm. Of these, ten white children in a total of 1,266 were found to harbour the organism. The incidence was much higher in aboriginal children among whom 297 children in a total of 836 were positive.

TABLE LXII.

Communicable Diseases in School Children 1956-57.

Disease.	Number of Cases.
Diphtheria	5
Scarlet Fever	155
Poliomyelitis	12
Lead Poisoning	2
Meningitis	8
Tetanus	5
Tuberculosis	10
Typhoid Fever	2
Rheumatic Fever	106

TABLE LXIII.

Number of Children Examined.	Number Notified for Professional Attention.	Number of Children under Regular Dental Care.			Number with Sound Mouths.		Carious Teeth Savable (Permanent).	Carious Teeth Unsavable (Permanent).	Temporary Carious Teeth.	Permanent Teeth Lost or Extracted.	Six-year Molars Extracted.
		Clinic.	School Dental Officer.	Private Dentist.	Natural.	Operatively Restored.					
26,803	5,297	353	5,133	6,672	1,592	4,875	30,832	4,905	36,166	13,415	10,155

TABLE LXIII.—*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.			
60,295	10,297	7,908	16,482	2,413	8,245	12,061	6,497	9%	35,737	1·3

*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—Regularly clean the teeth.
B—Occasionally clean the teeth.
C—Never clean the teeth.

The School Dental Service.

The year 1956-57 in School Dental Service was marked by a depletion of staff. Commencing the year with eighteen dentists, the ranks were reduced to fourteen with the loss of five dentists and the gain of one. Mr. G. O. Hosking, Chief Dental Inspector, retired at the end of June, 1957, after thirty-seven years service. Mr. T. D. Pugh, who has also several years service with School Dental Service has been appointed Chief Dental Inspector.

Despite the reduced numbers, the dental staff continued to give a fine service to children in distant parts of the State. As no school dentists work in large cities, their duties take them to remote areas away from the usual amenities. They are absent from home for long periods, and perform their professional work with portable equipment in small schools. Much praise is therefore due to the manner in which they perform their work. From the details of their work as given in Tables LXIII. and LXIV. it is noted that school dentists treated 9,307 children. Hospital Board Dental Clinics treat school children living in the larger cities in Queensland. The treatment carried out at Brisbane Dental Hospitals is given in Table LXVI.

TABLE LXIV.

Total Treatment for Year.

Number of Children Treated.	Number of Extractions.	Number of Fillings.	Number of Other Treatments.
9,307	8,849	22,444	14,006

TABLE LXV.

Treatment for Correspondence Pupils.

Number of Children Treated.	Number of Extractions.	Number of Fillings.	Number of Other Treatments.
16	34	14	34

TABLE LXVI.

Treatment of School Children at Brisbane Dental Hospital

Number of Children Treated.	Number of Extractions.	Number of Fillings.	Number of Other Treatments.
25,412	30,178	93,899	33,586

DIVISION OF MENTAL HYGIENE.

Director of Mental Hygiene: B. F. R. Stafford, M.B., B.S. (Melb.).

The preparation of the Annual Report is inevitably associated with an element of "stocktaking." It presents an opportunity to review the trends of the past twelve months, and to appreciate the implementation of projects founded on plans made years before.

It is salutary to take time to review activities over a long period such as twenty years. If one looks only to the future the vista tends to be clouded with incompleted plans, with the effects of changing economy, with concepts of ideals yet to be achieved. If one looks only at the present the view tends to be obscured with a multitude of details of administration and organisation that usurp time and thought. The result of such a contemplation could easily be frustration.

However, since 1937 revolutionary therapies such as the Cardiazol treatment of Meduna, the insulin treatment of Sakel, the electrotherapy of Corletti and more recently the wide use of the so-called "tranquillising" drugs and various new techniques of psychosurgery have been developed and these have been practised in Queensland.

Physical amenities and facilities such as canteens, beauty parlours, recreations, and entertainments have been greatly developed. Food and clothing have been improved.

Equipment in all sections has advanced with the times, for example, all transport was horse-drawn in 1937 and in 1957 the hospitals have motor transport.

Special services such as dentistry, pathology, radiography, visiting specialists have all originated in the past two decades.

In addition, medical and nursing establishments have been increased. The Department has sent its medical superintendents on visits to southern States and has enabled four of its medical officers to participate in special post-graduate courses in psychiatry held in Melbourne.

Advances in administration are shown by the introduction of the Managerial Division in each hospital and in 1950 the Office of the Director of Mental Hygiene was established in Brisbane independently of the Brisbane Mental Hospital.

Throughout the past twenty years our hospitals have been subjected to episodes of criticism much of which was based on misunderstanding. However, occasions occurred where it was possible to publicise the Government policy towards patients. It is now generally accepted that the mentally sick patient is entitled to be treated in a congenial and stimulating environment; that it is reasonable to permit him to achieve rehabilitation in circumstances that permit him all reasonable freedom. The open ward concept will be further implemented. Of course, certain patients need careful supervision, but more accommodation and better classifications enables those suitable for leave conditions to enjoy them, whereas in overcrowded wards one or two difficult patients necessitate the application of strict supervision for all.

Queensland has been fortunate in that there have been substantial additions made to accommodation from time to time throughout the past twenty years, and with the additional wards and services in course of building, and construction which has been approved, serious problems should disappear.

It will be expected that with satisfactory accommodation, modern buildings and services, augmented medical and nursing staffs, and the increased ancillary services, the next decade will introduce an era in which the mental illnesses of longer duration will receive more intensive treatment.

Satisfaction with the achievement of the past decade is justifiable, if only because a sound foundation exists on which to build future progress.

It is appropriate to review statistical trends relating to patient population since the introduction of "*The Mental Hygiene Act of* 1938."

Table LXVII. shows:—

(i.) Male Patients in residence—Brisbane Mental Hospital—1937-38—1956-57.

(ii.) Female Patients in residence—Brisbane Mental Hospital—1937-38—1956-57.

(iii.) Male Patients in residence—Toowoomba Mental Hospital—1937-38—1956-57.

(iv.) Female Patients in residence—Toowoomba Mental Hospital—1937-38—1956-57.

(v.) Male Patients in residence—Ipswich Mental Hospital—1937-38—1956-57.

(vi.) Female Patients in residence—Ipswich Mental Hospital—1937-38—1956-57.

Brisbane Mental Hospital.

Examination of this table will show that the total population of the Brisbane Mental Hospital has increased from 1,720 in 1937-38 to 2,364 in 1956-57, i.e. an increase of 644 patients.

It is interesting to note that whilst the male population has increased by 193, the female population has increased by 451. During the years 1942-43—1946-47 there was a maximum reduction of male patients of 122. From 1947 onwards there has been a gradual increase from 1,009 to 1,303 in 1955-56. The total for 1956-57 was reduced by 27 to 1,276.

Female patients increased progressively from 637 in 1937-38 to 1,220 in 1953-54 with a reduction thereafter to 1,088 in 1956-57.

During the year 24 boys were transferred to the Brisbane Mental Hospital and accommodated in the recently constructed Farm Colony Ward.

During the previous year, 17 youths were transferred from Ipswich Mental Hospital to the Brisbane Mental Hospital. Therefore, the reduction of 27 male patients at the Brisbane Mental Hospital occurred despite the transfer of 41 boys from Ipswich to occupy additional accomodation.

Toowoomba Mental Hospital.

The total patients have increased by 86 over a period of 20 years, an average annual increase of 4 patients. The static nature of this hospital's population is due to the policy of transferring patients from other hospitals.

Ipswich Mental Hospital.

The numbers of male patients in this hospital remain fairly constant—368 in 1937-38 and 384 in 1956-57—an increase of 16—less than one per annum.

The numbers of female patients increased from 145 in 1937-38 to 215 in 1954-55, with a reduction to 207 in 1956-57. A factor contributing to this reduction was the discharge of babies to the care of the Brisbane and South Coast Hospitals Board towards the end of the year under review.

TABLE LXVII.

Showing Number of Patients in Residence in Mental Hospitals—1937-38 to 1956-57.

Year.	Brisbane.			Toowoomba.			Ipswich.			Charters Towers.			
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Male.	Female.	Total.
1937-38	1,083	637	1,720	536	584	1,120	368	145	513	..	1,987	1,366	3,353
1938-39	1,107	708	1,815	513	580	1,093	370	141	511	..	1,990	1,429	3,419
1939-40	1,061	711	1,772	557	596	1,153	366	141	507	..	1,984	1,448	3,432
1940-41	1,107	769	1,876	561	602	1,163	360	141	501	..	2 028	1,512	3,540
1941-42	991	822	1,813	602	593	1,195	362	136	498	..	1,955	1,551	3,506
1942-43	1,002	828	1,830	608	599	1,207	360	150	510	..	1,970	1,577	3,547
1943-44	961	880	1,841	609	603	1,212	375	159	534	..	1,945	1,642	3,587
1944-45	977	933	1,910	595	582	1,177	366	155	521	..	1,938	1,670	3,608
1945-46	979	952	1,931	609	582	1,191	370	161	531	..	1,958	1,695	3,653
1946-47	1,009	931	1,940	618	610	1,228	369	166	535	..	1,996	1,707	3,703
1947-48	1,016	956	1,972	618	620	1,238	371	167	538	..	2,005	1,743	3,748
1948-49	1,057	1,023	2,080	574	602	1,176	355	177	532	..	1,986	1,802	3,788
1949-50	1,095	1,072	2,167	602	602	1,204	355	179	534	..	2,052	1,853	3,905
1950-51	1,115	1,101	2,216	631	612	1,243	341	183	524	..	2,087	1,896	3,983
1951-52	1,172	1,176	2,348	617	604	1,221	351	190	541	..	2,140	1,970	4,110
1952-53	1,205	1,216	2,421	620	608	1,228	356	201	557	..	2,181	2,025	4,206
1953-54	1,293	1,220	2,513	621	611	1,232	366	207	573	*	2,280	2,038	4,318
1954-55	1,269	1,215	2,484	622	599	1,221	387	215	602	56	2,334	2,029	4,363
1955-56	1,303	1,184	2,487	616	603	1,219	390	209	608	70	2,388	1,996	4,384
1956-57	1,276	1,088	2,364	611	595	1,206	384	207	591	79	2,350	1,890	4,240

* Charters Towers Mental Hospital officially opened July, 1954.

Patients Aged 60 and Over.

Table LXVIII (*a*) hereunder, shows the trend of patients aged 60 and over in relation to patients in mental hospitals from 1-7-46 to 30-6-57. The supporting Table LXIX. shows the percentage of these patients to total patients in residence.

In 1945-46 the percentage of patients aged 60 years and over to total patients in residence was 29, progressively increasing to 33·71 per cent. in 1955-56, followed by a reduction to 30·5 per cent. in 1956-57. From Figure A and Table LXIX. it is evident that patients aged 60 years and over (most of whom would be suffering from senility) constituted one-third of the total patient population of all mental hospitals.

Perusal of reports relating to mental hospitals in other Australian States indicates that the problem of the senile patient is not peculiar to Queensland, but there would not appear to be any indication of attempts at a positive solution by other States.

TABLE LXVIII.

SHOWING PROPORTION OF PATIENTS AGED 60 AND OVER IN RESIDENCE TO TOTAL PATIENTS IN RESIDENCE ALL MENTAL HOSPITALS—1945–46 TO 1956–57.

Year.	Total Patients in Residence.	Patients Aged 60 and Over in Residence.	Proportion. Percentage.
1945–46	3,653	1,060	29·01
1946–47	3,703	1,093	29·51
1947–48	3,748	1,125	30·00
1948–49	3,788	1,129	29·80
1949–50	3,965	1,208	30·46
1950–51	3,983	1,311	32·91
1951–52	4,110	1,341	32·62
1952–53	4,206	1,405	33·42
1953–54	4,308	1,416	32·86
1954–55	4,363	1,466	33·37
1955–56	4,384	1,478	33·71
1956–57	4,240	1,294	30·51

It is considered that the policy adopted in this State of providing special hospital accommodation for senile patients, if actively and progressively pursued, must ultimately provide a most satisfactory solution.

If relieved of a very high admission rate of seniles and a resident population of approximately one-third seniles, the mental hospitals can be expected to fulfil their function, i.e., the care and treatment of the mentally sick.

Figure B and Table LXIX. illustrate the trend in male and female patients aged 60 years and over in relation to patients in residence at the Brisbane Mental Hospital. Owing to the high admission rate of the Brisbane Mental Hospital, statistics relating to this hospital more clearly indicate the movement of senile patients in relation to its resident patient population.

It will be noted that the senile population in the year 1945-46 was 459, reaching a maximum of 821 in the years 1954-55 and 1955-56, reducing to 681 in the following year.

It is estimated that provision of 1,000 beds in special accommodation will be needed by 1965 to cope with the present senile population in mental hospitals and to absorb expected future admissions of seniles. Already up to 380 beds have been provided so that a further 600 beds are required.

TABLE LXIX.

SHOWING NUMBER AND PROPORTION OF PATIENTS AGED 60 AND OVER TO TOTAL PATIENT POPULATION BRISBANE MENTAL HOSPITAL 1945–46 TO 1956–57.

Year.	Patients in Residence.			Patients Aged 60 and Over.			Percentage. Patients Aged 60 and Over to Total Patients.		
	Male.	Female.	Total.	Male.	Female.	Tota.	Male.	Female.	Total.
1945–46	1,019	1,018	2,037	213	246	459	20·90	24·16	22·53
1946–47	1,053	986	2,039	242	245	487	22·99	24·54	23·88
1947–48	1,077	1,027	2,104	247	256	503	22·93	24·05	23·91
1948–49	1,122	1,104	2,226	246	289	535	21·92	26·17	24·03
1949–50	1,145	1,138	2,283	282	324	606	24·62	28·47	26·54
1950–51	1,184	1,205	2,389	307	369	676	25·84	30·62	28·23
1951–52	1,224	1,266	2,490	319	352	671	26·06	27·80	26·93
1952–53	1,288	1,340	2,628	338	401	739	26·24	29·92	28·08
1953–54	1,353	1,325	2,678	372	401	773	27·49	30·26	28·87
1954–55	1,348	1,325	2,673	371	451	822	27·11	34·03	30·57
1955–56	1,368	1,310	2,678	380	441	821	27·70	33·66	30·68
1956–57	1,276	1,088	2,364	326	355	681	25·54	32·62	29·08

NUMBER OF PATIENTS IN RESIDENCE AND NUMBER UNDER CARE.

Tables LXX. and LXXI.—

(1) Ratio of occupied beds in mental hospitals in relation to per 1,000 of population; and

(2) Ratio of patients under care in mental hospitals in relation to per 1,000 of population.

Table LXX. reveals that the ratio of patients in residence per 1,000 population of the State fluctuates between 3·36 and 3·50, but the ratio of the year 1957 drops to 3·07.

Table LXXII. shows the position in all Australian States at the dates indicated. It will be observed the Queensland figures respecting resident patients are comparable with South Australia, greater than other States excepting New South Wales, which is the highest of all States.

TABLE LXX.

SHOWING PROPORTION OF OCCUPIED BEDS IN MENTAL HOSPITALS PER 1,000 OF POPULATION (MEAN OF FINANCIAL YEARS) FROM 1-7-38 TO 30-6-57.

Year Ended.	Population.	Number of Patients in Residence.	Percentage. Occupied Beds per 1,000 mean Population.
30th June, 1938	996,448	3,353	3·36
30th June, 1939	1,008,207	3,419	3·39
30th June, 1940	1,021,426	3,432	3·36
30th June, 1941	1,032,122	3,540	3·43
30th June, 1942	1,036,690	3,506	3·38
30th June, 1943	1,040,433	3,647	3·50
30th June, 1944	1,054,810	3,587	3·40
30th June, 1945	1,068,630	3,608	3·37
30th June, 1946	1,084,125	3,653	3·37
30th June, 1947	1,097,303	3,703	3·37
30th June, 1948	1,114,634	3,748	3·36
30th June, 1949	1,140,816	3,788	3·32
30th June, 1950	1,173,232	3,965	3·38
30th June, 1951	1,207,194	3,983	3·30
30th June, 1952	1,239,868	4,100	3·31
30th June, 1953	1,272,244	4,206	3·30
30th June, 1954	1,300,464	4,308	3·31
30th June, 1955	1,325,466	4,363	3·29
30th June, 1956	1,352,629	4,384	3·24
30th June, 1957	1,380,737	4,240	3·07

TABLE LXXI.

SHOWING PROPORTION OF PATIENTS UNDER CARE IN RELATION TO PER 1,000 OF POPULATION (MEAN OF FINANCIAL YEARS) FROM 1-7-1938 TO 30-6-1957.

Year Ended.	Population.	Number of Patients Under Care.	Percentage of Patients per 1,000 Population.
30th June, 1938	996,448	4,085	4·10
30th June, 1939	1,008,207	4,124	4·09
30th June, 1940	1,021,426	4,237	4·15
30th June, 1941	1,032,122	4,226	4·09
30th June, 1942	1,036,690	4,309	4·15
30th June, 1943	1,040,433	4,605	4·42
30th June, 1944	1,054,810	4,710	4·46
30th June, 1945	1,068,630	4,502	4·21
30th June, 1946	1,084,125	4,479	4·13
30th June, 1947	1,097,303	4,641	4·23
30th June, 1948	1,114,634	4,692	4·20
30th June, 1949	1,140,816	4,765	4·09
30th June, 1950	1,173,232	4,800	4·10
30th June, 1951	1,207,194	5,086	4·21
30th June, 1952	1,239,868	5,238	4·22
30th June, 1953	1,272,244	5,570	4·38
30th June, 1954	1,300,464	5,656	4·35
30th June, 1955	1,325,466	5,726	4·32
30th June, 1956	1,352,629	5,880	4·34
30th June, 1957	1,380,737	6,184	4·47

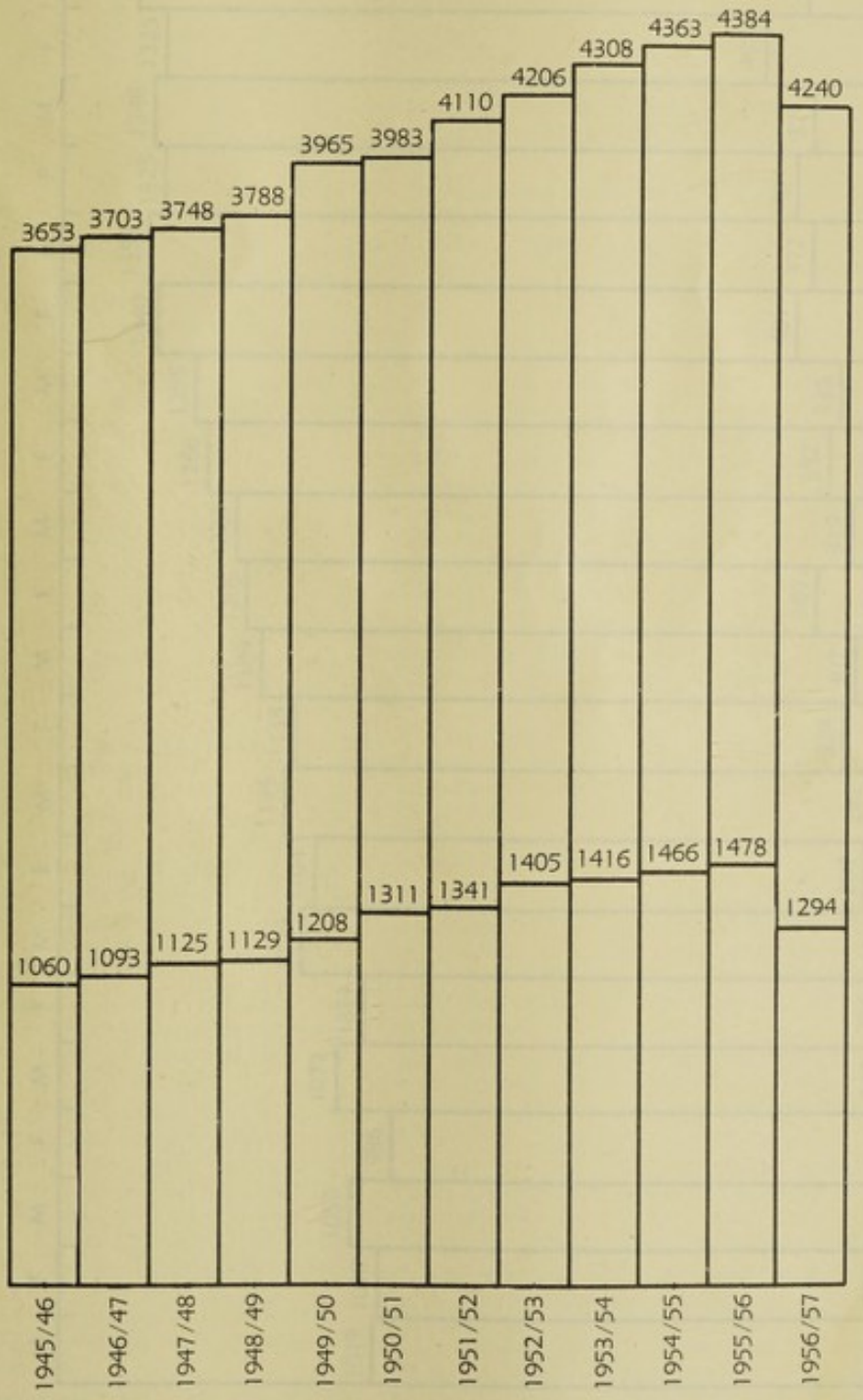
TABLE LXXII.

TABLE SHOWING INFORMATION RESPECTING PATIENTS RESIDENT AND ADMISSIONS TO MENTAL HOSPITALS IN RELATION TO POPULATION—ALL STATES.

State.	Date.	Mean Population.			No. of Patients per 1,000 population.			No. of Admissions per 10,000 population.		
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Queensland	30-6-57	709,101	671,636	1,380,737	3·49	2·98	3·29	9·66	10·36	9·99
Victoria	31-12-56	1,328,357	1,304,266	2,632,623	2·87	3·27	3·07	5·99	5·03	5·52
Western Australia	30-6-57	353,751	334,381	688,132	2·76	2·09	2·43	4·38	3·40	3·92
Tasmania	31-12-56	171,151	161,659	332,810	2·14	2·31	2·22	8·71	7·47	8·10
South Australia	30-6-56	432,000	418,000	850,000	3·18	3·08	3·13	6·67	6·53	6·60
New South Wales	30-6-56	1,785,243	1,768,198	3,553,432	3·76	4·00	3·87	6·49	7·35	6·91

FIGURE A.

SHOWING NUMBERS OF PATIENTS AGED 60 YEARS AND OVER IN RELATION TO ALL PATIENTS IN RESIDENCE IN ALL MENTAL HOSPITALS 1945/46 TO 1956/57.



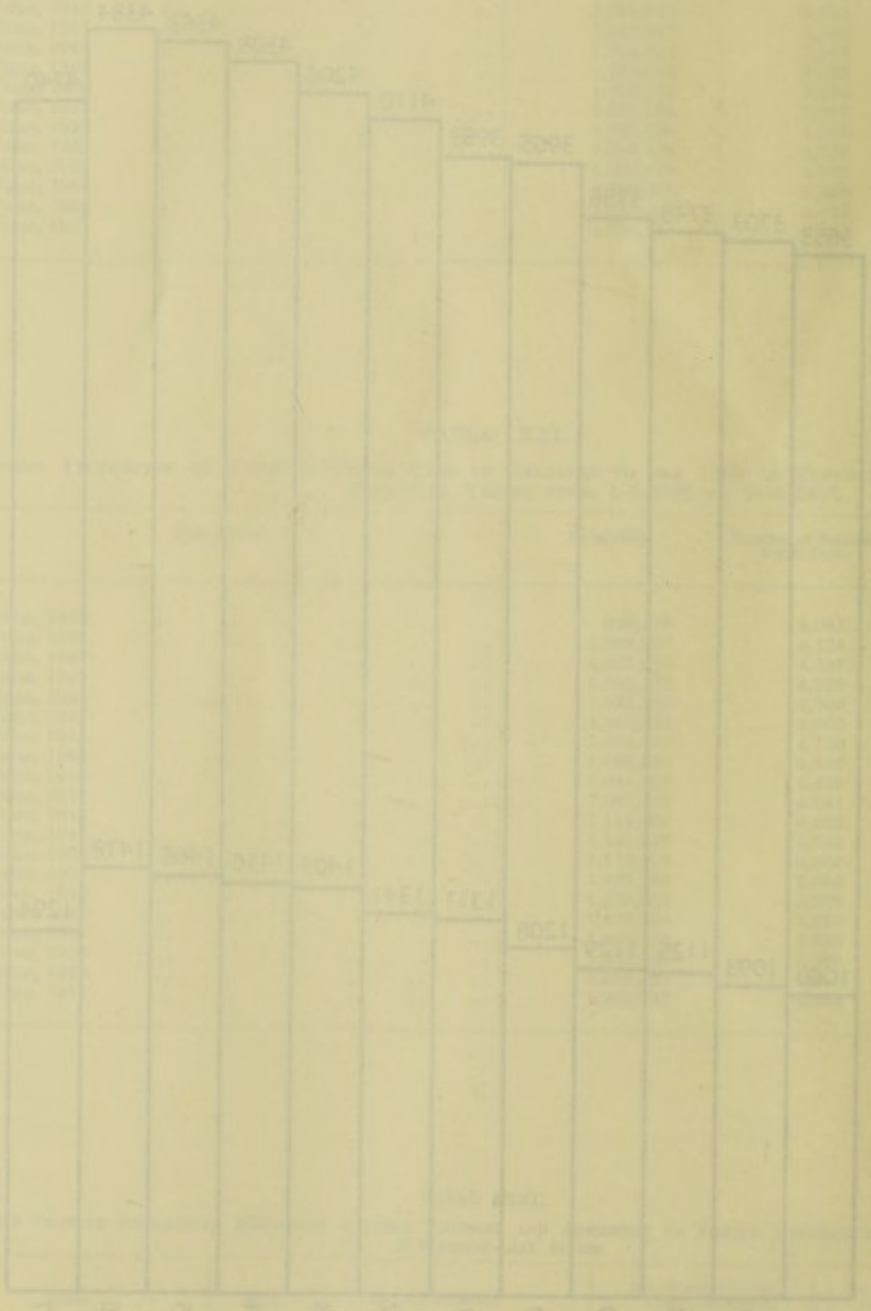
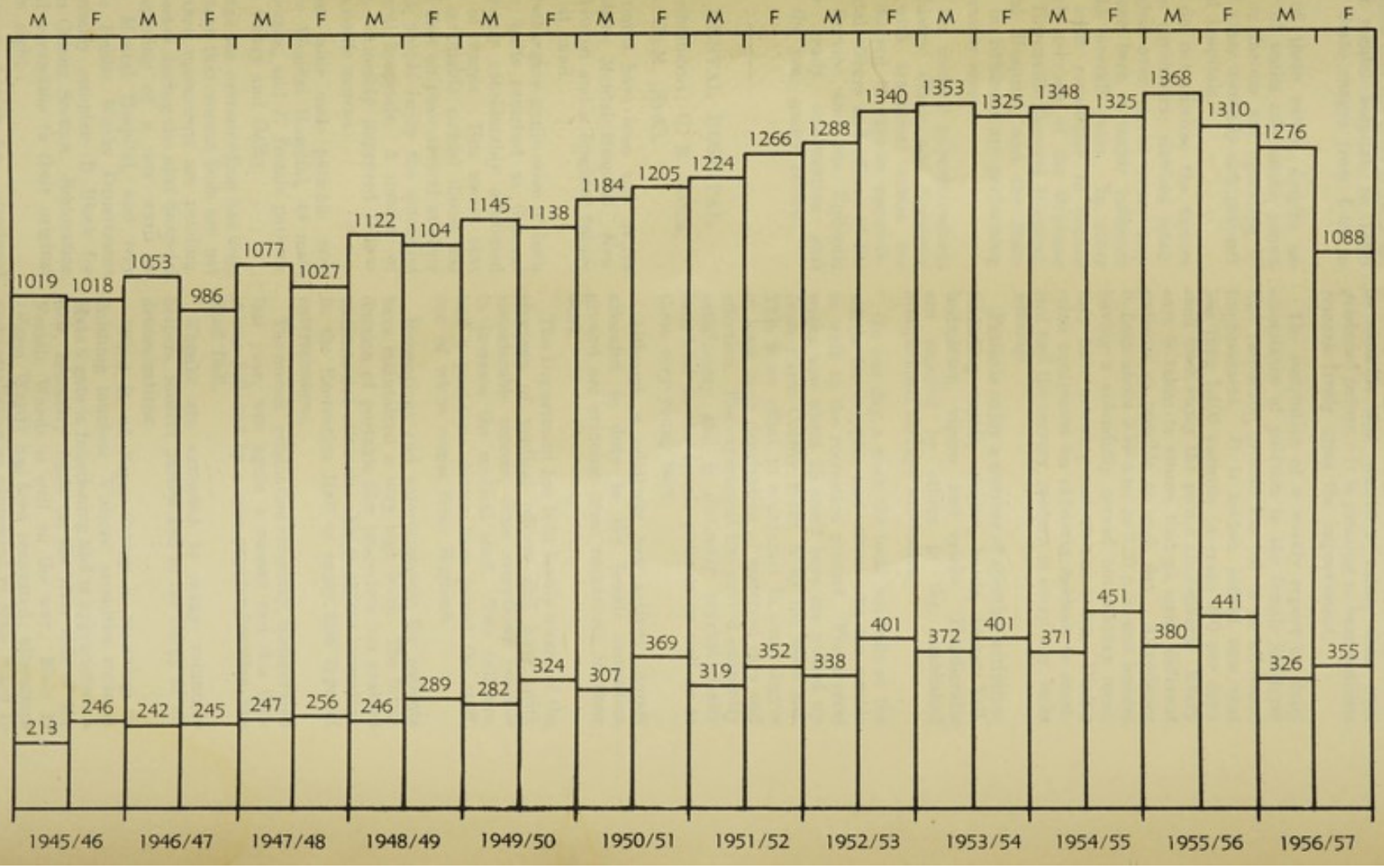
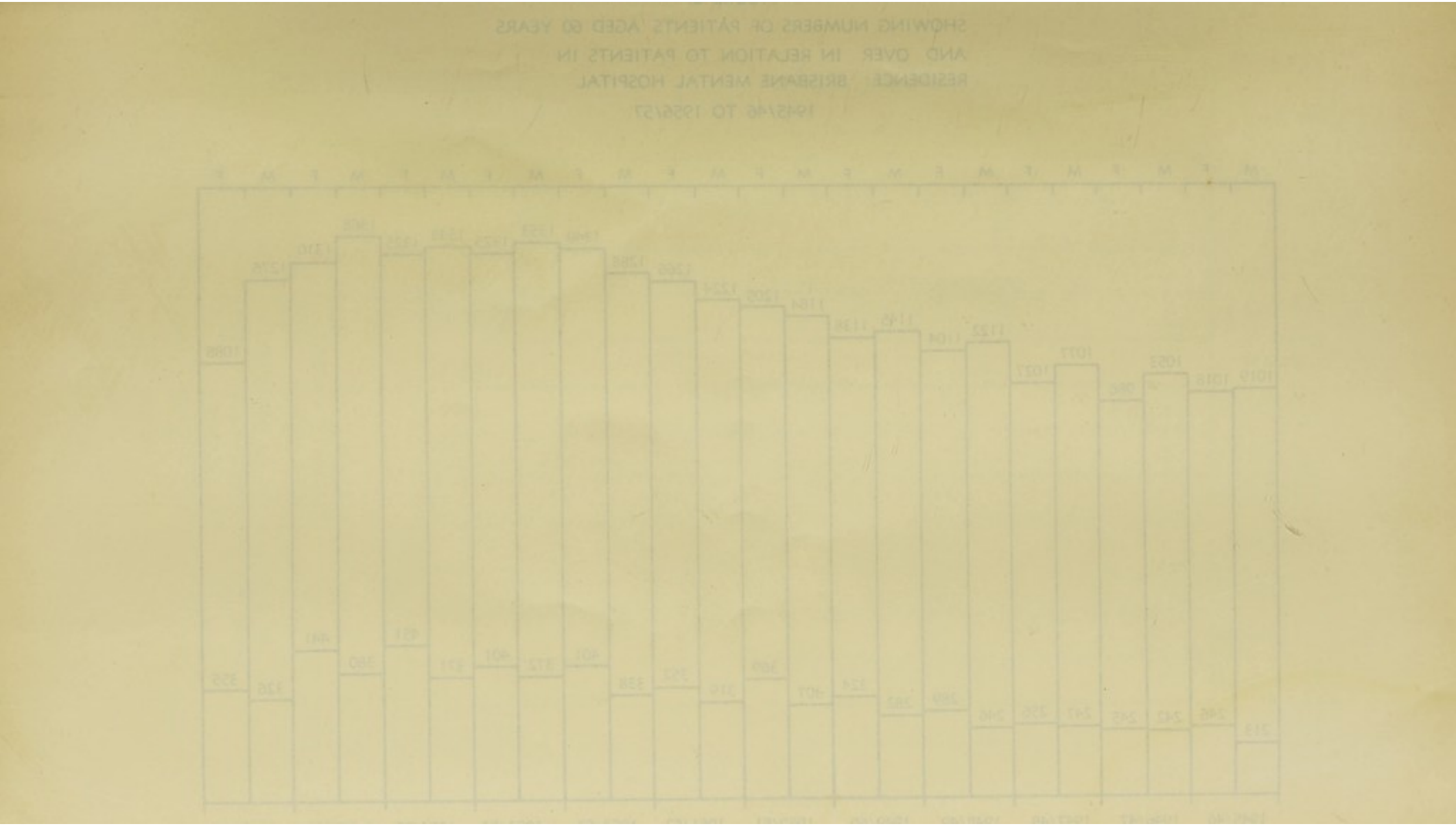


FIGURE B.

SHOWING NUMBERS OF PATIENTS AGED 60 YEARS AND OVER IN RELATION TO PATIENTS IN RESIDENCE BRISBANE MENTAL HOSPITAL

1945/46 TO 1956/57





Queensland has the highest admission rate of all States.

Table LXXI. reveals that the ratio of patients under care in all mental hospitals to 1,000 population of the State ranges from 4·09 to 4·47.

The constancy of these ratios, despite an increasing number of senile admissions, shows that some factor or factors are operating to reduce the ratio of other mentally sick patients admitted to mental hospitals.

These statistics do not disclose the factors operating, but the psychiatric services established and expanded over recent years may fairly claim to have been a major influence in maintaining the overall ratio. In other words, it would seem reasonable to deduce that the psychiatric services of the Brisbane General Hospital, Townsville General Hospital, Toowoomba General Hospital, and the State Psychiatric Clinic in Brisbane are performing a worthwhile community service.

The reports of the medical superintendents and of the Psychiatric Clinic and Epileptic Home, together with statistical tables are appended. It is desired to express appreciation to Departmental officers and officers of the Mental Hygiene Service and the Epileptic Home for their ready co-operation and assistance during the year under review.

BRISBANE MENTAL HOSPITAL.

Medical Superintendent: C. R. Boyce, M.B., Ch.M. (Syd.).

The past 12 months have been very active ones for the Brisbane Mental Hospital. New ground has been broken and a brighter future than ever is close at hand.

The policy of discharging senile cases of both sexes to geriatric units attached to General Hospitals has already considerably alleviated the overcrowding of wards. This means that the "stigma" of certifiable mental illness has been removed and that on their arrival at their new home the old people enjoy the amenities provided by general hospitals. A number of the patients have noticeably improved following admission to a senile annexe.

During the year nine male patients were transferred to the Wondai Hospital, 49 male patients to Toowoomba, and 77 female patients to the annexes at Oakey and Dalby.

Even at this stage the overcrowding has been reduced to an extent that vacant beds are not uncommon. Further movements are pending. More relief is expected during the next financial year with the opening of a new ward at Charters Towers Mental Hospital, and very shortly when the Public Works Department hands over the nearly complete B Block for males in the Farm Colony Section. Restoration of day-rooms and verandahs to their original function is within sight.

The supervising chief cook has introduced new ideas to the main kitchen that caters for upwards of 2,000 patients. Assisted by installation of new machinery, he has reorganised the work both qualitatively and quantitatively, and, with less raw materials, is turning out more attractive and more varied meals, adequate as to calorific and nutritive value, than ever produced before. It is pleasing to hear patients remark freely upon the improvement.

The institution of a weekly report on daily attendance of patients to the female cafeteria and recreation ground has led to an all-round improvement. It is seldom indeed now that less than 1,400 patients (average 200 per day) each week enjoy the picnic atmosphere. Every care is taken to ensure that as many different patients as possible go each day. Attendance is from about 9.30 a.m. to 3.20 p.m. and besides having a splendidly served hot midday meal, they have morning and afternoon tea. Dining room equipment on cafeteria methods is excellent and the servery, modern in every way, lacks nothing.

Patients enjoy a number of sporting activities, including tennis, croquet, bowls, basket ball, badminton, vigoro, and cricko. Handicrafts are enjoyed by others in the established occupational therapy sub-centre.

On one day a week the local bus calls at the wards for cripples and others who are unable to walk to the recreation ground. For several weeks now about 25 small boys are picked up from Farm Colony Ward A by the same bus. This is an effort to counteract in some degree at least their deprivation of maternal care and affection. The experiment has proved eminently satisfactory and is distinctly psychologically beneficial to the female patients as well as to these very young boys.

Although a relatively new activity, nurses allocated to duty in the female recreation ground are evincing great enthusiasm in their work.

The Department has been keenly aware of the shortage of medical officers and have, with considerable success, done everything possible to increase the medical staff. Two full-time and a part-time doctor have joined the staff, one of whom comes from England.

Recreations and entertainments for patients have maintained a very high level. The introduction of portable film projectors has enabled patients not otherwise able to attend screenings in the Recreation Hall to enjoy this type of entertainment.

The nurses' graduation ceremony, inaugurated last year, was again a success and this time it was followed by a once popular function, the Staff Ball.

Thanks are extended to many voluntary helpers, concert parties and to the clergy of all denominations.

Ward B. of Farm Colony is receiving its finishing touches. Visitors' amenities room at Male 9 gate is functioning and is appreciated; a new, necessary fence on the river side of the Female Wards is well on the way; Male 17 (Farm Ward) has been renovated; alterations and installation of equipment in Male Ward 15 will provide accommodation for the treatment of male patients with tuberculosis until the Chest annexe at Toowoomba is completed.

Since over-crowding in the wards has been somewhat alleviated, each ward in turn is relinquishing a suitable single room, painted, renovated and appropriately furnished for examination, consultation, and psycho-therapeutic purposes. These are appreciated by the medical officers who previously had to use the ward office which was not appropriate for these personal patient services.

A long list of general improvements itemising all of the 30 wards of the hospital, and in fact all other scenes of activity, could be drawn up. Briefly, they would include louvres and canopies, laminex topped tables, kitchenettes for nurses' quarters, ablution and change room for farm staff, renovation of Farm Ward, better water supply, improved delivery of food to wards, disposal of garbage, ward sterilisers, electric stoves, stovettes and toasters, floor coverings, pictures and window curtains, replacement of much aluminium and enamel crockery, rubber bath mats, invalid chairs, drinking fountains, clothing lockers, rotary hoists, fly-proofing serveries, transference of lecture room to Invalid Cooking Tuition Centre, continued conversion of electric current to alternating type, improvement generally in patients' clothing and nurses' uniforms and increased grazing area for dairy herd.

The recreation hall has been repaired and is in process of being painted both externally and internally.

Treatment of patients continues to follow modern trends. Nothing new can be claimed in chemo-therapy for chlorpromazine and reserpine, except that more and more extensive use of these drugs is being made. Two research projects are in hand for the purpose of determining the value of other ataraxic therapies.

There were 7,397 E.C.T. administrations—a decrease of 2,896 as compared with last year. Forty-one patients received full insulin therapy treatment.

Admissions for the year numbered 1,034, of whom 486 were aged 50 years and over. Transfers to other hospitals numbered 155, and the patients resident on 30th June were 2,364, as compared with 2,487 twelve months previously, a reduction of 123 patients.

Deaths numbered 328 and the average age at death was 71 years.

Wacol Repatriation Pavilion.

The repatriation pavilion continues its satisfactory service throughout the year.

Entertainment is maintained by the provision of film screenings, concerts and bus trips to the seaside. A number of patients attend functions at the Main Hospital.

Weekly visits are made by the Repatriation Department Senior Psychiatrist. Inspections are made by the Senior Dentist of the Commission, who confers with the Dental Surgeon on the staff of the Brisbane Mental Hospital.

There is considerable movement in respect of the patients of this pavilion and during the year 43 patients were admitted, 12 patients were transferred and 25 were discharged.

Leave was granted to 60 patients.

Scattered through the wards of the Main Hospital are over 40 cases recognised as Repatriation liabilities and who are considered unsuitable for admission to the pavilion.

Representations have been made to the Repatriation Commission that special accommodation should be provided for these patients.

Occupational therapy is provided by instructors from the Brisbane Mental Hospital. The question of increasing the quantum of occupational therapy has been discussed with officers of the Repatriation Commission. It is considered that any extensions will necessitate additional accommodation and full-time instructors.

TOOWOOMBA MENTAL HOSPITAL.

Medical Superintendent: J. H. B. Henderson, M.B., B.S. (Syd.).

The admission rate has risen rather rapidly this year to top the two hundred mark with the voluntary admissions still maintaining a high percentage and the need for the projected voluntary unit in the proximity of admission Ward 6 is now becoming almost a necessity. It is anticipated that in the near future a start will be made on the new Tuberculosis Block in the north-west corner of the grounds, this block being designed to carry seventy-four patients, thus entailing considerably more clinical work.

During the year the modernisation of the sculleries in six wards was completed and these are now well designed and equipped units providing every facility for satisfactory meal service to the patients. This has resulted in the establishment of a cafeteria system in the refractory ward and this method of securing meals is being extended to other wards.

Panelyte table tops are being provided in wards but there is still a preference in some female wards for the more homely dining cloths.

Facilities for the transport of meals have been improved. More soft furnishings, improved male and female attire, linoleum on certain floors and colourful interior painting have been responsible for raising the standard of living in the hospital.

An electric meat saw has been installed in the butcher's shop, a larger potato peeler in the vegetable preparation room, racks for the storage of food containers in the kitchen and also a large stainless steel sink for the cleaning of these containers.

A new washing machine has been added to the laundry equipment.

With the co-operation of the Australian Red Cross Society a comprehensive library for the patients is now being formed whilst newer methods of recreation are medicine ball and tug-o-war contests weekly in the recreation hall where indoor bowling and table tennis contests are being held. It is hoped to extend these contests to gymnastics at an early date.

The staffing position is very satisfactory on the male division and whilst improved on the female division is still somewhat inadequate numerically and deficient in trained nurses. However, the staff, male and female have done a splendid job, there having been little trouble or discord during the year.

The annual graduation ceremony was highly successful and the favourable publicity received should assist in bringing about a better understanding of the activities of a mental hospital.

Some patients on transfer to the senile annexes are staged at the Toowoomba Mental Hospital for a few days before taking up residence in their new home.

With the improved sporting facilities, together with 16-mm. services in the words, 25-mm. movies in the recreation hall, dances, community singing and a variety of entertainment provided by various religious, social, and philanthropic bodies in the town, the patients do not lack entertainment. Occupational therapy classes provided by members of the C.W.A. have been well patronised. It is hoped to expand that provided for male patients during the coming year.

It is pleasant to observe the acceptance of the hospital as a very necessary unit by the people of this district and the greater and more genuine interest which has been shown in the hospital. Were it not for the large number of irrecoverable senile admissions and the increased number of alcoholics who unfortunately can rarely be regarded as cured, the recovery rate would assume quite high proportions.

IPSWICH MENTAL HOSPITAL.

Medical Superintendent: J. A. Hede, M.B., B.S. (Melb.).

Admission of children during the last twelve months has continued to create a problem in accommodation in both male and female divisions of the Hospital. It has been necessary to accommodate the more disturbed female children in Female Ward 2, which, if the present trend continues, will ultimately be taken over as a ward for disturbed children.

The position in the male children's ward has been relieved to some extent by the transfer of certain boys to the Farm Colony Ward at the Brisbane Mental Hospital. Since December, 1955, thirty-three (33) boys have been so transferred.

Plans are now in preparation for additions to Male Ward 3 which will relieve overcrowding and provide improved facilities for the nursing of male children. A separate visitors' room and playground area have been completed adjacent to this ward, and enlargement of the bathroom is under progress.

The Department of Public Works has completed the building of a shelter for patients in Male Ward 1 and separate facilities have been provided for the nursing of tuberculosis patients in this ward.

Occupational and diversional activities have been improved for patients in Male Ward 2 and it is intended to construct a visitors' room adjacent to this ward and a new shelter for patients.

Construction of the new Female Ward 5 has commenced and is progressing satisfactorily.

Increases in male and female nursing establishments have been approved, and the recruitment of trainees—particularly in the male division, have brought the nursing staff close to full establishment. However, a considerable number of the female nursing staff are assistant nurses.

Introduction of tranquillising drugs have met with moderate success in the male and female refractory wards, and several patients have improved sufficiently to return home after many years' hospitalisation.

Increases in laundry staff and equipment have been found necessary following the increase in the child population, and it is planned further to extend the laundry, kitchen, general store, and nurses' quarters to coincide with the anticipated increase in patient population on completion of the new female ward.

The R.S.S.A.I.L.A. Sandy Gallop Sub-Branch, Country Women's Association, Red Cross Association, and the St. Vincent de Paul Society as well as several concert parties have visited regularly and provided entertainment, comforts, and picnic outings for various patients.

The Courier-Mail Toy Fund donated gifts to the children and Miss Hinton and party provided entertainment for the children at Christmas.

It was with regret that the resignation of Matron E. Sinclair was accepted. Miss Sinclair has given many years of invaluable service and she will be missed by staff and patients alike.

CHARTERS TOWERS MENTAL HOSPITAL.

Visiting Medical Officer: J. E. Robinson, M.B., B.S. (Q'ld.).

Progress is still being maintained in the construction programme of hospital buildings.

The ward built for the admission of female patients was taken over and now accommodates male patients.

It is hoped to occupy two new male wards and the general kitchen now under construction next year.

During the year there were 54 admissions; with 39 discharges, the average daily population being 75.

The use of ataraxic drugs has enabled a greater number of patients to be discharged than formerly. Others whose prognosis was bad can be allowed on leave under supervision. They have also resulted in E.C.T. being rarely used.

A variety of recreation and entertainment is available to the patients. They have been entertained at the Hospital by various Church choirs,

Red Cross Society, Charters Towers Brass Band, Dancing Schools, and the Sub-Branch of the R.S.S.A.I.L.A. A number of patients were guests of the R.S.S.A.I.L.A. at their League Rooms for an evening's entertainment. All classes of indoor games are played and during the year a basket ball court and a cricket pitch were laid down. The patients participated in these games.

On the invitation of the Rugby League and Basket Ball Association a number of patients are entertained weekly in Charters Towers at the respective fixture games.

The 200-book patients' library is well patronised.

A better line of clothing has been supplied to those patients attending functions in Charters Towers, and shorts and sandals are available for wear during the hot months of the year.

The establishment of a training school is eagerly awaited and recent changes in the regulations will help greatly to bring regular training classes much closer.

The menus and standard of food preparation remain high and reflect great credit on the catering staff.

General.

There have been several minor works and improvements carried out during the year. A high-level tank with a 30,000 gallon capacity has been erected for fire fighting purposes, and two additional fire extinguishers supplied. Cold water fountains have been installed in each of the two occupied wards and are much appreciated during the summer months.

The reticulation from the 4-inch rising main in the ground has commenced for the more efficient watering of the park area. Drinking fountains are to be supplied at selected points.

Acting on the advice of the Soil Conservationist from the Department of Agriculture and Stock, contour banks have been constructed on the cultivation area with noticeable results.

A catch crop of 20 acres of pumpkins was planted and despite dry conditions, a reasonable return was secured. Pumpkins were supplied to the various Institutions in Charters Towers as well as to the General Hospital and State Children's Department in Townsville.

Supplies of lemons from the citrus orchard have been received and distributed to various Institutions.

Establishment of a Dental Clinic is in progress and it is expected to be in operation in the near future.

Clinical Meetings.

Clinical meetings between the Visiting Medical Officer and trained staff take place monthly and various aspects of mental and general nursing are discussed, together with ward reports on the progress and status of patients undergoing intensive physical treatments. These meetings stimulate interest amongst the staff and materially improves the "team" approach to care and treatment of patients.

EPILEPTIC HOME.

Superintendent: E. G. Kenyon.

The Home continues to play an important part in the treatment and care of epilepties. Its existence is widely known, as evidenced from inquiries made from various parts of the State and Commonwealth.

The Home relieves our public hospitals of a service which they would otherwise have to provide, and lifts a burden from many homes where families are very often reduced to a state of despair, through the presence of an epileptic in the house.

The intelligence of the patients admitted to the Home varies from a few bright children through a group capable of a varying degree of employment to a group incapable of being employed.

Two boys discharged during the year were able to find employment, and are now in a position to maintain themselves. One female who was discharged, was, when admitted four years ago, a bad epileptic and troublesome, but has now gone home to her parents benefiting from the treatment received.

A number of patients who have been given chlorpromazine have shown marked improvement in behaviour.

Outside of farming, gardening, domestic, and laundry work, there is little other occupational work being carried on because the patients are not suitable for this type of therapy. Many female patients are good needle workers and do excellent fancy work, crochet, and knitting. Some patients are enthusiastic in their work, while others are disinterested and have to be carefully persuaded to carry out a task.

The School, in charge of Miss Dorothy King, renders valuable service. There were 34 children on roll during the year. Three boys and five girls attend from the Toowoomba Mental Hospital. An extract from a School Inspector's report sums up the position admirably: "Work is planned according to each child's wavering temperament and changing capabilities, but it is clearly apparent that the teacher's time is fully occupied in studying and eliciting the interests, capabilities, and the immediate needs of each individual. Group interest is fostered—there are songs to sing, poems to write, stories to hear and tell. The co-ordination of mind and hand is fostered, objects are handled, projects are carried out, and, in the activities suggested by the teacher, pupils evince interest and pride."

Earnestness, patience, devotion, and sincerity of purpose by the teacher warrant commendation, and the general impression of school is a place where these children share a companionship in an atmosphere of affection and security.

Farm production was seriously affected by drought conditions; nevertheless a large supply of tomatoes, potatoes, cabbage, pumpkins, and salad vegetables was produced.

Heavy rains of last year have taken toll of farm lands by erosion as portion of the land is on a sloping hill. Action has been taken to prevent further erosion.

Appreciation is expressed to various representatives of religious denominations who tended the patients' spiritual needs and gratitude to the various concert parties and the Salvation Army Band for entertainment during the year. Pictures shown weekly are always appreciated and the standard of films selected by the various companies have improved considerably. Bus outings were provided during the year and were much appreciated.

In addition visits to the city are arranged.

PSYCHIATRIC CLINIC.

Psychiatrist Dr. N. Parker, M.B., B.S. (Q'ld.) DPM.(Melb.).

During the year there has been a slight change in emphasis in the work of the clinic, more of our time being devoted to teaching and research. This, however, has not affected the number of patients receiving treatment, and in fact there has been an increase of patients in all sections. In particular there has been a significant increase in the number referred by general practitioners.

An observation room was built, so that new members of staff, and auxiliary workers who attend for practical experience can be trained in observing and handling patients. The Public Works Department has done an excellent job in its construction, and several visitors have commented that it compares favourably with similar rooms they have seen overseas.

In the past, groups of students have attended the clinic throughout the year for special instruction in the work we are doing. This year a week was set aside, and a complete educational programme arranged; the following subjects were discussed:—

Problems in the Pre-school Child,

Marriage Problems,

Problems in the School Child,

Functions of the Psychiatric Clinic,

Antisocial Behaviour in Children,

Problems in Adolescence,

Backward Children,

Recognizing the Psychotic Patient.

Speech disorders in Children,

The Neurotic Patient.

In the lunch hour guest speakers presented papers on the following topics:—

Mr. David Robertson, "Marriage Guidance Counselling."

Dr. John Hede, "Hospital Care of Defective Children."

The sessions were well attended by third year psychology students, final year students from the Kindergarten Teachers' College and from the Department of Social Studies, occupational therapy students, members of the Marriage Guidance Council, some theological students, workers at the Remedial Education Centre, Subnormal Children's School, and Acoustic Laboratory, nurses from the School Health Services and Maternal and Child Welfare Service—including two Colombo Plan students—and a few interested general practitioners.

Judging by the letters received from many of the people attending, the programme was an unqualified success, and we are no longer distracted by the preparation of demonstrations for individual groups throughout the year.

Once again two Honours students in Psychology took part in the work of the clinic for a fortnight, and three final year students in Social Studies have been attending for one session a week during the University academic year.

As mentioned previously, an interest is being taken in original research, and at present four projects are under way. A survey of Huntington's Chorea in Queensland has been carried out, and particular attention focussed on the mental symptoms found in this disease. A hitherto unknown form of deaf-mutism with associated psychiatric features is being investigated, and the effect of cyanotic congenital heart lesions on intelligence is being assessed. The speech therapists have been particularly interested in etiological aspects of stammering and are analysing the possibility that hereditary predisposition plays an important contributory role in its production.

Monthly meetings have been arranged for laryngectomy patients, and these have been attended by E.N.T. surgeons and local speech therapists. At one of these meetings Mr. Suggitt gave an illustrated talk on carcinoma of the larynx.

It is to be hoped that in the future facilities will be created to enable the Children's Court to obtain psychiatric and psychological assessment of every child who comes before the Court. This will enable information on which to build a satisfactory policy for the care and treatment of juvenile delinquency and antisocial behaviour to be obtained.

Publications by Members of the Staff.

Fenelon B. (in association with Dam J. T.) "The Psychological Adjustments to Life in the Tropics," Symposium, Australian Acadamy of Science, 1957. (This work was carried out under a Commonwealth Medical Research Council Grant).

Parker N. "Hypnosis in Dentistry," Australian Dental Journal, April, 1957.

TABLE LXXIII.

QUEENSLAND MENTAL HOSPITALS.

SHOWING ADMISSIONS, READMISSIONS, DISCHARGES AND DEATHS, DURING THE YEAR ENDED 30TH JUNE, 1957.

	Brisbane Mental Hospital.			Toowoomba Mental Hospital.			Ipswich Mental Hospital.			Charters Towers Mental Hospital.	Totals.		
	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Males.	Females.	Totals.
On the Books of the Hospitals on 1st July, 1956	**1,368**	**1,310**	**2,678**	**635**	**622**	**1,257**	**400**	**211**	**611**	71	**2,474**	**2,143**	**4,617**
Admitted for the first time	366	388	754	76	83	159	49	27	76	48	539	498	1,037
Readmitted	115	165	280	22	32	54	3	1	4	6	146	198	344
Totals All Hospitals	**1,849**	**1,863**	**3,712**	**733**	**737**	**1,470**	**452**	**239**	**691**	**125**	**3,139**	**2,839**	**5,978**
Transferred from Brisbane	..	..	..	18	129	147	7	..	7	1	26	129	155
Transferred from Toowoomba	1	4	5	..	..	..	..	..	..	..	1	4	5
Transferred from Ipswich	24	..	24	..	1	1	..	..	..	..	24	1	25
Transferred from Charters Towers	1	..	1	..	..	..	..	..	..	..	1	..	1
***Total number under care during the year**	**1,875**	**1,867**	**3,742**	**751**	**867**	**1,618**	**459**	**239**	**698**	**126**	**3,211**	**2,973**	**6,184**
†Discharged—													
Recovered	169	248	417	42	47	89	6	1	7	28	245	296	541
Relieved	50	51	101	28	31	59	2	6	8	3	83	88	171
Not Improved	64	8	72	11	111	122	8	10	18	1	84	129	213
Voluntarily left	38	19	57	..	..	..	..	..	..	7	45	19	64
Died	154	174	328	44	47	91	31	11	42	3	232	232	464
Total Number Discharged and Died	**475**	**500**	**975**	**125**	**236**	**361**	**47**	**28**	**75**	**42**	**689**	**764**	**1,453**
Transferred to Brisbane	..	..	..	1	4	5	24	..	24	1	26	4	30
Transferred to Toowoomba	18	129	147	..	..	..	..	1	1	..	18	130	148
Transferred to Ipswich	7	..	7	..	..	..	..	..	..	..	7	..	7
Transferred to Charters Towers	1	..	1	..	..	..	..	..	..	..	1	..	1
Total number discharged, died, &c., during year	501	629	1,130	126	240	366	71	29	100	43	741	898	1,639
Remaining on Books of Hospitals on 30th June, 1957	**1,374**	**1,238**	**2,612**	**625**	**627**	**1,252**	**388**	**210**	**598**	**83**	**2,470**	**2,075**	**4,545**
Average Number Daily Resident	**1,315**	**1,183**	**2,498**	**615**	**601**	**1,216**	**399**	**216**	**615**	**75**	**2,404**	**2,000**	**4,404**
Number on leave of absence on 30th June, 1957	98	150	248	14	32	46	4	3	7	4	120	185	305
Proportion of Mentally Sick to each 1,000 of population as at 30th June 1957											3·49	2·98	3·29
Proportion of Admissions per 10,000 of population for year ended 30th June, 1957											9·66	10·36	9·99
Recovered	..	..	..	1	..	1	..	..	..	2	3	..	3
Relieved	13	25	38	1	4	5	..	..	..	..	14	29	43
Not Improved	3	..	3	1	..	1	..	..	..	..	4	..	4
	16	25	41	3	4	7	..	..	..	2	21	29	50

* These totals include interhospital transfers.

† Includes Section 49 Discharges as shown—

TABLE LXXIV.

ADMISSIONS, DISCHARGES, AND DEATHS, WITH THE PROPORTIONS OF RECOVERIES AND DEATHS PER CENT. DURING THE YEAR ENDED 30TH JUNE, 1957.

—	Brisbane Mental Hospital.			Toowoomba Mental Hospital.			Ipswich Mental Hospital.			Charters Towers Mental Hospital.	Totals.		
	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Males.	Females.	Totals.
Total Admissions ..	481	553	1,034	98	115	213	52	28	80	54	685	696	1,381
*Discharged—													
Recovered ..	172	267	439	42	47	89	6	1	7	35	255	315	570
Relieved ..	133	51	184	28	31	59	2	6	8	3	166	88	254
Not Improved ..	16	8	24	11	111	122	8	10	18	1	36	129	165
Died	154	174	328	44	47	91	31	11	42	3	232	232	464
Average Number Daily Residents ..	1,315	1,183	2,498	615	601	1,216	399	216	615	75	2,404	2,000	5,404
Percentage of Recoveries on Admissions ..	35·76	48·28	59·05	42·93	40·86	41·78	11·54	3·57	8·75	64·81	37·22	45·25	41·27
Percentage of Patients Relieved on Admissions	30·98	9·22	5·08	28·57	26·95	27·69	3·85	21·43	10·00	5·56	24·23	12·64	18·39
Percentage of Deaths on Average Number Resident	11·71	14·71	12·16	7·15	7·82	7·48	7·52	5·09	6·82	4·00	9·65	11·60	10·53

* For the purposes of this table patients discharged under Section 49 (3) and Voluntarily Left have been classified under these headings.

TABLE LXXV.

FORMS OF MENTAL DISORDERS IN PATIENTS ADMITTED DURING THE TWELVE MONTHS ENDED 30TH JUNE, 1957.

—	Brisbane Mental Hospital.			Toowoomba Mental Hospital.			Ipswich Mental Hospital.			Charters Towers Mental Hospital.	Totals.		
	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Males.	Females.	Totals.
1. AFFECTIVE REACTION TYPES—													
(a) Manic Depressive Psychosis	22	67	89	..	1	1	1	..	1	..	23	68	91
(b) Mania	3	2	5	7	7	14	..	..	..	1	11	9	20
(c) Depression	4	4	8	7	20	27	..	..	..	1	12	24	36
Reactive Depression ..	12	3	15	2	3	5	..	..	..	..	14	6	20
Recurrent Depression ..	4	5	9	..	7	7	..	..	..	..	4	12	16
Hypomania	2	1	3	..	2	2	..	..	..	..	2	3	5
(d) Involution Depression ..	7	17	24	..	2	2	..	..	..	1	8	19	27
Cyclothymic Personality	..	..	..	2	..	2	..	..	..	..	2	..	2
2. SCHIZOPHRENIC REACTION TYPES—													
(a) Schizoid Personality ..	..	..	..	3	..	3	4	..	4	..	7	..	7
Schizophrenia	160	164	324	16	9	25	..	..	..	9	185	173	358
(b) Paraphrenia	13	19	32	3	1	4	..	..	..	..	16	20	36
Catatonia	..	..	..	..	1	1	..	..	..	..	..	1	1
(c) Paranoid Reaction ..	2	1	3	1	5	6	..	..	..	2	5	6	11
3. ORGANIC REACTION TYPES—													
(a) Organic Dementia ..	3	3	6	..	..	..	..	..	..	..	3	3	6
Organic Psychosis ..	7	8	15	..	1	1	..	..	..	..	7	9	16
Hydrocephalus	..	..	..	..	..	..	1	1	2	..	1	1	2
Huntingtons Chorea ..	..	..	..	..	..	..	..	..	..	1	1	..	1
Kernicterus	..	..	..	..	..	..	..	..	..	..	..	..	..
Cerebral Tumour	..	..	..	..	..	..	..	..	..	..	..	..	..
(b) Toxins—													
Acute Toxic Psychosis ..	..	..	..	1	..	1	..	..	..	..	1	..	1
Acute Alcoholism	2	..	2	2	..	2	..	..	..	1	5	..	5
Alcoholic Hallucinosis ..	6	..	6	7	..	7	..	..	..	8	21	..	21
Alcoholic Psychosis ..	1	..	1	..	1	1	1	..	1	1	3	1	4
Alcoholic Psychosis (Korsakov's) ..	6	1	7	1	..	1	2	..	2	3	12	1	13
Cerebral Syphillis	..	..	..	..	..	..	..	..	..	..	..	..	..
Congenital Syphillis ..	..	..	..	..	..	..	1	..	1	..	1	..	1
Acute Confusional Psychosis	2	1	3	..	..	..	..	..	..	..	2	1	3
(c) Arteriosclerotic Dementia	20	13	33	1	2	3	..	..	..	..	21	15	36
Arteriosclerotic Psychosis..	5	9	14	1	1	2	..	..	..	1	7	10	17
Presenile Dementia ..	4	..	4	..	..	..	..	..	..	..	4	..	4
Presenile Psychosis ..	..	8	8	1	..	1	..	..	..	..	1	8	9
Senile Dementia	85	110	195	7	5	12	..	..	..	5	97	115	212
Senile Psychosis	8	21	29	..	2	2	..	..	..	..	8	23	31
4. EPILEPTIC REACTION TYPES—													
Epileptic Psychosis ..	6	9	15	3	7	10	..	..	..	1	10	16	26
Epilepsy	4	3	7	..	..	..	..	..	..	..	4	3	7
5. PSYCHONEUROTIC REACTION TYPES—													
Psychoneurosis	7	21	28	..	1	1	..	..	..	..	7	22	29
Anxiety State	16	12	28	1	9	10	..	..	..	..	17	21	38
Hysteria	1	..	1	5	12	17	..	..	..	..	6	12	18
Obsessive	2	1	3	..	..	..	..	..	..	..	2	1	3
Neurasthenia	..	..	..	..	..	..	..	..	..	..	..	..	..
6. MENTAL DEFICENCY—													
(a) Mental Deficiency ..	14	18	32	..	..	..	..	..	..	1	15	18	33
With Epilepsy	7	1	8	5	2	7	2	7	9	1	15	10	25
Moron	..	..	..	..	..	..	1	..	1	..	1	..	1
Mongol	1	1	2	2	1	3	12	9	21	..	15	11	26
With Schizophrenia ..	5	8	13	..	..	..	..	..	..	..	5	8	13
(b) Idiocy	..	..	..	..	3	3	9	6	15	..	9	9	18
(c) Posteneephalitic Idiocy ..	..	..	..	..	1	1	3	2	5	..	3	3	6
(d) Microcephalic Idiocy ..	..	..	..	..	..	..	1	3	4	..	1	3	4
(e) Imbecility..	..	..	..	4	4	8	12	..	12	1	17	4	21
7. ADDICTION—													
Chronic Alcoholism ..	26	15	41	15	4	19	..	..	..	14	55	19	74
Drug	..	..	..	..	..	..	..	..	..	..	..	..	..
8. PSYCHOPATHIC PERSONALITY	12	7	19	1	1	2	2	..	2	..	15	8	23
9. TRAUMATIC PSYCHOSIS ..	1	..	1	..	..	..	..	..	..	2	3	..	3
10. Undiagnosed—	1	..	1	..	..	..	..	..	..	..	1	..	1
Totals	481	553	1,034	98	115	213	52	28	80	54	685	696	1,381

TABLE LXXVI.

CAUSES OF DEATHS WHICH OCCURRED DURING PERIOD ENDED 30TH JUNE, 1957.

—	Brisbane Mental Hospital.			Toowoomba Mental Hospital.			Ipswich Mental Hospital.			Charters Towers Mental Hospital.	Totals.		
	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Males.	Females.	Totals.
GENERAL DISEASES—													
Septicaemia	2	..	2	..	..	..	..	..	..	..	2	..	2
Marasmus	..	..	..	..	..	..	..	1	1	..	..	1	1
Toxaemia	..	..	..	..	1	1	..	..	..	..	..	1	1
Carcinoma of Tongue	2	..	2	..	..	..	..	..	..	..	2	..	2
Cirrhosis of Liver	1	..	1	..	..	..	..	..	..	..	1	..	1
Diabetites Mellitus	3	..	3	..	..	..	..	..	..	..	3	..	3
Chronic Lymphatic Leukaemia	1	..	1	..	..	..	..	..	..	..	1	..	1
Malignant Melanoma	1	..	1	..	..	..	..	..	..	..	1	..	1
Manic Depressive Psychosis	1	..	1	..	..	..	..	..	..	..	1	..	1
Chronic Interstital Pneumonia	1	..	1	..	..	..	..	..	..	..	1	..	1
DISEASES OF THE NERVOUS SYSTEM—													
Cerebral Degeneration	7	10	17	4	4	8	4	..	4	..	15	14	29
Cerebral Thrombosis	7	9	16	1	3	4	..	..	..	..	8	12	20
Cerebral Haemorrhage	5	1	6	4	..	4	..	..	..	1	10	1	11
Cerebral Arteriosclerosis	5	1	6	..	..	..	1	..	1	1	7	1	8
Dementia Paralytica	1	..	1	..	..	..	..	..	..	..	1	..	1
Hydrocephalus	..	..	..	..	..	..	2	..	2	..	2	..	2
Status Epilepticus	..	1	1	1	..	1	2	2	4	..	3	3	6
Huntington's Chorea	..	..	..	..	1	1	..	..	..	..	..	1	1
DISEASES OF THE CIRCULATORY SYSTEM—													
Cardio Vascular Degeneration	57	66	123	..	12	12	..	..	..	..	57	78	135
Coronary Occlusion	12	8	20	8	4	12	2	..	2	..	22	12	34
Acute Myocarditis	..	1	1	..	..	..	..	..	..	..	..	1	1
Myocardial Degeneration	15	7	22	13	6	19	2	1	3	..	30	14	44
Coronary Thrombosis	..	2	2	..	..	..	..	..	..	..	..	2	2
Myocardial Infarction	..	2	2	..	..	..	..	..	..	..	..	2	2
Auricular Fibrillation	..	..	..	..	..	..	2	1	3	..	2	1	3
Aortic Thrombosis	..	1	1	..	..	..	..	..	..	..	..	1	1
Congestive Cardiac Failure	15	9	24	2	..	2	4	..	4	..	21	9	30
Left Ventricular Failure	..	..	..	..	3	3	..	..	..	..	..	3	3
DISEASES OF THE RESPIRATORY SYSTEM—													
Broncho Pneumonia	7	35	42	7	5	12	10	3	13	..	24	43	67
Lobar Pneumonia	1	..	1	2	2	4	2	1	3	1	6	3	9
Basal Pneumonia	..	1	1	..	..	..	..	..	..	..	..	1	1
Terminal Pneumonia	..	7	7	..	..	..	..	..	..	..	..	7	7
Pneumonia	2	7	9	..	..	..	..	..	..	..	2	7	9
Cardiac Asthma	1	..	1	..	..	..	..	..	..	..	1	..	1
Pulmonary Tuberculosis	3	1	4	..	..	..	..	..	..	..	3	1	4
Carcinoma of Lung	..	..	..	1	..	1	..	..	..	..	1	..	1
Lung Abscess	..	..	..	..	1	1	..	..	..	..	..	1	1
Empysema	1	..	1	..	..	..	..	..	..	..	1	..	1
DISEASES OF THE ALIMENTARY SYSTEM—													
Gastro Enteritis	..	..	..	..	..	..	..	2	2	..	..	2	2
Peritonitis	..	..	..	1	..	1	..	..	..	..	1	..	1
Carcinoma of Caecum	..	1	1	..	..	..	..	..	..	..	..	1	1
Chronic Enterocolitis	..	1	1	..	..	..	..	..	..	..	..	1	1
Acute Enterocolitis	..	..	..	..	2	2	..	..	..	..	..	2	2
Gastrointestinal Haemorrhage	..	..	..	..	1	1	..	..	..	..	..	1	1
Carcinoma of Bladder	3	..	3	..	..	..	..	..	..	..	3	..	3
DISEASES OF THE GENITO-URINARY SYSTEM—													
Uraemia due to Chronic Nephritis	..	..	..	..	1	1	..	..	..	..	..	1	1
Chronic Nephritis	..	1	1	..	1	1	..	..	..	..	..	2	2
Carcinoma of Cervix Uteri	..	1	1	..	..	..	..	..	..	..	..	1	1
Granulosa-cell Tumor of Ovary	..	1	1	..	..	..	..	..	..	..	..	1	1
Totals	154	174	328	44	47	91	31	11	42	3	232	232	464

TABLE LXXVII.

BODILY HEALTH AND CONDITION OF PATIENTS ADMITTED DURING THE YEAR ENDED 30TH JUNE, 1957.

—	Brisbane Mental Hospital.			Toowoomba Mental Hospital.			Ipswich Mental Hospital.			Charters Towers Mental Hospital.	Totals.		
	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Males.	Females.	Totals.
In apparently good health and condition	214	218	432	64	73	137	35	16	51	38	351	307	658
In indifferent health and reduced condition	180	240	420	23	25	48	8	9	17	11	222	274	496
In bad health and exhausted condition	87	95	182	11	17	28	9	3	12	5	112	115	227
Totals	481	553	1,034	98	115	213	52	28	80	54	685	696	1,381

TABLE LXXVIII.

BIRTH PLACES OF PATIENTS ADMITTED DURING PERIOD ENDED 30TH JUNE, 1957.

—	Brisbane Mental Hospital.			Toowoomba Mental Hospital.			Ipswich Mental Hospital.			Charters Towers Mental Hospital.	Totals.		
	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Males.	Females.	Totals.
Queensland	262	369	631	58	76	134	36	20	56	29	385	465	850
New South Wales	59	41	100	17	11	28	1	..	1	8	85	52	137
Victoria	23	20	43	4	6	10	1	1	2	3	31	27	58
South Australia	3	5	8	..	..	..	..	..	..	..	3	5	8
Western Australia	2	9	11	..	..	..	..	..	..	1	3	9	12
Northern Territory	..	..	..	..	..	..	..	..	..	..	..	..	..
Tasmania	3	2	5	..	..	..	..	..	..	..	3	2	5
New Zealand	3	1	4	2	1	3	..	..	..	..	5	2	7
England	35	31	66	5	5	10	1	..	1	..	41	36	77
Scotland	20	22	42	..	1	1	..	..	..	2	22	23	45
Ireland	11	6	17	2	1	3	1	..	1	4	18	7	25
Wales	..	3	3	..	..	..	..	..	..	..	..	3	3
India	1	1	2	..	..	..	..	..	..	..	1	1	2
Norway	1	1	2	..	..	..	..	..	..	..	1	1	2
Latvia	..	2	2	..	..	..	1	..	1	..	1	2	3
China	1	..	1	..	3	3	..	..	..	..	1	3	4
Denmark	..	1	1	..	..	..	..	..	..	..	..	1	1
Finland	1	..	1	..	..	..	..	..	..	..	1	..	1
Lithuania	2	..	2	..	..	..	1	..	1	..	3	..	3
Germany	7	5	12	1	1	2	..	..	..	..	8	6	14
Sweden	..	..	..	..	..	..	..	..	..	1	1	..	1
Italy	4	1	5	..	1	1	..	..	..	3	7	2	9
Holland	3	..	3	..	..	..	..	..	..	..	3	..	3
Poland	3	4	7	..	..	..	1	..	1	..	4	4	8
Sicily	..	..	..	..	..	..	..	..	..	..	..	..	..
Russia	2	2	4	..	..	..	..	..	..	..	2	2	4
Hungary	2	..	2	..	..	..	..	..	..	..	2	..	2
Czechoslovakia	4	1	5	..	..	..	..	..	..	..	4	1	5
United States of America	2	..	2	..	..	..	1	..	1	1	4	..	4
Cyprus	..	..	..	..	..	..	..	..	..	..	..	..	..
Estonia	1	..	1	..	..	..	..	..	..	..	1	..	1
British Columbia	..	..	..	..	..	..	..	..	..	..	..	..	..
Spain	..	..	..	..	..	..	..	..	..	..	..	..	..
Isle of Guernsey	..	..	..	..	..	..	..	..	..	..	..	..	..
South Africa	2	..	2	..	..	..	..	..	..	2	4	..	4
Greece	3	1	4	..	..	..	..	..	..	..	3	1	4
Ukraine	1	1	2	..	..	..	..	..	..	..	1	1	2
France	..	2	2	..	..	..	..	..	..	..	..	2	2
Manchuria	..	..	..	..	..	..	..	..	..	..	..	..	..
Austria	1	..	1	1	..	1	..	..	..	..	2	..	2
Java	..	..	..	..	2	2	..	..	..	..	..	2	2
Ceylon	..	..	..	..	..	..	..	..	..	..	..	..	..
Thursday Island	1	..	1	..	..	..	..	..	..	..	1	..	1
Yugoslavia	4	1	5	..	..	..	..	..	..	..	4	1	5
Malta	2	1	3	..	..	..	..	..	..	..	2	1	3
Bulgaria	1	..	1	..	..	..	..	..	..	..	1	..	1
Switzerland	1	1	2	..	..	..	..	..	..	..	1	1	2
Egypt	..	1	1	..	..	..	..	..	..	..	..	1	1
Mexico	..	1	1	..	..	..	..	..	..	..	..	1	1
Canada	..	1	1	..	..	..	..	..	..	..	..	1	1
Unknown	10	16	26	8	7	15	8	7	15	..	26	30	56
Totals	481	553	1,034	98	115	213	52	28	80	54	685	696	1,381

TABLE LXXIX.

DISTRICTS WHENCE PATIENTS WERE RECEIVED DURING THE YEAR ENDED 30TH JUNE, 1957.

—	Brisbane Mental Hospital.			Toowoomba Mental Hospital.			Ipswich Mental Hospital.			Charters Towers Mental Hospital.	Totals.		
	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Males.	Females.	Totals.
Northern and North-Western	47	22	69	..	..	..	1	2	3	52	100	24	124
Central	34	25	59	1		1	2	2	4	2	39	27	66
Southern and South-Western	400	506	906	97	115	212	49	24	73	..	546	645	1,191
Totals	481	553	1,034	98	115	213	52	28	80	54	685	696	1,381

TABLE LXXX.

AGE GROUPS OF PATIENTS WHOSE ADMISSIONS, DISCHARGES, OR DEATHS OCCURRED DURING THE YEAR, AND THOSE WHO REMAINED IN THE HOSPITAL ON 30TH JUNE, 1956.

Age Group.	Admissions.			* Discharges.						Deaths.			Remaining.		
				Recovered.			Relieved and not Improved.								
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
BRISBANE MENTAL HOSPITAL.															
Under 5 years	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
5 years and under 10 years	..	..	..	..	..	..	..	..	..	..	..	..	12	..	12
10 years and under 15 years	4	3	7	1	2	3	3	..	3	..	..	..	23	3	26
15 years and under 20 years	27	17	44	9	4	13	5	5	10	..	..	..	49	18	67
20 years and under 30 years	67	56	123	36	30	66	15	6	21	..	..	..	145	90	235
30 years and under 40 years	102	113	215	48	73	121	23	19	42	2	6	8	274	238	512
40 years and under 50 years	74	84	158	36	49	85	20	17	37	5	4	9	280	254	534
50 years and under 60 years	56	88	144	21	41	62	13	16	29	11	11	22	262	269	531
60 years and under 70 years	49	65	114	14	35	49	27	6	33	37	35	72	197	185	382
70 years and under 80 years	54	65	119	4	12	16	26	2	28	47	64	111	98	106	204
80 years and under 90 years	40	58	98	2	2	4	13	7	20	45	51	96	28	59	87
90 years and over	8	3	11	1	..	1	4	..	4	7	3	10	3	5	8
Unknown	..	1	1	..	..	..	..	..	..	..	..	..	2	11	13
Totals, Brisbane Mental Hospital	**481**	**553**	**1,034**	**172**	**248**	**420**	**149**	**78**	**227**	**154**	**174**	**328**	**1,374**	**1,238**	**2,612**
TOOWOOMBA MENTAL HOSPITAL.															
Under 5 years	..	1	1	..	..	..	..	..	..	..	1	1	2	3	5
5 years and under 10 years	4	3	7	..	..	..	1	..	1	..	..	..	6	3	9
10 years and under 15 years	5	6	11	..	..	..	3	1	4	..	..	..	11	11	22
15 years and under 20 years	4	3	7	4	..	4	1	..	1	1	..	1	12	14	26
20 years and under 30 years	15	20	35	10	9	19	4	3	7	1	1	2	46	41	87
30 years and under 40 years	15	17	32	8	12	20	6	1	7	..	1	1	67	55	122
40 years and under 50 years	19	17	36	11	6	17	5	8	13	4	2	6	127	118	245
50 years and under 60 years	18	15	33	7	10	17	9	9	18	2	6	8	128	161	289
60 years and under 70 years	7	14	21	2	7	9	4	44	48	13	10	23	115	139	254
70 years and under 80 years	4	16	20	..	3	3	4	50	54	14	16	30	74	65	139
80 years and under 90 years	5	3	8	..	..	..	1	25	26	5	8	13	29	11	40
90 years and over	1	..	1	..	..	..	1	..	1	4	2	6	1	..	1
Unknown	1	..	1	..	..	..	..	1	1	..	..	..	7	6	13
Totals, Toowoomba Mental Hospital	**98**	**115**	**213**	**42**	**47**	**89**	**39**	**142**	**181**	**44**	**47**	**91**	**625**	**627**	**1,252**
IPSWICH MENTAL HOSPITAL.															
Under 5 years	24	20	44	..	1	1	7	9	16	10	6	16	25	20	45
5 years and under 10 years	12	5	17	..	..	..	2	4	6	2	..	2	32	35	67
10 years and under 15 years	5	1	6	..	..	..	1	2	3	3	1	4	23	23	46
15 years and under 20 years	1	2	3	..	..	..	..	..	..	1	1	2	28	21	49
20 years and under 30 years	2	..	2	2	..	2	..	..	..	1	..	1	19	24	43
30 years and under 40 years	4	..	4	3	..	3	..	1	1	..	..	..	28	14	42
40 years and under 50 years	2	..	2	1	..	1	..	..	..	..	1	1	49	17	66
50 years and under 60 years	2	..	2	..	..	..	..	..	..	2	1	3	62	28	90
60 years and under 70 years	..	..	..	..	..	..	..	..	..	4	..	4	77	17	94
70 years and under 80 years	..	..	..	..	..	..	..	..	..	3	..	3	37	8	45
80 years and under 90 years	..	..	..	..	..	..	..	..	..	5	..	5	7	3	10
90 years and over	..	..	..	..	..	..	..	..	..	..	1	1	1	..	1
Unknown	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals, Ipswich Mental Hospital	**52**	**28**	**80**	**6**	**1**	**7**	**10**	**16**	**26**	**31**	**11**	**42**	**388**	**210**	**598**
CHARTERS TOWERS MENTAL HOSPITAL.															
Under 5 years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5 years and under 10 years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10 years and under 15 years	1	..	1	..	..	..	..	..	..	..	..	..	1	..	1
15 years and under 20 years	1	..	1	1	..	1	..	..	..	..	..	..	3	..	3
20 years and under 30 years	12	..	12	7	..	7	1	..	1	..	..	..	10	..	10
30 years and under 40 years	14	..	14	6	..	6	1	..	1	..	..	..	17	..	17
40 years and under 50 years	13	..	13	11	..	11	1	..	1	..	..	..	15	..	15
50 years and under 60 years	4	..	4	6	..	6	1	..	1	..	..	..	8	..	8
60 years and under 70 years	3	..	3	3	..	3	..	..	..	..	..	..	18	..	18
70 years and under 80 years	5	..	5	1	..	1	..	..	..	1	..	1	9	..	9
80 years and under 90 years	1	..	1	..	..	..	..	..	..	2	..	2	2	..	2
90 years and over	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Unknown	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals, Charters Towers Mental Hospital	**54**	..	**54**	**35**	..	**35**	**4**	..	..	**3**	..	**3**	**83**	..	**83**
Grand Totals, All Hospitals	**685**	**696**	**1,381**	**255**	**296**	**551**	**202**	**236**	**438**	**232**	**232**	**464**	**2,470**	**2,075**	**4,545**

*For the purposes of this table patients discharged under Section 49 (3) and Voluntarily Left have been classified under these headings.

TABLE LXXXI.

GENERAL CLASSIFICATION OF OCCUPATIONS OF PATIENTS ADMITTED DURING THE YEAR ENDED 30TH JUNE, 1957.

Occupations.	Brisbane Mental Hospital.			Toowoomba Mental Hospital.			Ipswich Mental Hospital.			Charters Towers Mental Hospital.	Totals.		
	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Males.	Females.	Totals.
Rural Industries ..	59	1	60	19	..	19	1	..	1	7	86	1	87
Secondary Industries, Trades, &c.—													
Building Construction ..	32	..	32	6	..	6	2	..	2	2	42	..	42
Machinery and Electrical ..	38	..	38	7	..	7	1	..	1	7	53	..	53
Foodstuffs, Meat, &c.	24	9	33	1	..	1	..	..	..	3	28	9	37
Clothing, Retail, &c.	8	23	31	..	..	..	..	..	..	..	8	23	31
Mining	1	..	1	..	..	..	..	..	..	..	1	..	1
Transport	29	..	29	6	..	6	..	..	..	..	35	..	35
Clerical	17	26	43	5	5	10	..	..	..	6	28	31	59
Domestic Employment	..	345	345	..	74	74	..	..	..	..	..	419	419
Private Employment	9	..	9	..	..	..	..	..	..	2	11	..	11
Miscellaneous Employment ..	113	19	132	31	2	33	7	..	7	23	174	21	195
No Occupation, and Pensioners ..	134	112	246	23	31	54	..	..	..	2	159	143	302
Professions	12	12	24	..	3	3	..	..	..	1	13	15	28
Children	5	6	11	..	..	..	41	28	69	1	47	34	81
Totals ..	481	553	1,034	98	115	213	52	28	80	54	685	696	1,381

TABLE LXXXII.

MARITAL STATUS OF PATIENTS WHOSE ADMISSIONS, DISCHARGES AND DEATHS OCCURRED DURING THE YEAR AND OF PATIENTS WHO REMAINED IN HOSPITAL ON 30TH JUNE, 1957.

Marital Status.	Admissions.			*Discharges.						Deaths.			Remaining.		
				Recovered.			Relieved and not Improved.								
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
BRISBANE MENTAL HOSPITAL.															
Single	236	144	380	100	57	157	80	22	102	49	47	96	1,019	547	1,566
Married	193	274	467	61	152	213	53	44	97	66	56	122	280	482	762
Widowed	44	127	171	7	32	39	15	12	27	38	71	109	46	173	219
Divorced	6	8	14	3	7	10	1	..	1	1	..	1	10	19	29
Child	..	..	..	1	..	1	..	..	..	..	..	..	5	..	5
Unknown	2	..	2	..	..	..	..	..	..	..	..	..	14	17	31
Totals, Brisbane Mental Hospital	**481**	**553**	**1034**	**172**	**248**	**420**	**149**	**78**	**227**	**154**	**174**	**328**	**1,374**	**1,238**	**2,612**
TOOWOOMBA MENTAL HOSPITAL.															
Single	56	40	96	20	10	30	23	52	75	27	16	43	536	252	788
Married	32	51	83	18	31	49	13	42	55	12	12	24	59	314	373
Widowed	8	24	32	4	6	10	2	46	48	4	19	23	10	41	51
Divorced	1	..	1	..	..	..	1	2	3	..	..	..	5	14	19
Unknown	1	..	1	..	..	..	..	..	..	1	..	1	15	6	21
Totals, Toowoomba Mental Hospital	**98**	**115**	**213**	**42**	**47**	**89**	**39**	**142**	**181**	**44**	**47**	**91**	**625**	**627**	**1,252**
IPSWICH MENTAL HOSPITAL.															
Single	51	28	79	6	1	7	10	16	26	24	8	32	323	168	491
Married	..	..	..	..	..	..	..	..	..	7	1	8	45	27	72
Widowed	1	..	1	..	..	..	..	..	..	..	2	2	7	5	12
Divorced	..	..	..	..	..	..	..	..	..	..	..	..	3	9	12
Unknown	..	..	..	..	..	..	..	..	..	..	..	..	10	1	11
Totals, Ipswich Mental Hospital	**52**	**28**	**80**	**6**	**1**	**7**	**10**	**16**	**26**	**31**	**11**	**42**	**388**	**210**	**598**
CHARTERS TOWERS MENTAL HOSPITAL.															
Single	32	..	32	20	..	20	2	..	2	..	..	..	59	..	59
Married	21	..	21	15	..	15	1	..	1	2	..	2	18	..	18
Widowed	1	..	1	..	..	..	1	..	1	1	..	1	6	..	6
Divorced	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Unknown	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals, Charters Towers Mental Hospital ..	**54**	..	**54**	**35**	..	**35**	**4**	..	**4**	**3**	..	**3**	**83**	..	**83**
Grand Totals, all Hospitals ..	**685**	**696**	**1,381**	**255**	**296**	**551**	**202**	**236**	**438**	**232**	**232**	**464**	**2,470**	**2,075**	**4,545**

* For the purposes of this table patients discharged under Section 49 (3) and Voluntarily Left have been classified under these headings.

TABLE LXXXIII.

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, 1957.

—	*Discharges.						Deaths.			Remaining.		
	Recovered.			Relieved and not Improved.								
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
BRISBANE MENTAL HOSPITAL.												
Under 1 month	17	13	30	28	17	45	46	22	68	36	43	79
1 month and under 3 months	69	81	153	23	21	44	25	32	57	52	50	102
3 months and under 6 months	41	65	106	19	18	37	13	18	31	64	96	160
6 months and under 9 months	15	23	38	12	3	15	9	11	20	52	77	129
9 months and under 12 months	11	12	23	8	4	12	11	12	23	50	45	95
1 year and under 2 years	10	16	26	18	2	20	10	24	34	135	103	238
2 years and under 3 years	2	8	10	7	2	9	4	11	15	85	75	160
3 years and under 5 years	2	12	14	11	4	15	12	21	33	177	125	302
5 years and under 7 years	4	4	8	7	4	11	6	8	14	107	101	208
7 years and under 10 years	..	5	5	4	1	5	3	4	7	128	127	255
10 years and under 12 years	1	..	1	2	..	2	2	2	4	61	68	129
12 years and under 15 years	..	3	3	3	2	5	2	2	4	83	86	169
15 years and under 20 years	..	3	3	2	..	2	3	5	8	119	106	225
20 years and over	..	..	..	5	..	5	8	2	10	225	136	361
Totals, Brisbane Mental Hospital	**172**	**248**	**420**	**149**	**78**	**227**	**154**	**174**	**328**	**1,374**	**1,238**	**2,612**
TOOWOOMBA MENTAL HOSPITAL.												
Under 1 month	11	7	18	17	74	91	4	1	5	6	7	13
1 month and under 3 months	15	17	32	5	12	17	5	6	11	9	15	24
3 months and under 6 months	4	15	19	3	3	6	..	8	8	9	17	26
6 months and under 9 months	6	2	8	4	2	6	..	..	..	8	11	19
9 months and under 12 months	2	3	5	2	5	7	..	2	2	4	8	12
1 year and under 2 years	4	1	5	..	5	5	2	4	6	28	26	54
2 years and under 3 years	..	1	1	1	2	3	2	..	2	15	12	27
3 years and under 5 years	..	1	1	..	2	2	4	7	11	47	33	80
5 years and under 7 years	..	..	..	..	4	4	4	1	5	24	38	62
7 years and under 10 years	..	..	..	..	6	6	3	3	6	57	53	110
10 years and under 12 years	..	..	..	..	..	..	3	2	5	38	33	71
12 years and under 15 years	..	..	..	..	..	..	3	2	5	38	34	72
15 years and under 20 years	..	..	..	1	3	4	2	1	3	85	81	166
20 years and over	..	..	..	6	24	30	12	10	22	257	259	516
Totals, Toowoomba Mental Hospital	**42**	**47**	**89**	**39**	**142**	**181**	**44**	**47**	**91**	**625**	**627**	**1,252**
IPSWICH MENTAL HOSPITAL.												
Under 1 month	..	..	..	..	1	1	3	..	3	..	..	..
1 month and under 3 months	..	..	..	4	3	7	1	4	5	6	3	9
3 months and under 6 months	1	1	2	3	3	6	2	..	2	13	4	17
6 months and under 9 months	1	..	1	..	2	2	2	..	2	7	3	10
9 months and under 12 months	..	..	..	2	2	4	2	..	2	10	2	12
1 year and under 2 years	2	..	2	1	3	4	4	1	5	14	16	30
2 years and under 3 years	..	..	..	..	1	1	..	1	1	35	14	49
3 years and under 5 years	1	..	1	..	..	..	7	2	9	49	25	74
5 years and under 7 years	..	..	..	..	..	..	1	..	1	28	22	50
7 years and under 10 years	1	..	1	..	..	..	2	..	2	22	25	47
10 years and under 12 years	..	..	..	..	..	..	2	2	4	24	10	34
12 years and under 15 years	..	..	..	..	..	..	..	1	1	44	34	78
15 years and under 20 years	..	..	..	..	..	..	1	..	1	47	22	69
20 years and over	..	..	..	..	1	1	4	..	4	89	30	119
Totals, Ipswich Mental Hospital	**6**	**1**	**7**	**10**	**16**	**26**	**31**	**11**	**42**	**388**	**210**	**598**
CHARTERS TOWERS MENTAL HOSPITAL.												
Under 1 month	2	..	2	2	..	2	..	..	..	5	..	5
1 month and under 3 months	20	..	20	..	..	..	2	..	2	7	..	7
3 months and under 6 months	6	..	6	..	..	..	..	..	..	6	..	6
6 months and under 9 months	3	..	3	..	..	..	..	..	..	2	..	2
9 months and under 12 months	..	..	..	..	..	..	1	..	1	2	..	2
1 year and under 2 years	2	..	2	..	..	..	..	..	..	15	..	15
2 years and under 3 years	2	..	2	..	..	..	..	..	..	12	..	12
3 years and under 5 years	..	..	..	1	..	1	..	..	..	10	..	10
5 years and under 7 years	..	..	..	1	..	1	..	..	..	5	..	5
7 years and under 10 years	..	..	..	..	..	..	..	..	..	8	..	8
10 years and under 12 years	..	..	..	..	..	..	..	..	..	..	..	..
12 years and under 15 years	..	..	..	..	..	..	..	..	..	6	..	6
15 years and under 20 years	..	..	..	..	..	..	..	..	..	1	..	1
20 years and over	..	..	..	..	..	..	..	..	..	4	..	4
Totals, Charters Towers Mental Hospital	**35**	**..**	**35**	**4**	**..**	**4**	**3**	**..**	**3**	**83**	**..**	**83**
Grand Totals, all Hospitals	**255**	**296**	**551**	**202**	**236**	**438**	**232**	**232**	**464**	**2,470**	**2,075**	**4,545**

* For the purposes of this table patients discharged under Section 49 (3) and Voluntarily Left have been classified under these headings.

TABLE LXXXIV.

EXPENDITURE TABLE FOR THE TWELVE MONTHS ENDED 30TH JUNE, 1957.

—	Brisbane Mental Hospital.	Toowoomba Mental Hospital.	Ipswich Mental Hospital.	Charters Towers Mental Hospital.	Total and Average Costs.
Average Number Daily Resident.	2,498	1,216	615	75	4,404
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Total expenditure	1,026,810 11 10	417,110 14 5	350,966 1 9	59,768 8 3	1,854,655 16 3
Sales	8,016 9 2	2,732 15 10	2,310 15 5	363 11 5	13,423 11 10
Collections	60,401 15 7	3,067 16 9	2,228 7 1	483 17 6	66,181 16 11
Net Expenditure	958,392 7 1	411,310 1 10	346,426 19 3	58,920 19 4	1,775,050 7 6
					Average Costs.
Gross cost per Patient per annum	411 1 0	343 0 4	570 13 6	796 18 3	421 2 7
Net cost per Patient per annum	383 13 3	338 4 11	563 5 11	785 12 3	403 1 1
Gross cost per Patient per week	7 18 1	6 11 11	10 19 6	15 6 6	8 2 0
Net cost per Patient per week	7 7 6	6 10 1	10 16 8	15 2 1	7 15 0

TABLE LXXXV.

STATEMENT SHOWING EXPENDITURE BY THE DEPARTMENT OF PUBLIC WORKS AT MENTAL HOSPITALS AND AT THE EPILEPTIC HOME DURING THE FINANCIAL YEAR ENDED 30TH JUNE, 1957.

Place.	Expenditure, 1956–57.		
	Revenue.	Loan.	Total.
Mental Hospitals—	£ s. d.	£ s. d.	£ s. d.
Brisbane (Excluding Expenditure at the Repatriation Hospital)	7,588 13 8	89,406 12 5	96,995 6 1
Charters Towers	..	73,979 18 9	73,979 18 9
Ipswich	2,446 8 5	66,901 11 0	69,347 19 5
*Rockhampton	13 15 7	4,858 15 0	4,872 10 7
Toowoomba	403 14 6	9,425 3 4	9,828 17 10
Epileptic Home—Toowoomba	408 6 8	840 4 3	1,248 10 11
	£10,860 18 10	£245,412 4 9	£256,273 3 7

* Site only.

DETAILS OF EXPENDITURE ON MAJOR WORKS—MENTAL HOSPITALS.

		Expenditure. 1956–57.
		£ s. d.
Brisbane	Erection of Ward " B "—Farm Colony ..	42,096 15 8
	Erection of Visitors' Pavilion—Male Ward ..	10,009 19 7
	Augmentation of Water Supply	9,863 3 6
	Supply and Delivery of Pumping Plant ..	5,895 0 0
	Concrete Paving Yards, and Fencing Female Wards 1 and 2	2,816 11 3
	Provision of Elevated Tank to Farm Colony ..	2,808 9 0
Charters Towers	Male Admission Ward	52,193 9 10
	Installation of Sewerage	10,435 10 4
	Supply and Erection of Steel Tank	6,489 18 6
	Water Supply	4,460 6 3
Ipswich	Erection of New Ward for Females	45,480 19 8
	Erection of Shelter Shed—Male Ward 1 ..	7,798 17 1
	Erection of Shelter Shed—Male Ward 3 ..	4,980 17 2
Toowoomba	Erection of additions to Sculleries of various Wards	5,092 10 9
	Fire Escapes to Wards	2,582 7 3
	Drainage to Laundry	1,470 12 0

TABLE LXXXVI.

POPULATION CHANGES AT EPILEPTIC HOME DURING THE YEAR 1956-57.

PATIENTS AT 30TH JUNE, 1956: MALES 54; FEMALES 64; TOTAL 118.
FOR YEAR ENDED 30TH JUNE, 1957.

Age.	Admitted.		Discharged.		To Ment. Hosp.		Deaths.		Remaining.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Under 5 years	..	..	..	..	..	..	..	..	..	..	..
5—10 years	..	..	..	..	..	..	..	..	..	1	1
10—15 years	1	1	1	..	1	..	..	..	6	3	9
15—20 years	1	2	4	..	1	..	..	..	8	8	16
20—25 years	..	..	..	..	..	2	..	..	5	6	11
25—30 years	..	1	..	..	..	..	..	..	6	6	12
30—35 years	1	..	..	..	..	..	..	..	7	8	15
35—40 years	..	..	..	1	..	..	1	..	2	4	6
40—45 years	..	1	..	1	..	..	..	..	2	9	11
45—50 years	..	1	..	..	..	1	..	..	5	5	10
50—55 years	..	1	..	..	..	..	..	..	4	5	9
55—60 years	..	..	..	..	..	1	..	1	..	4	4
60—65 years	..	..	..	..	..	..	1	..	1	1	2
Over 65 years	..	..	..	..	..	..	..	..	2	4	6
Totals	3	7	5	2	2	4	2	1	48	64	112

PATIENTS RESIDENT—

Under 5 years	36
5—10 years	30
10—15 years	12
15—20 years	19
Over 20 years	15
	112

CAUSES OF DEATH—

Male aged 38. Carcinoma of Stomach.
Male aged 63. Broncho Pneumonia, Status Epilepticus.
Female aged 60. Carcinoma of Colon.

TABLE LXXXVII.

EXPENDITURE TABLE, EPILEPTIC HOME, FOR THE TWELVE MONTHS ENDED 30TH JUNE, 1957.

Average Number Daily Resident—111.

	£	s.	d.
Gross Expenditure	36,101	17	7
Collections	12,239	0	8
Sales	13	13	11
Net Expenditure	23,849	3	0
Gross cost per patient per annum	325	4	10
Net cost per patient per annum	214	17	1
Gross cost per patient per week	6	5	1
Net cost per patient per week	4	2	7

TABLE LXXXVIII.

YEARLY SUMMARY OF PATIENTS TREATED AT THE PSYCHIATRIC CLINIC, CLASSIFIED IN AGE GROUPS ACCORDING TO DIAGNOSIS, 1956–57.

—	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.	
Schizophrenia	..	..	..	..	2	..	2	5	4	8	1	10	3	9	..	2	..	2	12	36	48
Manic-Depressive	..	..	..	..	..	..	..	..	1	..	1	1	1	4	..	4	2	2	5	11	16
Paranoia and Paranoid States	..	..	..	..	..	..	..	..	1	..	1	..	1	2	..	..	..	..	3	2	5
Organic Psychoses	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	1
Senile Psychoses	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	1
Other Psychoses	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
																			21	50	71
Obsessive-Compulsive	..	..	..	..	..	..	..	..	..	1	2	..	..	..	..	..	..	..	2	1	3
Psychoneuroses	..	..	..	..	4	1	2	6	8	15	12	26	8	12	5	9	2	6	41	75	116
Psychoneurosis with Psychosomatic Symptomatology	..	..	..	..	..	..	..	..	1	1	2	..	..	..	..	..	..	..	3	1	4
																			46	77	123
Alcoholism and Drug Addiction	..	..	..	..	..	..	..	..	..	.	..	..	1	3	..	..	..	..	1	3	4
Inadequate and Immature Personality	..	1	14	2	6	2	4	1	1	4	1	1	..	..	..	..	..	..	26	11	37
Pathological Personality	..	..	1	..	3	4	10	7	13	3	9	..	1	1	..	1	..	..	37	16	53
Organic	..	..	.	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	1	2
Primary Childhood Behaviour Disorders	13	7	33	24	36	19	6	3	..	..	..	..	..	..	..	..	..	..	88	53	141
																			152	81	233
Epilepsy	..	2	..	..	1	2	2	2	..	..	..	3	..	..	..	..	..	..	3	9	12
Physical only	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	1	2	..	2	3	5
Mental Deficiency	11	3	14	7	7	4	6	4	1	1	2	1	..	..	..	..	..	..	41	20	61
Borderline Deficiency	2	1	1	2	1	2	1	..	..	..	..	..	..	..	..	..	..	..	5	5	10
																			46	25	71
Domestic Problems	..	..	..	..	..	..	..	1	1	2	1	5	3	1	..	1	..	..	5	10	15
Stammering	7	1	16	2	10	1	6	3	3	3	1	..	2	..	..	..	..	..	45	10	55
Aphonia	.	.	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	1
Dyslalia and Ret. Sp. Devt.	29	8	18	13	1	..	..	1	..	..	..	..	..	..	..	..	..	..	48	22	70
Cleft Palate	3	2	2	2	..	..	..	1	..	..	1	..	..	..	..	..	1	..	7	5	12
Aphasia	2	1	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	4	1	5
Laryngectomy	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1
Deaf and Partially Deaf	..	..	2	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	3	..	3
Dysphonia	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1
Other	1	..	3	2	..	..	..	..	..	..	..	..	..	..	1	..	..	..	5	2	7
Hyperrhinophonia	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2
Dysarthria	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1
																			117	41	158
N.A.D.	..	..	2	..	1	..	1	1	1	1	2	1	2	1	..	..	..	1	9	5	14
Not yet diagnosed	6	1	..	1	1	3	2	2	2	1	..	..	..	..	1	.	..	.	12	8	20
Grand Total	74	28	109	55	73	39	42	37	38	40	37	48	25	34	8	19	8	12	414	312	726

TABLE LXXXIX.

SOURCES OF REFERRAL OF PATIENTS TO PSYCHIATRIC CLINIC YEAR ENDED 30TH JUNE, 1957.

	Male.	Female.	Total.
Personal	173	134	307
Commonwealth Government Departments	10	5	15
State Government Departments	46	19	65
Medical Practitioners	108	59	167
General and Mental Hospitals, Red Cross, &c.	28	62	90
Others	49	33	82
Grand Total	414	312	726

TABLE XC.

SHOWING ADMISSIONS, DISCHARGES, AND DEATHS AT THE WACOL REPATRIATION PAVILION DURING THE YEAR ENDED 30TH JUNE, 1957.

Total number of patients on books as at 30th June, 1956		103	
Transferred from Brisbane Mental Hospital		42	
Admitted		1	
		146	
Discharged, recovered	16		
Discharged, relieved	1		
Discharged. Not improved	1		
Voluntarily left	6		
Died	1		
Transferred to Brisbane Mental Hospital	11		
Discharged to Mt. Lofty Home for aged	1		
Absconded (Returned via B.M.H.)	1		
		38	
Total number of patients on books as at 30th June, 1957			108
Total number of patients on leave as at 30th June, 1957			8
Total number of patients in residence as at 30th June, 1957			100
Average number of patients daily resident			98·7

DIVISION OF LABORATORY SERVICES.

LABORATORY OF MICRO-BIOLOGY AND PATHOLOGY.

Director: J. I. Tonge, M.B., B.S. (Syd.), D.C.P. (Syd.), M.C.P.A.

Deputy Director: M. J. J. O'Reilly, M.B., B.S. (Syd.), M.C.P.A.

Medical Officer: A. Davison, M.B., B.S. (Qld.), M.C.P.A.

Technical Supervisor: H. E. Brown.

Statistical Summary, 1956-57.

TABLE CIII.

1. Bacteriology.

A. Specimens of Human Origin.

Specimen.	Mode of Examination.	Number.
Swabs—		
Throat ..	Culture	1,307
Nose ..	Direct Smear ..	4
	Antibiotic Sensitivity Tests ..	792

TABLE CIII.—*continued.*

Bacteriology—*continued.*

A. Specimens of Human Origin—continued.

Specimen.	Mode of Examination.	Number.
Urethra ..	Culture	597
Cervix ..	Direct Smear ..	5,900
Bartholin's Gland	Antibiotic Sensitivity Tests ..	132
Anus ..		
Ear ..	Culture	32
	Direct Smear ..	1
	Antibiotic Sensitivity Tests ..	324
Eye	Culture	25
	Antibiotic Sensitivity Tests ..	204
Mouth ..	Culture	6
	Antibiotic Sensitivity Tests ..	60
Lip	Culture	1
	Antibiotic Sensitivity Tests ..	12
Face ..	Culture	2
	Antibiotic Sensitivity Tests ..	12
Neck ..	Culture	1
	Antibiotic Sensitivity Tests ..	12
Foot ..	Culture	2
	Direct Smear ..	1
	Antibiotic Sensitivity Tests	24
Leg ..	Culture	6
	Antibiotic Sensitivity Tests ..	60
L. Axilla ..	Culture	1
	Antibiotic Sensitivity Tests ..	12
Pus ..	Culture	236
	Direct Smear ..	17
	Antibiotic Sensitivity Tests ..	2,476
Pleural Fluid	Culture	10
	Antibiotic Sensitivity Tests ..	24
Cerebrospinal Fluid ..	Culture	60
	Microscopic ..	85
Synovial Fluid	Culture	4
	Microscopic ..	1
	Antibiotic Sensitivity Tests ..	12
Seminal Fluid ..	Microscopic ..	44
Mucus from Bowel	Culture	1

TABLE CIII.—*continued.*

BACTERIOLOGY—*continued.*

A. Specimens of Human Origin—continued.

Specimen.	Mode of Examination.	Number.
Serous Exudate	Direct Smear ..	1,427
	Dark Ground Microscopy	87
Sputum ..	Culture	101
	Direct Smear ..	10
	Antibiotic Sensitivity Tests ..	612
Blood ..	Culture	58
	Antibiotic Sensitivity Tests ..	24
Urine ..	Culture	882
	Microscopic ..	1,909
	Antibiotic Sensitivity Tests ..	2,812
Faeces ..	Culture	368
	Microscopic ..	19
	Antibiotic Sensitivity Tests ..	116
Post-Mortem Swabs and Tissues ..	Culture	64
	Direct Smear ..	7
	Antibiotic Sensitivity Tests ..	12
Virulence Tests for Corynebacterium Diphtheriae ..	..	1
	Total 1956–57 ..	21,009
	Total 1955–56 ..	19,655

TABLE CIII.—*continued.*

TUBERCULOSIS SECTION.

Specimen.	Mode of Examination.	Number.
Sputum ..	Culture	4,236
	Microscopic	4,236
	Animal Inoculation	89
Gastric Aspiration	Culture	2,330
	Animal Inoculation	835
Laryngeal Swabs ..	Culture	63
Urine	Culture	142
	Microscopic	6
	Animal Inoculation	55
Pus	Culture	7
	Microscopic	6
	Animal Inoculation	7
Pleural Fluid ..	Culture	11
	Microscopic	10
	Animal Inoculation	9
Cerebrospinal Fluid	Culture	5
	Microscopic	5
	Animal Inoculation	3
Tissue ..	Culture	19
	Microscopic	19
	Animal Inoculation	14
Post-Mortem Tissue	Culture	8
	Microscopic	8
	Animal Inoculation	7
Culture	Sensitivity Tests ..	235
	Total 1956–57	12,365
	Total 1955–56	11,396

TABLE CIII.—*continued.*

B. Foods and Waters.

Specimen.	Mode of Examination.	Number.
Water ..	Culture	186
	Plate Count ..	182
	Microscopic	4
Milk	Culture	385
	Plate Count ..	372
	Reductase Test ..	344
Goat's Milk ..	Culture	1
	Plate Count ..	1
Tinned Natural Milk	Culture	1
	Plate Count ..	1
Ice Cream ..	Culture	91
	Plate Count ..	91
Ice Blocks ..	Culture	28
	Plate Count ..	28
Ice Cream Bulk Mix	Culture	3
	Plate Count ..	3
Cream ..	Culture	2
	Plate Count ..	2
	Reductase Test ..	2
Reduced Cream ..	Culture	1
Butter ..	Culture	16
	Plate Count ..	16
Sugar of Milk ..	Culture	1
Tinned Milk Drink ..	Culture	1
Pineapple Juice ..	Culture	3
Soft Drinks	Culture	3
Whisky	Culture	1
Beer	Culture	1
Oysters	Plate Count ..	1
Smoked Oysters ..	Culture	1
Cod Fillets	Microscopic ..	1
Tinned Herrings ..	Culture	5
Prawns	Culture	4
Scallops	Culture	1
Meat	Culture	2
Minced Meat	Culture	2
	Plate Count ..	2
Camp Pie	Culture	1
Sausage	Culture	1
Flour	Culture	10
Tomato Puree ..	Culture	1
Canned Tomatoes ..	Culture	2
Lemon Meringue Tart	Culture	1
Apple Pie	Culture	1
Cheese Sandwich ..	Culture	1
Prepared Curry and Rice	Culture	1
Crumpet	Culture	1
"Fairy Floss" ..	Culture	7
Dates	Culture	5
Coconut	Culture	15
	Total 1956–57 ..	1,836
	Total 1955–56 ..	2,047

TABLE CIII.—*continued.*

C. Various Materials.

Specimen.	Object of Examination.	Number.
Disinfectants and	Rideal-Walker Coefficient	77
	Germicidal Value ..	3
Liquid Soap	Rideal-Walker Coefficient	1
Clipper Oil	Rideal-Walker Coefficient	1
Bottles	Sterility	12
Glasses	Sterility	74
Bacterial Cultures ..	Identification ..	21
Ointment	Culture	1
Chemical Reagents ..	Culture	3
Adrenalin	Culture	3
Procaine	Culture	1
Hay	Culture	1
Chaff	Culture	1
Swab from Pipe ..	Culture	2
Swabs from Crockery	Culture	21

TABLE CIII.—*continued.*

C. Various Materials—continued.

Specimen.	Object of Examination.	Number.
Swabs from Cutlery	Culture	11
Washings from Crockery	Culture	6
Washings from Cutlery	Culture	12
"Geyser" Wash	Culture	1
Cosmetic	Culture	1
Shaving Brush	Culture	1
Skin Scrapings	Culture	7
	Antibiotic Sensitivity Tests	12
Hair	Presence of Fungi	5
Tobacco	Presence of Fungi	19
	Total	297
	Total 1955–56	268

2. Serology.

	Number.
Serum Agglutination (Screen)—	
Eberthella typhosa (O)	14
Eberthella typhosa (H)	2,712
Salmonella paratyphi (H)	2,707
Salmonella schottmülleri (*H*)	2,707
Proteus OX19	2,731
Proteus OXK	2,731
Brucella abortus	2,725
Leptospira icterohaemorrhagiae	3,276
Leptospira canicola	3,276
Leptospira australis A	3,276
"Robinson" Strain of *leptospira*	3,276
Leptospira australis B	3,276
"Esposito" Strain of *leptospira*	3,276
Leptospira pomona	3,276
Leptospira grippotyphosa	3,276
Leptospira medanensis	3,276
"Kremastos" Strain of *leptospira*	3,276
Leptospira mini A	3,276
Leptospira hyos	3,276
Leptospira celledoni	3,276
Leptospira autumnalis	3,276
Coxiella burneti	2
Erythrocytes "O"	6
Streptococcus MG	1
Serum Agglutination Tests (Quantitative)	2,180
Paul Bunnell Tests	269
Leptospiral Strains Typed (38)—	
Agglutination Tests Peformed in Typing	1,500
Leptospiral Antisera Prepared	22
Leptospiral Antisera Absorbed	20
Sensitized Erythrocyte Lysis (S.E.L.) Tests	1,313
Complement Fixation Tests—	
Coxiella burneti—	
Routine	2,746
Quantitative	359
Typhus Fever Murine (Soluble)—	
Routine	307
Quantitative	144
Typhus Fever Tick (Soluble)—	
Routine	6
Psittacosis Virus C.F.	29
Eagle Wassermann (Serum)—	
Routine	6,410
Quantitative	55
Eagle Wassermann (C.S.F.)	179
Kline	6,764
Kahn	982
Lange Colloidal Gold Reaction (C.S.F.)	202
Colloidal Gold Reaction (Serum)	13
Total 1956–57	85,700
Total 1955–56	84,534

TABLE CIII.—*continued.*

3. Biochemistry.

Specimen.	Examined For.	Number.
Whole Blood	Urea	439
	Glucose	36
	Uric acid	113
	Chloride	23
	Pigments	19
Plasma	Protein	1
	Bilirubin	4
	Chloride	2
Serum	Protein	933
	Cholesterol	76
	Bilirubin	530
	Chloride	35
	Calcium	38
	Inorganic phosphate	3
	Acid phosphatase	49
	Alkaline phosphatase	515
	Thymol turbidity	507
	Thymol flocculation	507
	Zinc sulphate turbidity	507
	Paper Electrophoresis	573
	Amylase	16
	Diastase	1
	Bromide	1
	Thiocyanate	1
	Bromine	1
	Iron	2
	Fibrinogen	1
Cerebrospinal Fluid	Protein	85
	Globulin	63
	Chloride	75
	Glucose	78
	Urea	9
Pleural Fluid	Chloride	1
Urine	Albumin	2,015
	Sugar	2,020
	Pigments	5
	Bile	2
	Bilirubin	5
	Urobilin	3
	Urobilinogen	5
	Diastase	6
	Chloride	1
	Presence of Dye	1
	Calcium	1
	Creatinine	1
	Aceto-acetic acid	1
Faeces	Total, Split and Unsplit Fats	76
	Occult Blood	77
	Creatorrhoea	10
	Urobilinogen	1
Sputum	Acid content	1
Gastric Contents	Acid content	1
Renal calculi	Chemical constitution	11
Functional Tests	Glucose tolerance tests	203
	Urea clearance tests	115
	Urea concentration tests	114
	Fractional test meals	73
	Total 1956–57	9,992
	Total 1955–56	9,392

TABLE CIII.—*continued.*

4. HAEMATOLOGY.

—	Number.
Cell Counts—	
Red Cells (Total)	1,642
Red Cells (Stippled)	1,049
Reticulocytes	15
White Cells (Total)	4,322
White Cells (Differential)	4,056
Platelet Count	47
Haemoglobin	7,678
Haematocrit	5,765
Sedimentation Rate	633
Coagulation Time	85
Bleeding Time	83
Prothormbin Time	18
Red Cell Fragility	14
"L-E" Cells	1
Blood Grouping (A.B.O.)	3,651
Blood Grouping (Rh)	3,651
Rh Antibodies	1,002
Total 1956-57	33,742
Total 1955-56	31,817

5. PARASITOLOGY.

Specimen.	Object of Examination.	Number.
Faeces	Amoebae (Cysts and vegetative)	38
	Helminth ova	411
Pus	*Trichomonas vaginalis*	7
Blood	*Microfilariae*	1
	Plasmodium sps.	38
Helminth	Identification	17
Arthropod	Identification	2
	Total 1956–57	514
	Total 1955–56	693

6. HISTOLOGY.

Tissues Sectioned.	Number.
Human—	
Biopsy (specimens received 3,418)	5,109
Post-Mortem	1,475
Medico-Legal Tissues	156
Animal—	
Guinea-pig	8
Rabbit	8
Mouse	6
Total 1956–57	6,762
Total 1955–56	7,145

TABLE CIII.—*continued.*

7. VARIOUS TESTS.

—	Number.
Male Toad Test (Pregnancy)	2,312
Aschheim Zondek Test (Pregnancy)	12
Casoni Skin Test	3
Total 1956–57	2,327
Total 1955–56	1,972

8. EXFOLIATIVE CYTOLOGY.

Specimen.	Number.
Sputum	381
Gastric Aspiration	1
Pleural Fluid	11
Bronchial Aspiration	17
Lung Tissue	4
Fluid from Scrotum	1
Total 1956–57	415
Total 1955–56	7

9. MEDICO-LEGAL

	Number.
Clothing—	
Blood	73
Spermatozoa	75
Faecal excretion	1
Various Articles—	
Blood	43
Spermatozoa	11
Faecal excretion	1
Smears—	
Spermatozoa	36
Bacteria	3
Swabs—Spermatozoa	2
Tissues—Examination	156
Blood—Grouping	9
Blood-Stained Articles—Determination of Blood Group of Stains	29
Scrapings—	
Identification	5
Presence of Blood	1
Hair—Identification	21
Skull—Identification	1
Skeleton—Identification	2
Bones—Identification	4
Earth—Presence of Blood	1
Total 1956–57	474
Total 1955–56	500
Post-Mortem Examinations—1956–57	587
1955–56	609
Attendances at Courts—	
Supreme Court	16
Police Court	20
Coroner's Court	17
Other Courts	12
	65

2. Laboratory Development.

The steady increase in the volume of work carried out in the laboratory is again manifest. In the current year 175,400 tests were performed, a 4 per cent. rise over the period 1955-56. The increase appears to have been fairly evenly distributed over the Bacteriology, Serology, Biochemistry, Haematology, and Histo-pathology sections.

It is inevitable that this laboratory will be called upon more and more as the population grows and as practitioners in both country and metropolitan areas appreciate the service which is available to them. It is becoming increasingly difficult to cope with the increasing demands as the accommodation available is inadequate and extremely overcrowded. This applies particularly to histology.

It is fully realised that the provision of additional accommodation for the laboratory is difficult to obtain in the existing building but provision for some expansion will have to be made in the immediate future. Plans for the new laboratory are proceeding but it seems probable that this will not be available for several years.

It is nowadays necessary for any Public Health laboratory to provide a diagnostic service for virus diseases and plans for this have been made in the new laboratory.

Although the prime function of this laboratory is to provide routine diagnostic and public health control services, every encouragement is given for the staff to investigate various problems which arise in the course of their routine work. The work that has been done in the past in collaboration with the Queensland Institute of Medical Research has made an important contribution to the knowledge of the pyrexial diseases occurring in this State. It is gratifying that the laboratory is now officially recognised as the Leptospiral Reference Laboratory for Australia.

In the past university students have worked in this laboratory during the long vacation as part of the curriculum of their Medical Science course. This has been extremely beneficial to the students and laboratory alike. It has provided the students with valuable practical training in laboratory methods. It has also provided a source of extra staff during those periods when many of the existing staff are away on leave. In addition it affords one an opportunity to judge at first hand those students who are likely to prove useful laboratory workers for permanent employment after graduation. Now that the course in Medical Science has terminated students in Pure Science will be allowed to undertake vacational employment here as for them the practical trainiing will be even more essential than for the Medical Science undergraduates.

3. Leptospirosis.

During the year there has been considerable activity and progress in the serological study of leptospirosis. This has involved the examination of large numbers of sera from animals collected by the staff of the Queensland Institute of Medical Research, of paired sera from patients suspected of having leptospirosis and the typing of many cultures. Representative serotypes of all the officially recognised serogroups of leptospirae have now been established in the culture collection. The laboratory is now recognised by the World Health Organisation as the official Leptospiral Reference Laboratory for Australia. Active collaboration has been maintained with workers in this field and we are indebted to Dr. J. C. Broom of the Wellcome Laboratories in London, Dr. J. W. Wolff in Amsterdam and to Mr. A. Alexander of the Walter Reed Army Medical Centre in Washington, U.S.A., for their much appreciated co-operation. The staff of the Queensland Institute of Medical Research have assisted in many ways and have provided much of the material for these investigations.

(*a*) *The "Canicola" Strains of Leptospirae in Queensland.*—In January, 1952, two strains of leptospirae were isolated in North Queensland and as a result of investigations they were considered to be related to, if not identical with, *L. canicola*. These strains were subsequently submitted to Dr. Broom in London who confirmed our findings. The results of these investigations were published.

The actual absorption tests which had been carried out on these strains, whilst adequate for the purpose of distinguishing them from *L. icterohaemorrhagiae*, did not in fact permit of a distinction between *L. canicola* and a related serotype.

In July, 1955, absorption studies were begun on "Canicola" strains which have been isolated in North Queensland. It has been found that the minority of these strains are homologous with the type strain *L. canicola* (Hond Utrecht) whereas the majority appear to be antigenically distinct. Alexander at the Walter Reed Army Medical Centre has had similar experience with "Canicola" strains isolated in Malaya. The serological typing of the Queensland strains is proceeding.

(*b*) *L. "robinson".*—The taxonomic status of the "Robinson" strain, originally isolated in North Queensland in 1951, is currently being investigated in association with other Leptospiral Reference Laboratories. It appears to be a heterologous strain within the pyrogenes serogroup. It is distinct from *L. australis B.* and our results show that it has antigenic differences from *L. pyrogenes* (Salinem). It is anticipated that its final designation will be determined and published in the near future.

(*c*) *L. pomona.*—It has been observed that two distinct agglutination patterns occur in the sera of patients proven by culture to have been infected with strains of *L. pomona*. In a minority the serum reacts with the homologous strain only, whilst in the majority, agglutination also occurs with *L. australis A.*, "Esposito," *L. grippotyphosa* and *L. autumnalis*. Because of this difference between the two groups of cases it was thought that a hitherto unidentified serotype similar to *L. pomona* might be present in Queensland. With the assistance of medical practitioners in Brisbane, Wondai, Goomeri and Collinsville, cultures of *L. pomona* were obtained together with paired sera from the infected patients. By the agglutination pattern in the sera, representatives of the two groups of reaction were obtained. Cross-

agglutination and cross-absorption tests were carried out with the new cultures and with the stock *L. pomona* (Staines) strain. It was not possible to show any serological difference between the new strains and the Staines strain and thus there is no evidence as yet to suggest that more than one serotype occurs in Queensland. The cause of the varied agglutination pattern in the patients' sera remains unsolved.

(*d*) *L. celledoni*: *Designation and Report of a Fatal Case.*—The "Celledoni" strain of leptospira isolated in North Queensland in 1952 has been fully investigated serologically with the assistance of Dr. Broom. It has proved to be a new leptospiral serotype distantly related antigenically with *L. javanica* and *L. poi*. The name *Leptospira celledoni* has been proposed for it and a report has been published.

In March, 1957, a patient, A.J., a female, aged 57, died in North Queensland of leptospirosis. She had been sick for one week prior to admission. On arrival in hospital intense jaundice was noticed but this subsequently disappeared. Cultures for leptospirae were negative and no leptospirae could be found in the urine. Anuria developed soon after admission and persisted for 13 days before sudden diuresis occurred. During this period she was kept alive by intravenous therapy. Death occurred suddenly, within 24 hours of the diuresis, as a result of an inability to control her electrolyte balance. Unfortunately permission could not be obtained for an autopsy.

Blood was obtained from the patient on the 8th and 18th days after the onset of symptoms. The results are set out in Table CIV. It will be noted that there is a marked rise in titre with *L. celledoni*. The stationary titres with both *L. icterohaemorrhagiae* and *L. canicola* are indicative of a previous leptospiral infection. Although cultural evidence is lacking the evidence is strong for infection with *L. celledoni* and as such this is the first fatal case due to infection with that serotype on record.

TABLE CIV.

ANTIBODY AGGLUTINATION-LYSIS TITRE.

Leptospiral Strain.*	Day.	
	8.	18.
L. icterohaemorrhagiae	300	100
L. canicola	1,000	1,000
L. celledoni	10	1,000

* Negative results with the other 11 test strains are not recorded.

(*e*) *The "Szwajizak" Strain of Leptospira.*—This strain was originally isolated from a patient in North Queensland in February, 1952. Preliminary investigations were made in this laboratory and established it as a member of the *hebdomadis* serogroup of leptospirae. Further serological studies have been made with this strain by Dr. J. W. Wolff of Amsterdam and by Dr. B. Babudieri in Rome. Dr. Babudieri published his results in a paper in 1956 (Zeitschr f. Hygiene, Bd. 143, 121) and stated that the "Szwajizak" strain is the incomplete biotype of strain Sari, for which he proposed the name *mini*. Dr. Wolff has confirmed this finding and thus the "Szwajizak" strain may henceforth receive the designation of *L. mini A*.

(*f*) *The Sensitized Erythrocyte Lysis Test in the Diagnosis of Leptospirosis.*—In collaboration with Dr. Shihman Chang and his colleagues at the Harvard School of Public Health, two papers have been published this year on the use of erythrocyte sensitizing substance in the diagnosis of leptospirosis. The first describes the use of the sensitized erythrocyte agglutination test, (Am. J. Trop. Med. and Hyg. VI, 90), and the second, the sensitized erythrocyte lysis test, (Am. J. Trop. Med. and Hyg. VI, 101). In this latter paper the diagnostic value of the S.E.L. test was established, using an E.S.S. prepared from *L. pomona*, in infections with nine strains of leptospirae known to occur in Queensland. The co-operation of Dr. Chang has been greatly appreciated.

Further work has been carried out in this laboratory during the year to investigate further the use of the sensitized erythrocyte lysis test. It was found that an erythrocyte sensitizing substance prepared from *L. australis A*. (Ballico) reacted with antibody against 26 pathogenic serotypes of leptospirae and with the non-pathogenic serotype *L. biflexa*. A rising titre of E.S.S. antibody was detected by the sensitized erythrocyte lysis test in 83 patients with leptospiral infections, proven by culture.

Forty-seven of forty-nine patients considered to be infected with leptospirosis on the basis of rising agglutination-lysis titres showed rising titres for E.S.S. antibody in the S.E.L. test. Only two patients failed to show antibody. The S.E.L. test was negative in paired sera from 163 of 179 patients with pyrexias due to diseases other than leptospirosis. Of the remainder, 14 gave stationary titres and in two only were rising titres found.

In all but one of 83 proven leptospiral infections E.S.S. antibody appeared along with or before the agglutination-lysis antibody. High titres of E.S.S. antibody were obtained with S.E.L. tests in sera stored at —20 deg. C. for up to five years.

The S.E.L. test appears to be useful in the diagnosis of leptospirosis with paired sera particularly where large numbers of sera have to be screened. The test may also aid in distinguishing true from anamnestic reactions in the agglutination-lysis test. It is doubtful whether the S.E.L. test will prove of much use in surveys for past leptospiral infections in a population. A report on this work has been prepared for publication.

(*g*) *Typing of Leptospiral Cultures.*—Twenty-two cultures of leptospirae have been received in 1956–57 from the Commonwealth Health Laboratory in Cairns for typing. These cultures were all of human origin. Eighteen of the cultures were *L. australis A.*, 2 were *L. australis B.* and 2 were *L. canicola.*

In the same period 16 cultures have been typed for the Queensland Institute of Medical Research Field Station at Innisfail. Twelve of the cultures were from mice (*Mus musculus*) and four from rats (*Rattus rattus*). All cultures were *L. australis B.*

(*h*) *Investigation for Animal Reservoirs of Leptospirosis.*—(i) *North Queensland.*—During the year sera from 121 rats, 13 mice and 4 bandicoots have been tested in addition to the 16 cultures from animals, listed above.

It would seem appropriate at this stage to review the results that have been obtained from animal sera submitted to date from the Field Station of the Queensland Institute of Medical Research and tested in this laboratory. Included in these are sera collected by Fenner on the Atherton Tableland in 1945 which were made available by him. Localities listed are districts rather than towns, thus all those sera gathered near Innisfail are listed as "Innisfail."

The interpretation of the serological results presents a serious problem and is largely based on the normal agglutination pattern one has, from experience, learned to associate with various types of leptospirae. For purposes of subdivision "very probable" means a titre of 1:1000 with a normal agglutination pattern; "probable" means 1:100 or 1:300 sometimes without such a clear pattern; "possible" means 1:100 as an isolated record, or when antibodies to clearly distinct serotypes seem to be present. It is extremely difficult to interpret even high titres with *L. icterohaemorrhagiae*, some of which certainly appear to be non-specific.

Rodents.—Rattus rattus: 221 examined (Babinda, 11; Bartle Frere, 26; Innisfail, 184). *L. australis* B. isolated from 7 (1 in March, 1955, 2 in October, 1955, 2 in December, 1956, 2 in March, 1957). Serological results available for 173; very probable to probable *australis B.* 14 (including the 7 proven by culture); very probable *pomona*, 1; possible *icterohaemorrhagiae*, 2; total, 17. The incidence of *australis B.* would thus appear to be about 8 per cent. in this series.

Rattus norvegicus: 3 examined (all Innisfail). *L. australis B.* isolated from 2 (September and October, 1955). Serological results for 3; only the two positive by culture reacted.

Mus musculus: 61 examined (Bartle Frere, 2; Innisfail, 59). Leptospirae isolated from 13 (1 in June, 1956, 1 in March, 1957, 4 in April, 7 in May), of which 4 identified so far as *L. australis B.* Serological results available for 12; all negative, except the only mouse from which *australis B.* was isolated in that part of the series. The incidence of proven infection was 21 per cent.

Rattus conatus: 34 examined (Babinda, 17; Innisfail, 17). *L. australis A.* isolated from 8 (all Babinda; 1 in July, 1953, 2 in October, 1954, 5 in November, 1954); leptospirae seen by dark ground in 2 (November, 1954). Serological results available for 23; one *australis A.* rat was negative; very probable to probable *australis A.*, 12 (all Babinda, including the remaining 9 from which leptospirae seen or cultured); very probable *pomona*, 1 (Innisfail).

Rattus assimilis: 17 examined (Bartle Frere, 2; Innisfail, 15). No leptospirae isolated. Serological results available for 16; very probable *pomona*, 2; possible *australis B.*, 1 (in one of the *pomona* rats—the antibody responses differed from overlaps usually seen).

Hydromys chrysogaster reginae: 11 examined (all Innisfail). No leptospirae isolated. Serological results available for 11; very probable *australis B.*, 1.

Hydromys longmani: 1 examined (Atherton Tableland, Fenner). Serology only; negative.

Uromys caudimaculatus: 2 examined (Mossman; Innisfail). No leptospirae isolated. Serology of both negative.

Melomys littoralis: 36 examined (Babinda, 3; Bartle Frere, 1; Innisfail, 31; Mena Creek, 1). No leptospirae isolated. Serological results available for 30; all negative.

Melomys cervinipes: 1 examined (Innisfail). No leptospirae isolated. Serology negative.

Marsupials and Monotremes.—Thylacis obesulus: 82 examined (Mossman, 7; Babinda, 32; Innisfail, 35; Atherton Tableland, Fenner, 8). *L.* "Kremastos", isolated from 1 (October, 1955) of the 69 cultured. Serological results available for 75; very probable "Kremastos", 3 (including the one positive by culture); very probable *mini A.* (= "Szwajizak"), 3; probable *pomona*, 2 (one in a *mini A.* serum); very probable to possible *australis A.*, 7 (2 in *mini A.* sera); very probable to possible *australis B.*, 10 (2 in "Kremastos" sera); very probable "Robinson" or *australis B.*, 1; possible mixed *australis A.* and *australis B.* (1:1000 for both), 1. Altogether 20 of the sera had titres of 1:300 or more for one or more of the above serotypes. It seems that the bandicoots, generally, are natural hosts of the *hebdomadis* group, but also pick up other leptospirae that are present locally.

Perameles nasuta: 8 examined (Atherton Tableland, Fenner, 2; Babinda, 1; Innisfail, 5). *L.* "Kremastos" isloated from 1 (October, 1955) of the 6 cultured. Serological results from 8; very probable "Kremastos," 1 (the one proven by culture); very probable *celledoni*, 1; very probable *australis A.*, 1; very probable "Esposito," 1; very probable *australis B.*, 1; possible *australis B.*, 1 (in the "Esposito" serum); possible *pomona*, 1. Altogether, five of the sera had titres of 1:1000 or more for one or more of the above serotypes, and one (*pomona*) a titre of 1:100.

Unidentified bandicoots: 6 examined (3 Daintree, 3 Mossman). Serology only; very probable *mini A.*, 1; possible *australis A.*, 2 (one in the *mini A.* serum).

Dasyurus sp.: 1 examined (Atherton Tableland, Fenner). Serology only; negative.

Trichosurus vulpecula johnstoni: 15 examined (all Atherton Tableland, Fenner). Serology only; probable *medanensis*, 1.

Aepyprymnus rufescens: 5 examined (all Atherton Tableland, Fenner). Serology only; all negative.

Unidentified marsupials: 15 examined (all Atherton Tableland, Fenner). Serology only; very probable *medanensis*, 1.

Ornithorhynchus anatinus: 1 examined (S. Johnstone R.). Serology only; negative.

Domestic Animals.—Dogs: 34 examined (Cooktown, Daintree, Miallo, Hartley's Creek, Gordonvale, Aloomba, Mount Sophia, Babinda,

Innisfail district, Mena Creek, Japoon, Silkwood). Two only cultured (Silkwood); negative. Serology shows wide scatter of mostly low titres in 21 of the 34; very probable *hyos* (1:1000), 1; very probable *australis A.* (1:1000), 1; probable *australis A.*, 1; probable "Robinson" or *australis B.*, 1; possible *australis B.*, 3; *australis A.*, 3; *pomona*, 1; *hebdomadis* group, 4.

Cattle: 21 examined (Millaa Millaa, 4; Innisfail, 4; Mena Creek, 1; Ingham, 12). Serology only; rather wide scatter of titres, like dogs; very probable *hyos* (1:1000), 1; probable *hyos*, 1; probable *australis A.*, 1; probable "Robinson" possible *australis A.*, 1; *hyos*, 2.

(ii.) *Papua-New Guinea.*—During the period November-December, 1956, a member of the staff of the Queensland Institute of Medical Research made a search for evidence of leptospiral infections in Papua and New Guinea. Sera from 104 humans, 165 dogs, 21 pigs, 5 goats, 59 rats, and 5 bandicoots were collected and submitted to this laboratory for examination.

The sera are being tested against 24 serotypes of leptospirae and as yet the results are incomplete. The following results give an indication of the findings. —

1. Of 104 human sera from the Popondetta area, 59 showed titres of 1:100 or more with various serotypes, 22 of them had titres of 1:300 or greater. It is probable that the following, or closely allied serotypes are present in that area: *australis A.* and "Esposito"; *semaranga, bataviae, hebdomadis* group. Some sera also reacted with *L. sentot, L. grippotyphosa, L. hyos* and *L. andamana A.*

2. Of 81 dog sera so far tested, 8 gave titres of 1:100 or more, 2 giving 1:300 or more to "Esposito" and *pyrogenes* group with *canicola* respectively.

3. Four of 9 pigs tested gave titres of 1:100 or more, 2 at 1:300 or more for "Esposito" and *pomona* respectively.

4. The only positive result in 35 rats was a titre of 1:30 to *L. canicola* in one *Rattus rattus.*

In February, 1956, sera were received for examination from Dr. A. V. G. Price of Port Moresby and these included 8 human and 11 bandicoot sera. These also were tested against 24 leptospiral serotypes.

Of the human sera only one gave a titre of 1:100 with both *L. semaranga* and *L. andamana A.* The results with the bandicoot sera were more striking and the positive titres are set out in Table CV.

4. Food Poisoning Due to *Shigella sonnei.*

Two occurrences of acute food poisoning were investigated during the year. In both cases the causative organism was *Sh. sonnei.*

In the first case the organism was recovered from the meringue on the top of a lemon tart. Acute gastroenteritis occurred in a family a few hours after consumption of the tart.

In the second case the source of the infection was some beef which was purchased in a city store, taken home and cooked for the evening meal. Three members of a family partook of the meat and developed acute gastroenteritis during the night. *Sh. sonnei* was grown from the remains of the cooked meat.

5. *? Pfeiferella Whitmori* From Bundarra, N.S.W.

In May, 1957, a culture was forwarded to the laboratory for identification from Inverell Hospital. The notes accompanying the culture stated that it had been obtained from the blood of a woman from Bundarra, N.S.W. She had had attacks of breathlessness and a systolic murmur. A provisional diagnosis of bacterial endocarditis had been made.

The organism was a thin aerobic gram-negative motile rod which gave slow growth on glycerol-agar to produce smooth mucoid colonies.

TABLE CV.

Bandicoots.	*L. icterohaemorrhagiae.* (Jackson).	*L. javanica.* (Batavia 46).	*L. cynopteri.* (V.I. 3663).	*L. sentot.* (Sentot).	*L. autumnalis.* (Autumnalis.)	*L. australis A.* (Ballico).	"Esposito."	*L. pomona.* (Shaine).	*L. semaranga.* (Semaranga 173).	*L. andamana A.* (CH 11).
1	300	30	..	..	..	30	30	..	30	..
2	..	..	..	..	30	30	..	..	..	..
3	..	..	..	..	..	30	..	..	..	..
6	300	..	1,000	..	3,000	100	10,000	300	..	..
7	..	..	..	..	..	30	30	..	30	..
8	1,000	..	1,000	3,000	10,000	300	10,000	1,000	..	..
11	1,000	..	100	3,000	3,000	3,000	10,000	3,000	30	30

Slightly quicker growth was obtained on MacConkey's agar to produce small red colonies. Slight acidity was noted in litmus milk, but none of the carbohydrates was fermented. There was slight decolourisation of Andrade's indicator after 14 days. The indole test was negative but catalase positive. Methylene blue was slightly reduced in 14 days.

Unfortunately no information was available as to the age of the culture when it was received, Although the organism failed to show the fermentation reactions common to freshly isolated strains of *Pf. whitmori*, its general appearance and ability to grow on MacConkey's agar with typical reddish colonies was in keeping with this organism.

6. Drug-Resistant Tubercle Bacilli.

A survey is in progress to determine the prevalence of drug-resistant tubercle bacilli in untreated patients with pulmonary tuberculosis. Sensitivity tests with Streptomycin, para-amino-salicylic acid and isonicotinic acid anhydrazide are being made on cultures from all newly diagnosed cases of tuberculosis. To date 94 cultures have been examined. It is hoped that when sufficient cases have been collected that the clinical, radiological, epidemiological, and bacteriological findings can be correlated and reported. The Medical Research Council of Great Britain have recently published results of a national survey and it will be of value to compare our experience in Australia.

7. Q. Fever.

During the year 1956-57, seventy-six cases of Q. fever have been diagnosed in this laboratory. Two of these have been from New South Wales, (i.e. Lismore and Tenterfield). The extent of Q. fever in Queensland is wide but is mainly confined to the coastal belt. The following is the distribution of the cases: Brisbane 35, Townsville 7, Mackay 3, Atherton, Innisfail, Gladstone, Gympie, Kilcoy, Wondai, Nambour, Kingaroy and Ipswich 2, and one isolated case in Cairns, Charleville, Springsure, Clifton, Dalby, Toowoomba, Cooroy, Maleny, and Nanango.

The case from Charleville is of interest in that it occurred in the sheep belt where Q fever is rare. The patient was a shearer aged 37 years. He became ill in the Charleville district and a rising titre from nil to 1:128 was obtained with the complement fixation test.

Sera from 37 cows were tested for the Animal Health Station at Yeerongpilly, prior to the export of the cattle to Japan. No evidence of Q. fever was found.

8. Scrub Typhus—Report of a Second Infection.

Second attacks of scrub typhus are known to occur but so far no case has been recorded in Australia.

F. R., a male, aged 33 years, is a labourer on a banana and pineapple farm from Mission Beach in North Queensland. In June, 1952, he had been clearing new ground in an area where mites, ticks, and rats were known to occur. He was admitted to hospital on 16th June, 1952, with pyrexia of 6 days' duration. Blood was collected on the 6th and 14th day of the disease and a rising titre with *B. Proteus OXK* from nil to 1:640 was obtained. All other laboratory investigations for evidence of murine typhus, leptospirosis, typhoid, brucellosis, and Q fever were negative at this time.

In September, 1956, the same patient was admitted to the Innisfail Hospital with pyrexia of unknown origin which clinically resembled scrub typhus. On this occasion blood was collected on the 15th day since the onset of the disease and on this occasion a titre of 1:1024 with *B. Proteus OXK* was obtained. The only other positive finding was a titre of 1:100 with *L. hyos.* It is considered that the infection with *L. hyos* may have occurred in the intervening years and that such a high titre with *Proteus OXK* could not be accounted for as an anamnestic reaction nor to a "carry-over" from the previous scrub typhus infection. This case therefore represents the first record of a second infection with scrub typhus in Australia.

9. Murine Typhus.

During the year 32 cases of murine typhus have been diagnosed in this laboratory. The diagnosis is made by demonstration of a rising titre with the *Proteus OX19* agglutination test and complement fixation test with *R. mooseri.* Three of the cases were from outside the State, (i.e. Sydney, Lismore and Kyogle). Of the 29 cases occurring in Queensland, not less than 12 (or 41 per cent.) were from the Atherton area. The predominance of murine typhus in the Atherton district has been observed previously, as in the period 1954-55 of 26 cases diagnosed 50 per cent. were from that source. This is probably due to the maize and peanut industries carried on in the Atherton Tablelands.

10. Psittacosis—Report of a Case in Brisbane.

A case of psittacosis in the city of Brisbane occurred in May, 1957. D.A., a female, aged 61 years complained of severe rheumatic-like pains and a feeling of swelling in the abdomen accompanied by a temperature of 100·2 deg. F. on May 2. The muscular pains became generalised and a severe headache developed during the following week. On May 13, her condition had improved somewhat but she was still extremely weak. The patient was admitted to hospital on May 18, with rigors, a temperature of 104 deg. F. and haematuria. There was generalised tenderness of the abdomen and a provisional diagnosis of pyelonephritis was made. On May 20, X-ray revealed a small opacity at the right lung base. On the following day photophobia was noted, the sedimentation rate was 28 and microscopic examination of the urine revealed 20 r.b.c. per high power field. On May 22, crepitations were present in the right lung and the opacity in the right lung had enlarged. There was no leuocytosis. The patient made an uneventful recovery following tetracycline therapy.

The diagnosis of psittacosis was made by Dr. Aaron, to whom thanks are due for supplying the clinical notes. The patient had had contact with a sick parrot for 6 weeks prior to the onset of her illness and during this illness the parrot had lost all its feathers. The diagnosis was supported in the laboratory by finding a persistent complement fixation titre of 1:64 in the patient's serum take on 20th, 27th, and 31st days since the onset of symptoms.

11. Typhoid Fever.

Typhoid fever has become so rare as to be almost a curiosity in the State yet 3 cases have been diagnosed serologically within the space of three months this year, all from the Toowoomba area. The first case, a male aged 20 years, occurred in March. In May a male aged 35 years from Nangwee developed the disease. A significant rise in the titre was obtained in paired sera with both "H" and

"O" antigens. The third patient was a male aged 54 years who became infected in June and again paired sera revealed a significant rise in titre with both antigens.

12. Histopathology.

The number of biopsy sections prepared has increased from 4,821 in 1955-56 to 5,109 for this year. In the vast majority of cases the reports are available to doctors and hospitals in less than 48 hours. The biopsies are all indexed according to pathological diagnosis and this material has been made available for several research projects during the year.

There are now records of over 9,000 medico-legal autopsies available in the laboratory and an index of these is in course of preparation. There is much valuable information in these records and only by means of such an index can it be readily made use of for research.

Among the tissues submitted for histopathological examination the following lesions of interest were diagnosed:—

(*a*) Megalocytic inclusion disease in a female infant aged 5 months from Warwick.

(*b*) Metastasis of an endometrial carcinosarcoma to an inguinal lymph node in an elderly female aged 76.

(*c*) Mycetoma of the foot from a male aged 25 from Wewak, N.G.

(*d*) Sporotrichosis from Bundaberg.

(*e*) Four cases of "Milkers nodule."

(*f*) Three cases of chromoblastomycosis.

(1) *Study of Resected Lung Tissue.*—A pathological study of resected tuberculosus lung specimens has been undertaken in order to correlate clinical and operative findings and to determine the effect of treatment from both bacteriological and histological aspects. A total of twelve specimens has been examined so far.

Seven specimens have shown lesions with cavitation in five of which acid-fast bacilli were demonstrated by smear. Positive results on culture and guinea-pig inoculation were obtained in only one instance. Five specimens showing non-cavitary caseous lesions contained acid-fast bacilli demonstrated by smear but culture and guinea-pig inoculation produced negative results.

(2) *Gas Gangrene following the Injection of Adrenalin in Oil.*—A fatal case of gas gangrene occurred in a young female following an intramuscular injection of adrenalin in oil. It is considered that the source of the infection was almost certainly exogenous. Adrenalin in guinea-pigs enhances the infection with both *Cl. septique and Cl. welchii* 100,000 fold. It is thought that the adrenalin by its vasoconstrictor effect probably reduces the oxygen tension at the site of inoculation allowing the bacilli to multiply. Once sufficient growth has occurred, the toxin so formed, produces locally in the tissues conditions suitable for the growth to continue even after the effect of the adrenalin has disappeared. A report on the clinical, autopsy, and bacteriological findings has been submitted for publication.

13 Exfoliative Cytology.

This field has been confined almost entirely to the investigation of specimens of pulmonary origin. Of the 413 specimens examined 378 have been sputum, 19 bronchial or tracheal washings, 11 pleural fluids and 5 of miscellaneous origin. Of these 413 specimens examined 59 (14·3 per cent.) have been diagnosed as containing malignant cells, 17 have been regarded as suspicious and 280 negative, while 57 specimens were unsatisfactory, usually due to the absence of true sputum. An effort has been made to examine at least three specimens from each patient but this has not been possible in many cases, though in some patients more than three specimens have been provided. The number of patients investigated during the year was 151 of whom 24 (15·9 per cent.) were considered to have produced malignant cells.

A follow-up of patients investigated during the first six months is now under way and it is hoped by this means to evaluate the reliability and sensitivity of the method and at the same time to provide data which will assist in the interpretation of doubtful smears.

14. City Morgue.

During the year improvements to the existing building have been carried out and these have improved the external appearance and provided better facilities for carrying out autopsies. It is fully recognised by all concerned that these improvements have in no way lessened the urgency for the new building which has been approved and for which a site has been selected. Considerable thought has been given to the requirements for the new Morgue and its design and in March the Chief Engineer of the Public Works Department with the Deputy Director of the Laboratory visited Melbourne to inspect the newly-completed Morgue for that City. This visit provided valuable data and many useful ideas which have been incorporated with our own conception of a Morgue as a functional unit equipped to enable the complete scientific investigation of every death under suspicious circumstances. It is intended to provide facilities for teaching both undergraduates and graduates and at the same time to possess dignified and attractive surroundings where relatives may be brought to identify bodies with a minimum of mental trauma. Reports giving detailed recommendations have been submitted and it is hoped that an early start may be made with the planning of the new building.

15. PUBLICATIONS.

*Smith, D. J. W. (with Doherty, R. L.) (1956): "Double Infection with Two Serotypes of Leptospirae—A Case Report," M.J. Aust., 2, 643.

*Smith, D. J. W. (with Broom, J. C.) (1956): "*Leptospira celledoni*—A New Leptospiral Serotype," Lancet 2, 866.

Smith, D. J. W. (with McComb, D. E., Coffin, D. L., MacCready, R. A., and Shihman Chang, R.) (1957): "The Use of Erythrocyte Sensitizing Substance in the Diagnosis of Leptospiroses. I. The Sensitized Erythrocyte Agglutination Test," Amer. J. Trop. Med. and Hyg., VI., 90.

*Smith, D. J. W., Sharp, C. F. and Tonge, J. I. (with Shihman Chang, R. and McComb, D. E.) (1957): "The Use of Erythrocyte Sensitizing Substance in the Diagnosis of Leptospiroses. II. The Sensitized Erythrocyte Lysis Test," Amer. J. Trop. Med. and Hyg., VI., 101.

Tonge, J. I.: "Gas Gangrene Following the Injection of Adrenalin in Oil," (in the Press).

* Previously reported as in the Press.

GOVERNMENTAL CHEMICAL LABORATORY, 1956-57.

Government Analyst and Chief Inspector of Explosives:
S. B. Watkins, M.Sc. F.R.A.C.I.

Deputy Government Analyst and Inspector of Explosives:
A. S. Hurwood, B.Sc., A.R.I.C., A.R.A.C.I.

Function & Service.

The Government Chemical Laboratory provides a co-ordinated chemical service for the benefit of Queensland Government Departments with the exception of the Department of Agriculture and Stock which maintains its own chemical service. The Railways and Forestry Departments maintain chemical laboratories for specific purposes but seek the advice of this laboratory outside the ambit of their laboratories' activities.

In Queensland the Laboratory also serves a number of Federal Departments, that of Customs and Excise since the commencement of Federation; more recently, work has been done for the Department of Primary Industry in connection with the examination of export foodstuffs, the Department of Works and Housing on water and sewage samples, the Postmaster-General, the Royal Australian Navy, the Aeronautical Inspection Directorate, the Army, the Repatriation Department, and the Deputy Commissioner of Sales Tax.

The following State Departments and semi-governmental bodies avail themselves of the services of the laboratory:—

Department of Health and Home Affairs.
Departments of Mines, Geological Survey and Machinery.
Departments of Lands, Irrigation and Water Supply, and Forestry.
Department of Public Works and the Queensland Housing Commission.
The State Stores Board.
Department of Public Instruction.
Department of the Auditor General.
The Commissioner of Police.
The Main Roads Commission.
The Co-ordinator General of Public Works.
The Railway Department.
The Division of Secondary Industries.
The Portmaster and the Department of Harbours and Marine.
The Brisbane and South Coast Hospitals Board and Country Hospitals Boards.
Also the medical profession and the public.

With the expansion of the facilities offered by private analysts and chemists, service given to the public is being more and more restricted and, except for the examination of samples of water for health and general purposes, assistance is only given where no outside chemical service is available. Appropriate charges are made with the exception that the examination of waters is free.

Organisation.

The Government Chemical Laboratory is under the immediate direction of the Government Analyst who is also the Chief Inspector of Explosives. Subject to the Treasurer the Chief Inspector of Explosives is charged with the administration of "*The Explosives Act of* 1952," the Explosive Regulations of 1955, and The Fruit Ripening Regulations. A separate annual report upon the administration of this legislation is submitted to the Treasurer. Several members of the chemical staff in addition to a full time Inspector of Explosives are also Inspectors of Explosives.

The laboratory comprises four main sections each being in charge of an officer who is responsible for the conduct of the work within his section.

Section 1 embodies Foods and Drugs and other matters concerned with health together with a subsection devoted to waters. It is in charge of the Deputy Government Analyst. An important part of the work concerns the examination of foodstuffs more particularly the staple ones for conformity with legal requirements, also drugs, disinfectants, medicines, tobacco, and toilet preparations. Paints, also bedding and upholstery materials are tested for compliance with standards laid down under their respective regulations. Toys, pencils, crayons, colours, and such like articles are given particular attention to maintain a lead free condition.

An important development is the determination of the total dry solids of bread on sample loaves submitted on behalf of the Chief Inspector of Weights and Measures in connection with new legislation governing bread weights.

In the water subsection the examination and analysis of waters intended for human consumption, household use, industry, stock and irrigation are undertaken. Sewerage and waste process waters in increasing numbers are also assessed.

Section 2 covers the work concerned with toxicology, biochemistry, and industrial hygiene. Whilst a steady demand is maintained by the Commissioner of Police for examination of submissions concerned with homicidal, suicidal and accidental poisonings there has been a considerable increase in specimens of blood and urine for alcohol content and of urine for lead estimation. Coupled with this, investigations associated with industrial health are in frequent demand.

Section 3 is concerned with mining, metallurgy, geology, mineralogy, and explosives. The work involves the assay of ores of all kinds including those of uranium, the analysis of alloys, the identification and determination of minerals, the evaluation of clays, natural gases, oil bearing strata, coals, limestones, and other economic minerals, the investigation of problems associated with corrosion, the examination and testing of explosives and washability tests on coal.

Section 4 deals with the many and varied submissions from the Collector of Customs, the numerous samples of foodstuffs for export from the Commonwealth Department of Primary Industry. Work for the State Stores Board covering the examination of a wide range of goods for Government departments and technical advice on same is included in this section in addition to the analysis of paints used in Government contracts and bitumens for the Main Roads Commission.

Staff.

In addition to the Government Analyst and the Deputy Government Analyst, the professional staff is as follows:—

3 Senior Chemists,
7 Chemists Division I.,
3 Chemists Division II.,
5 Analysts,
1 Inspector of Explosives (full time),
3 Assistants to Analysts,
1 Cadet,
2 Technical Assistants.

There are three clerk typists, one laboratory mechanic, and three laboratory attendants and a storeman/attendant.

This composite staff is able to examine, analyse, and investigate the many and varied specimens, samples, and other submissions from the numerous Government departments requiring chemical assistance and also to advise on a wide range of problems. Being a centralised service there is considerable economy both in equipping and maintaining the laboratory; there is no overlapping of efforts, a better apportionment of work with closed contact between staff members and pooling of knowledge and experience. This all leads to a more effective employment of professional officers. The trend in other States has been toward unification of laboratory services rather than the establishment of a number of separate chemical laboratories all basically the same but each proportionally involving a greater expense in founding, equipping, and maintaining such. It is and always has been the object of the laboratory to give service without any undue delay as the results are of immediate significance to those interested. Where investigational procedure is required or a new technique involved more time may be required. In many cases immediate examinations are essential because of perishable nature, the release of imports from the Customs Department or from Customs bond, the payment of contracts or the purchase of goods.

To function effectively and economically, adequate laboratory accommodation is essential. Space is less costly than professional time—and time consumed in mounting and dismounting apparatus is saved where assemblies frequently required for analytical procedure can be set up permanently. The laboratory could use effectively far more space than is now available.

Statistics.

The total of samples which received attention during the year was 19,927, and in the following table this figure is included with those for the previous 9 years:—

TABLE CVI.

Year.	Total of Samples.
1947–48	13,629
1948–49	17,564 (Record year)
1949–50	18,840 (Record year)
1950–51	14,137
1951–52	15,657
1952–53	26,091 (Record year)
1953–54	21,894
1954–55	20,905
1955–56	21,178
1956–57	19,927

The table below indicates the distribution of the above samples between the several sections for this and the past three years.

TABLE CVII.

Year.	Section 1.	Section 2.	Section 3.	Section 4.
1953–54	7,762	1,647	4,295	8,190
1954–55	7,397	2,815	4,412	6,281
1955–56	6,690	3,207	3,754	7,527
1956–57	6,731	3,686	4,473	5,037

The following table records the year's total of samples against the various departments using the service:—

TABLE CVIII.

State Departments:		
Health and Home Affairs	7,793	
Police	317	
Mines	69	
Coal Board	123	
Portmaster	2,242	
Geological Survey	1,025	
Tile Testing Station	285	
Irrigation	734	
Local Government	441	
Harbours and Marine	321	
Main Roads	169	
State Stores	510	
Public Works	698	
Housing Commission	725	
Railways	33	
Weights and Measures	75	
Queensland Institute for Medical Research	7	
Others	624	
		16,191
Commonwealth Departments:		
Customs	1,904	
Commerce	982	
Others	324	
		3,210
Hospitals Boards	160	
Medical Profession	83	
Public	283	
		526
Total		19,927

SECTION 1.

FOODS, DRUGS AND WATERS.

A. S. HURWOOD, B.Sc., A.R.I.C., A.R.A.C.I., Deputy Government Analyst, Officer-in-Charge.

Table CIX. gives the number and source of the samples examined.

TABLE CIX.

Department.	No. of Samples.
Health and Home Affairs	4,699
Irrigation and Water Supply	728
Local Government	313
Other Government Departments	748
Public	243
Total	6,731

TABLE CX.

SUMMARY OF SAMPLES OF FOODS AND DRUGS EXAMINED FOR THE DEPARTMENT OF HEALTH AND HOME AFFAIRS.

Nature of Sample.	No. of Samples.
Beverage or Cordial	226
Bread	182
Cereal	43
Condiment	37
Confectionery	64
Crayon or Coloured Pencil	336
Disinfectant	30
Drug or Medicine	93
Fish	34
Fruit or fruit juice	34
Jam or jelly	25
Meat	124
Milk—official	1,562
Milk—unofficial	126
Milk product	121
Paint and Paint Scraping	696
Spirituous Liquor	39
Tobacco	238
Toy	297
Vegetable	36
Miscellaneous	178
Total	4,521

The miscellaneous samples include sugar, glue, peanut paste, garden plant, hydrometer, yoghurt, chicken roll, egg, dye, rice, and Chinese food.

TABLE CXI.

DETAILS OF LEGAL SAMPLES TAKEN BY INSPECTORS IN ACCORDANCE WITH THE PROVISIONS OF "THE HEALTH ACTS, 1937 TO 1955":—

Nature of Sample.	Number Examined.	Passed.	Failed.
Milk	1,562	1,360	202
Paint and Paint Scraping	198	69	129
Toy	150	8	142
Minced Meat	82	33	49
Sausage	15	10	5
Spirituous Liquor	6	2	4
Bread	4	4	..
Soft Drink	3	1	2
Miscellaneous	4	3	1
Total	2,024	1,490	534

MILK.

The Brisbane supply of pasteurised milk was regularly examined, as also was the milk issued to schools under the free milk scheme. The number of legal samples of milk was 1,562, the smallest yearly total for 27 years. Of these samples, 46·7 per cent. was taken in the Greater Brisbane area and 53·3 per cent. in other parts of Queensland.

Of milks from Greater Brisbane, 1·9 per cent. were adulterated with water and of the milks from other parts of the State, 5·3 per cent. were likewise adulterated. The 14 adulterated milks from Greater Brisbane had an average extraneous water content of 3·2 per cent., the highest individual figure being 11·0 per cent. The occasional low level adulteration of the Brisbane supply would indicate that there are still a few dishonest suppliers contributing to the pooled milk at the pasteurisation centres.

Of 44 adulterated samples from the rest of Queensland, the average proportion of extraneous water was 8·8 per cent., the highest individual adulteration being 53 per cent. Most of these samples were raw milks.

The average fat content of all the legal samples of milk was at the satisfactory high level of 3·93 per cent.

MEAT.

Eighty-two (82) legal samples of minced meat and 15 legal samples of sausages were examined.

The position as regard preservative in minced meat does not improve and, as with last year, six in every ten of the samples received, contained the preservative substance, sulphur dioxide, in contravention of the Regulations.

Five of the sausage samples failed because of excess preservative. All conformed with the standard in meat content (not less than 75 per cent.) and starch content (not more than 6 per cent.).

FLOUR.

Various kinds of flour from the several mills in Queensland were fairly regularly examined.

Ordinary white flour varied in protein content from 10·3 to 12·2 per cent. with an average of 11·1 per cent.

There has been a steady decline in quality and protein content since the 1953-4 season, when the quality was high and the average protein content was around 12·6 per cent.

None of the samples examined was chlorine bleached.

"Protein rich" and "Gluten rich" claims on a few samples of flour and bread examined were not justified.

BREAD.

Quality bread surveys were made at Cleveland, Rockhampton, Biloela, Ipswich, Innisfail, Rosewood, Forest Hill, and Malanda, and with most of the samples the bread was of fair average quality.

Samples of wholemeal bread and brown bread were examined for wholemeal content and a few failed to conform with prescribed standards in this respect.

Bread was examined for the Health Department, the Brisbane and South Coast Hospitals Board, Weights and Measures Department, Prices Commissioner, and the Department of the Army.

TABLE CXII.

DETAILS OF LEGAL SAMPLES OF MILK SUBMITTED FOR ANALYSIS.

District.	Total Number of samples.	Number of samples which passed the standard.	Number of watered samples.	Number of samples below the standard in fat (3·3 per cent.) but not watered.	Number of samples below the standard in total solids (12 per cent.) and/or solids not fat (8·5 per cent.) but not watered nor deficient in fat.	Proportion of watered samples. (per cent.)	Average proportion of added water. (per cent.)
Greater Brisbane	730	673	14	21	22	1·9	3·2
Cairns	68	53	14	1	Nil	20·6	10·0
Central West ..	44	18	6	19	1	13·6	4·8
Gympie	17	13	4	Nil	Nil	23·5	9·5
Ipswich	160	128	6	13	13	3·8	6·5
Mackay	4	4	Nil	Nil	Nil	Nil	Nil
Maryborough ..	25	24	Nil	1	Nil	Nil	Nil
Mount Isa ..	18	11	2	5	Nil	11·1	27·5
North Coast ..	111	94	4	10	3	3·6	3·0
Rockhampton ..	42	36	1	4	1	2·4	8·0
Roma	11	6	2	2	1	18·2	5·0
South Burnett ..	23	22	1	Nil	Nil	4·4	13·0
South Coast ..	87	82	Nil	3	2	Nil	Nil
Toowoomba ..	158	144	3	11	Nil	1·9	9·3
Townsville ..	64	52	1	10	1	1·6	19·0
Total ..	1,562	1,360	58	100	44	3·7	7·5

(SUMMARY OF TABLE CXII).

	Proportion of total number of Samples. Per cent.
Samples adulterated with water ..	3·7
Samples deficient in fat but not watered	6·4
Samples below the standard in total solids and/or solids not fat only ..	2·8
Samples which passed the standard ..	87·1
Total ..	100·0

TABLE CXIII.

MILK SAMPLES TAKEN IN GREATER BRISBANE COMPARED WITH PREVIOUS YEARS.

Year.	Number of Samples.	Proportion of Total Samples.	Proportion Adulterated with Water.
		Per cent.	Per cent.
1949–50	1,154	53·0	1·7
1950–51	732	43·2	6·5
1951–52	878	41·8	4·3
1952–53	813	42·1	0·7
1953–54	768	37·7	7·7
1954–55	898	51·3	0·9
1955–56	679	41·9	0·9
1956–57	730	46·7	1·9

Seventy-four (74) loaves of bread were examined for dry solids content for the Weights and Measures Department in connection with new legislation on bread weight. Under "*The Weights and Measures Act Amendment Act of* 1957," proclaimed on the 10th April, 1957, the total dry solids of a loaf of bread shall be:—

In the case of a one pound loaf—not less than 9.6 ounces.

In the case of a two pound loaf—not less than 19.2 ounces.

In the case of a four pound loaf—not less than 38.4 ounces.

These figures apply also to the total dry solids of the bread contained in a package of sliced bread.

Queensland is the first of the Australian States to standardise bread weight on a dry solids basis.

TABLE CXIV.

SHOWING MILK ANALYSES COMPARED WITH PREVIOUS YEARS.

Year.	Number of Legal Samples.	Percentage showing Deficiency in Fat but not Watered.	Percentage Below the standard in Total Solids and/or Solids not Fat only.	Percentage of Watered Samples.	Added Water (Average per cent.)
1949–50	2,179	9·6	3·5	3·1	9·0
1950–51	1,695	9·7	2·7	8·7	8·5
1951–52	2,100	13·7	9·6	8·0	9·5
1952–53	1,934	7·8	3·5	2·8	10·2
1953–54	2,036	11·0	7·5	6·3	9·4
1954–55	1,750	6·4	3·0	3·5	10·2
1955–56	1,621	5·4	1·1	3·7	9·2
1956–57	1,562	6·4	2·8	3·7	7·5

TABLE CXV.

FAT CONSTANTS OF TABLE MARGARINE.

Sample Number.	1.	2.	3.	5.	5.	6.
Saponification Value	220	229	224	237	237	223
Iodine Value (Wijs')	39	29	39	19	19	38
Reichert Meissl No.	6·5	6·9	6·3	7·6	8·4	8·1
Polenske No.	5·0	6·6	4·8	7·4	6·5	5·4
Butyro Reading at 40°C	42·7	40·3	42·4	37·3	37·3	43·0

Quality Survey of "Hot Pies."

In a quality survey of the popular small hot meat pie on the market, 14 samples were examined.

The weights of the several pies varied from 4·4 to 5·3 ounces, and the meat content from 15 per cent. to 30 per cent. with an average of 22 per cent.

The overall quality of the pies was not good, the chief factors responsible being partial desiccation caused by long heating or frequent reheating of the product, poor quality meat and undercooking of the pastry.

A standard of not less than 25 per cent. meat content would appear reasonable.

Rusted Cans and Dented Cans of Foodstuff.

Rusted cans and dented cans of foodstuff are frequently submitted for opinion as to the fitness of the contents for human consumption.

The classification of cans showing external rust requires careful consideration. If the iron plate is definitely pitted, it is advisable to regard the can as spoiled since the danger of perforation is great. Cans which are slightly rusty without noticeable pitting of the iron, can be considered fit for immediate consumption.

As regards dented cans, apart from other considerations, considerable bacteriological significance should be attached to cans damaged by rough handling. The important points where such cans are concerned are the extent and location of the damage. Marked deformation of the seam will be attended by considerable risk of leakage and cans with this type of damage should be classified as spoiled. Similarly, where dents on the can body are so severe that seam distortion has occurred, cans should be rejected. Slight indentations on the can body are, however, permissible.

Sickness from Excess Preservative.

Cooked sausages containing 25 grains per pound of sulphur dioxide were the cause of sickness of a number of people, and dried apricots containing 27 grains per pound of the same preservative appeared to be the cause of sickness in another case investigated.

Scheduled Poison in Fireworks.

It is enacted that no person shall manufacture or sell any fireworks which contain any arsenic or other Schedule 1 poison.

Of 39 samples of fireworks examined, two only contravened this Regulation, containing antimony compounds in quantity.

Poppy Seeds in Bread.

A complaint sample from the public consisted of a loaf of bread with a large number of poppy seeds embedded in the crust. Bread rolls and loaves containing poppy seeds are more popular overseas than in this country.

Poppy seed is edible and entirely free of opium.

Dangerous Cake Decoration.

An imported article, claiming value in cake decoration, consisted essentially of glass wool and was quite unfit for the purpose. Crumbling of the fibres would produce small sharp rods of glass which could readily penetrate and damage the delicate membranes of the digestive tract. Its sale for cake decoration would not be permitted in Queensland.

Paint Position Satisfactory.

Paint legislation introduced last year prohibits the use of white lead in paint and drastically limits the use of lead chromate.

Paint manufacturers have fallen in line with this new legislation and most of the paint now sold in Queensland is free of lead.

Six hundred and ninety-six samples of paint and paint scrapings were examined for lead content.

Spirituous Liquors.

The position as regards adulteration of spirituous liquors with water was again satisfactory, following on the remarkably low figure of four samples received last year. Four samples containing excess water were again received, this year, three being rum and one brandy.

Toys.

Under Queensland legislation, no person shall sell any toy containing lead in any form whatsoever, either in the toy substance itself or the painted surface of the toy.

Two hundred and ninety-seven samples were examined in connection with this legislation. The metal part of the toy is now almost invariably free of lead, but the painted surface all too frequently contains lead in quantity due usually to the use of lead chromate as colouring agent in the yellow and green pigments. A recent endeavour to enforce the Regulation interfered considerably with local toy sales especially during the last Christmas peak period. Nevertheless, in the interests of the health of the child, this law should be enforced. When overseas paint and toy manufacturers become fully conversant with Queensland legislation and realise the necessity of producing a lead-free article, most of our present difficulties in this field should disappear.

Coloured Pencils and Crayons.

A further search for lead in articles coming within the reach of a child resulted in the examination of 336 samples of coloured pencils and crayons. A number contained lead in quantity, although the majority was free of this toxic substance. Here again the positive cases were associated chiefly with the use of lead chromate as colouring matter in the green and yellow pencils and crayons.

TABLE CXVI.

Composition of Honey (15 Brands).

		Maximum.	Minimum.	Mean.
Water (per cent.)	..	17·0	13·4	15·5
Reducing Sugar	(per cent.)	77·4	72·9	75·1
Dextrose	(per cent.)	41·5	33·9	37·6
Cane Sugar	(per cent.)	4·2	Nil	1·1
Dextrin	(per cent.)	2·1	0·7	1·2
Ash	(per cent.)	0·63	0·14	0·38
Nitrogen	(per cent.)	0·10	0·02	0·04
Acidity (Formic)	(per cent.)	0·14	0·04	0·07
Lead (parts per million)	..	1·0	Nil	0·3
Zinc (parts per million)	..	6·0	1·0	2·1
Reaction (pH)	..	4·8	4·1	4·3

Pollen grains— Present in all samples (chiefly from Eucalypt, Ti-tree and Wattle).

Test for Commercial Invert Sugar—Negative in all samples

Colour—(Lovibond Units)—Yellow—3·4 to 17·0
1 cm. cell— Red—0·9 to 2·9

Polariscope Reading ° V.—
Direct (constant)—8·6° to −22·8°
Invert—13·0° to −24·6°

Canned Fruit Juice.

A survey was made of the canned fruit juice on the market, including orange, pineapple, apple, and grapefruit.

The samples were in sound clean condition with Vitamin C contents comparing favourably with the fresh fruit; also there was no significant metallic contamination in any of the samples.

Lead in Tooth Paste.

Following on similar work last year, a further 15 samples of tooth paste in collapsible tubes were examined.

One of the metal tubes was aluminium, a definite improvement from a health angle on the other tubes which were all composed of lead.

The lead content of the paste was at a satisfactory level in most of the samples. With two samples, however, the lead content was excessive, and these samples were unfit for use. One was old stock and contained over 1,000 parts per million of lead.

Drugs and Medicines.

The examination of drugs and medicines followed the same pattern as previous years and 93 samples in all were examined.

Drugs were checked against British Pharmacopoeia standards and the composition and claims of new proprietary lines were examined.

Medicines were checked for accuracy of dispensing and complaint samples from the public were investigated. Most of these samples conformed with official requirements, and there was no sample of outstanding interest to record.

Spray Residues on Fruits and Vegetables.

The position under this heading was again satisfactory, following on a good year last year, and few complaint samples were received from the public.

The vast majority of fruit and vegetables marketed in Queensland is in clean, wholesome condition and free from any significant proportion of spray residue or other substance which is deleterious, objectionable, or injurious to health.

Tobacco.

In this section of the work, 238 samples were examined.

Contraband cigarettes and smoking tobacco from the Queen's Warehouse were examined for quality and suitability for sale.

Cigarettes from the open market and tobacco leaf were examined for spray residues.

Tender samples of cigarettes and pipe tobacco were examined for the Government Storekeeper and advice given as to the most economical lines for use in Government institutions.

Of 48 different brands of cigarettes and pipe tobacco examined, 3 were free of arsenic, 38 contained between 0·1 and 0·3 grains per pound, 6 between 0·3 and 1 grain per pound and 2 contained Arsenic (As_2O_3) at a rate in excess of 1 grain to the pound.

Lead Toys in Confectionery.

A popular line of children's confectionery examined, comprising 16 samples, had a plastic or metallic emblem, usually in the form of a ring or brooch, attached to the wrapped confection with a rubber band. In two cases, a toy ring attached to the confection, was composed of lead in contravention of the Regulations which prohibit the use of a metal ornament likely to contaminate the confectionery or capable of proving dangerous or deleterious in the hands of a child.

Filth in Foodstuff.

The overall purity of the food supply in Queensland is exceptionally good, and filth in foodstuff is of rare occurrence.

Unfortunately, however, isolated cases do occur despite the vigilance of health inspectors, and cases encountered during the year under review include:—

A cigarette dumper in a meat pie.

A piece of cottonwool in a bottle of soft drink.

Fragments of a cockroach in a bottle of pasteurised milk.

Rodent hairs in a slice of bread.

Decomposed lizard in a bottle of ginger ale.

Prosecution with resultant fine and publicity has a marked corrective influence on the careless manufacturer or on the careless handler of food and assists in keeping the purity of our foodstuff at the high level it attains to-day.

Survey Samples of Foods and Drugs.

The different brands on the market of the following foods and drugs were examined against prescribed standards:—

Olive oil (10), butter (16), flavouring essences (39), headache powders and tablets (22), glycerine (11), processed cheese (63), dripping (12), barilla soap (7), tomato sauce (19), canned fruit juice (9), canned fruit salad (7), preserved cherries (4), margarine (7), ice cream (67), and canned beetroot (10).

In general, the standard of the several lines was good.

Miscellaneous.

A number of samples of drugs, medicines, soaps, and foodstuffs was submitted for examination and reports by the Brisbane and South Coast Hospitals Board.

Submissions from the Departments of the Army and Repatriation totalled 59 and consisted chiefly of tender and contract samples of tea, coffee, cordials, bread, insect sprays, canned food, and sterilisation tablets.

Samples of drugs, shell fish, tea, and canned foods to a total number of 14 were submitted for examination by the Department of Health, New Guinea.

There was an increase in work within the section, on chromatography, especially in regard to the identification of dyes in foodstuff.

An investigation was made into the nature and stability of frozen food packs as sold to the public.

Coumarin was present in one food flavour in contravention of the Regulations.

A few samples of butter failed to attain a satisfactory standard of cleanliness.

A number of dead fish were examined for signs of poison and explosive shock in connection with the death of an unusually large number of fish in northern waters.

Fine black thread-like markings on imported cod fillets proved to be clotted blood in capillaries and not parasites, as complained of by the purchaser.

Old stocks of dangerous drugs from several pharmacies were found to be in a deteriorated condition and were destroyed.

The examination was made of a large number of soft drinks from Brisbane and from the country towns of Sarina, Tewantin, Babinda, Innisfail, Cooktown, Pialba, and Mackay.

There were a few cases of contaminated foodstuff including ammonium sulphate in sugar, sodium bicarbonate in arrowroot, and caustic alkali in milk.

A number of aerated drinks did not conform with the standard in that the acidulant was phosphoric acid.

Samples were also received from the Railway Department, the Education Department, the Prices Commissioner, the Postmaster General, the State Storekeeper, and the Department of Agriculture and Stock.

Water Section.

The establishment of new industries and the reorganisation and expansion of existing ones bring with them the problems of the disposal of waste water, and with the development of sewerage works within the State the combined volume of effluent is increasing year by year. For many years, in most parts of the world, such waste waters have been discharged to streams, often without any preliminary treatment. The result has been gross pollution of beautiful streams, with its menace to human health, the destruction of fish and other aquatic life, the development of offensive odours and murky water, and the building up of silt deposits.

In England, the use of synthetic detergents has caused so much concern to sewerage authorities that a special scientific committee was set up to study this single problem. Pollution of the Thames estuary is another problem being investigated by another special committee.

In Queensland, especially during extended dry seasons, samples of water from seriously polluted streams are submitted to the laboratory by interested Government authorities. In most cases, the trouble arises from oxygen depletion; there is insufficient intake of oxygenated water to supply the oxygen demand of the effluents discharged to the streams in question. Under these circumstances, anaerobic fermentation with its accompanying objectionable odours and unsightly conditions, sets in.

Advice has been sought on steps to overcome pollution, but little can be done unless the oxygen level in the stream is maintained by sufficient intake of fresh water or natural oxygenation can more than keep pace with biochemical oxygen demand. The real solution to stream pollution lies in pretreatment of waste waters to such an extent that on discharge to a stream, the level of oxygenation of the water is not seriously affected or reduced to a stage where the biological equilibrium of the stream is upset. To determine this requires considerable investigation for each particular case, and it is anticipated that much more work will be required on such problems in future.

Owing to the protracted dry season, considerable demand has arisen for the analyses of waters for human consumption and domestic use, but determinations of salinity and suspended solid content on samples of Brisbane River water for the Department of Harbours and Marine have lessened because of the low intake of fresh water. An increasing number of samples of sewage from the Department of Local Government, and the Commonwealth Department of Works and Housing has been recorded.

Table CXVII. shows the number of the water samples received from the several Departments indicated, and the Public—

TABLE CXVII.

Department.	Number of Samples.
Health and Home Affairs	178
Irrigation and Water Supply	728
Local Government	313
Harbours and Marine	312
Miscellaneous Government	239
Public	237
Total	2,007

Section 2.

TOXICOLOGY, BIOCHEMISTRY, AND INDUSTRIAL HYGIENE.

I. L. B. Henderson, B.Sc., Officer-in-Charge.

The total number of specimens submitted for examination by this section was 3,686.

Police Department.

Specimens submitted by this Department during the year numbered 316, of which 208 were in connection with 86 post-mortem examinations.

Poisons found included barbiturate (35), strychnine (3), organic phosphate (2), paraldehyde (2), pentachlorphenol (1), morphine (1), pethidine (1), chloral (1), cyanide (1), A.P.C. mixture (1), cresol (1), ferrous sulphate (1), hydrochloric acid (1). The remaining 35 post-mortem examinations did not disclose any poison but were required to exclude any possibility of poison being the cause of death.

A number of suspected animal poisonings were also investigated, strychnine being found in 3 cases. Other specimens examined for this Department included bloods, urines, baits, foodstuffs, drugs, medicines, clothing, and plant material.

Biochemistry.

Biochemical specimens are examined for the Laboratory of Microbiology and Pathology, the Government Medical Officer, the Queensland Institute for Medical Research, the Director of Industrial Medicine, the Brisbane General Hospital, other hospitals and medical practitioners.

The nature, significance and number of such specimens are shown in the following table:—

Table CXVIII.

Nature of Specimen and Significance.	Number of Specimens.
Blood or Urine, for alcohol or other drugs	824
Blood for Carbon monoxide	12
Urine for lead	2,242
Urine for Mercury	6
Bone for lead	8
Hair, nail and urine for arsenic	98
Miscellaneous	50
Total	3,240

The determinations of alcohol in blood and urine are carried out for the Government Medical Officer, the majority in connection with charges against motorists, and for the Government Pathologist who submits post-mortem specimens in appropriate cases.

The number of urinary lead determinations has almost doubled as compared to the previous twelve months, the majority of specimens coming from employees at Mount Isa Mines.

The analyses of human bones for lead content which have been carried out for some years on behalf of the Queensland Institute for Medical Research are now completed.

Industrial Hygiene.

Excluding biochemical specimens, the number of samples examined was 130.

The Section undertook 19 investigations during the year, all for the Director of Industrial Medicine.

These investigations included:—

- Lead estimations in air at a battery works;
- Survey of lead contamination around a lead smelting works;
- Determination of carbon monoxide in exhaust from jet aircraft;
- Investigation of irritation caused by glass fibre insulating tape; and
- Investigations of the use of mechanical buffing for lead filling in car body works.

Section 3.

MINES MINERALOGY, METALLURGY, AND EXPLOSIVES.

V. R. Cundith, B.Sc., A.R.A.C.I., A.M. Aust. I.M.M., Officer-in-Charge.

Table CXIX shows the sources of work done by this Section and the number of each to account for the total of 4,473:

TABLE CXIX.

Department.	Number of Samples.
Geological Survey and Mines Department	1,079
Coal Board	123
Portmaster (Explosives)	2,242
Other Departments (includes 285 tiles)	927
Public	36
Commonwealth Departments	66
Total	4,473

Geological Survey and Mines Department.

The types of samples from these Departments generally conform with those of previous years but a great proportion of work was concerned with coal, followed by the assay of gold, silver, copper, zinc, manganese, tungsten, and other ores.

Clays were tested as to suitability for bricks, earthen-ware pipes, or common pottery. In regard to house bricks, complaints have been received occasionally about efflorescences which appear on stored bricks or bricks laid in a wall. These salts may have been present in the clay or water used to make the bricks, or may have been produced during the burning process. In some cases, the efflorescence is due to the mortar, while the greenish to yellowish brown staining is frequently due to the presence of vanadium salts.

There is a good market for high class fire bricks and some samples received, although not conforming with the requirements for first class quality, would be serviceable in environments where temperatures up to 1,590°C. obtain.

Softening Points for Fireclay or Firebrick (American Society of Testing Materials).

	°F.	°C.
Super Grade—not lower than ..	3,173	1,745
High duty—not lower than ..	3,056	1,680
Intermediate duty—not lower than	3,018	1,659
Low duty—not lower than ..	2,806	1,541

The softening point is recorded as that temperature at which the top of a cone, made from the clay to standard measurements and fired in a furnace under controlled conditions, bends over to touch the mount base.

In addition, shrinkage and resistance to deformation with load at operating temperatures are essential.

Building bricks made from clays with much lower fusion points than those of the above categories, are used as fire bricks, because of suitability for duty at temperatures up to 1450°C.

Sulphuretted Hydrogen Gas in Mines.

Complaints arising with the presence of H_2S in working places were investigated in the coal mines and concentrations as high as 120 parts per million were found in a freshly drilled bore hole at a fault. The concentrations of H_2S in a drilled hole nearby with a similar concentration the previous day, showed less than 1 part per million.

Concentrations at working face were less than 1 part per million, thus indicating effective dilution by ventilation air supply.

The permissible concentration for H_2S is 20 parts per million for prolonged exposure.

Bauxite.

A bauxite sample yielded:—

Total Alumina (Al_2O_3) ..	56.0 per cent.
Total Iron Oxide (FeO_2) ..	5.6 per cent.
Total Silica (SiO_2)	4.4 per cent.
Soda soluble Alumina (Al_2O_3)	44.5 per cent.
Soda soluble Silica (SiO_2) ..	1.8 per cent.

Rutile

Of interest is the occurrence of lode rutile in the Mount Perry district. The rutile is contaminated with quartz. Two samples received assayed—

	1	2
Silica (per cent.)	1.0	6.8
Iron as Fe_2O_3 (per cent.) ..	0.7	1.0
Titania (TiO_2) (per cent) ..	97.3	92.1

Mine Airs, Bore Gas and Other Samples.

Samples of mine air and bore gas taken during drilling for oil operations were received for examination.

A gas from a mud volcano in Papua contained 97·1 per cent. Methane.

A gas taken from behind a seal in a coal mine showed—

Carbon dioxide	3.6 per cent.
Oxygen	0.5 per cent.
Methane	89.4 per cent.
Nitrogen	6.5 per cent.
	100.0 per cent.

Amberley No. 3 Colliery, near Ebbw Vale, which had been closed down for some time, was examined in May to determine any hazards of gas ignition arising with a fire in old workings near the upcast shaft. Seals were made and the shaft subsequently filled with earth to extinguish the fire.

Some specimens stated to be natural occurrences were found to be coal tar pitch or bituminous residues derived from the weathering of fuel and furnace oils.

Radioactive Ores and Radioactivity.

A number of samples (80) was received from the University of Queensland for Uranium and Thorium Assay.

These samples are used to determine extraction efficiencies in the treatment of various uranium ores undertaken at the Department of Mining and Metallurgy. The estimations of phosphorus, copper, zinc, and alumina were also required. Checks were made on fruits and vegetables during the year for possible radioactive fall out.

The delivery of a Scintillation Counter ordered May, 1956, from the Atomic Energy Research Establishment, Harwell, is expected later this year, 1957. This equipment, together with other radiometric apparatus to hand, will be housed in a small laboratory just completed.

Coal.

The coal work for the Government Geologist and State Coal Board continues to maintain pressure, due to drilling activities in the Ipswich, Collinsville, and Scottville districts, and to colliery investigations by the Coal Board. Nine hundred and thirty-nine samples were received from these sources, and most of these were examined for Calorific Value, proximate analyses, sulphur content, specific gravity, fusion point, analysis of coal ash, and washability tests. Sink and float tests were carried out at gravities 1·35 to 1·85 by 0.05 rises on various sizings with further work on middlings obtained.

These tests serve to indicate the quality of coal reserves available to cater for industrial requirements and expansion.

Analyses (average) of Queensland Coals (as sold)—

—	Ipswich.	Callide.	Bluff.	Blair Athol.	Styx.	Collinsville.
Proximate Analysis (air dried)—						
Inherent Moisture (per cent.)	2·1	9·0	1·3	7·4	2·3	1·1
Volatile matter (per cent.)	27·1	26·0	14·0	27·8	28·9	21·0
Fixed Carbon (per cent.)	43·3	50·9	73·2	56·8	54·2	61·4
Ash (per cent.)	27·5	14·1	11·5	8·0	14·6	16·5
	100·0	100·0	100·0	100·0	100·0	100·0
Calorific Value—						
Gross British Thermal Units per pound (air dried basis)	10,000	10,100	13,350	11,800	11,900	12,550
Sulphur (per cent.)	0·4	0·3	0·7	0·4	0·6	0·9
Specific Gravity	1·53	1·53	1·41	1·36	1·42	1·49

The coal work has more than doubled and has involved the full time employment of three (3) analysts.

Accommodation.

At the present time, accommodation in the section is already overtaxed and there is insufficient operating space to cope with the additional requests for more coal testing.

It is hoped additional space will be provided in the coming year so as to cope with this increase in work.

Other Departments.

The consultative and analytical services supplied by the section have been well utilised.

Soils (corrosion tests), cement and concrete products, brass tubing, steel, stainless steel, filter sands, tiles, roofing, terrazzo, pigment, battery acid, plastic containers, inflammable gas detectors, spectacle frames, effluents, corrosion products, plated metal, and reactivity of aggregate tests indicate the range of samples handled.

In connection with concrete and mortar, some samples were found to be well below specification, both in cement content and quality of sand used. In some instances, the correct aggregate cement mixture had been used, but the use of excessive water and its subsequent leakage from poor forms, caused loss of cement. A sample of compo showed an acceptable mix of 3·6 sand to 1 cement (by weight). The sand recovered from this sample however gave the following results:—

	Sample	Maximum permissible limits
Percentage passing B.S.S. No. 25 mesh	96.4	100
Percentage passing B.S.S. No. 52 mesh	88.2	65
Percentage passing B.S.S. No. 100 mesh	48.2	15
Percentage passing B.S.S. No. 240 mesh	15.8	

The compo proved too weak in service, because of either or both—

(1) excessive fines;

(2) insufficient soaking of bricks when being laid.

The bulk of the concrete analyses was for the Local Government Department in connection with investigations into the action of aggressive town water supplies and problems of sewage disposal.

Only one tile out of 285 concrete roofing tiles examined failed to conform with the specification in that it was coloured with unofficial colour.

On two occasions, complaints were received from the General Hospital relative to the rusting of stainless steel receptacles, such as kidney dishes, bed pans, bowls, buckets, &c., to ordinary water. The steels proved to be 18:8 type of stainless steel which is very resistant and useful for most hospital purposes. In this case, the rusting occurred overnight and was due to contributing factors such as—

1. Intercrystalline corrosion, which usually follows work hardening and/or incorrect heat treatment during processing.
2. Weld decay—all welded vessels showed a number of rust spots in the welded areas.
3. The presence of iron particles embedded in the surface during fabrication or polishing.

Concerning the failure of heating elements in hot water systems in which the feed water contacts the copper element sheath, the continued use of hard water results in the deposition of scale, which insulates the water from the heat, with subsequent overheating and break down of the element.

A brass tubing sample showed a type of failure known as "season cracking." The primary cause of failure is initial stress introduced during manufacturing processes. The cracks form in articles that appear of sound design and may even develop before being put into actual service.

Some die cast zinc aluminium alloy autoclave clamping rings received were found to be severely corroded. The rate of corrosion of zinc alloy varies greatly with exposure conditions such as temperature, sweating, pH, stress segregation, porosity (gas blows) and contact with more noble alloys. In addition to being nickel plated and in contact with a graphite coated gasket, most of the above factors were operating whilst the autoclave was in use.

Some samples of fresh water sponge gemmules and spicules were received for examination. The sponge growths were investigated as a possible corrosion product on the retaining wall of the Somerset Dam.

The presence of sulphur bacteria in a sample of water indicated the source of corrosion troubles. The water contained H_2S produced by the action of sulphur bacteria on dissolved sulphates; exposure to another type of sulphur bacteria, when discharged from a pipe, led to acid and slime formation.

Some samples taken in connection with the apparent corrosion of lead sheathing of telephone cables in a manhole, showed the effects of decaying fungus growths after entry of muddy water. The lead compound formed as a result of these conditions chiefly consisted of sulphide of lead.

Aviation oxygen supplies to the R.A.A.F. were regularly tested throughout the year.

Of interest is the use of coal burning gas producers for public electricity supply purposes in a number of Western and Central Queensland towns. The producers consume about 1·8 pounds of coal per unit generated and are more economical than charcoal or oil fuel. A number of producer gas samples was received from the Southern Electricity Commission, which has successfully commissioned several coal burning producers.

Explosives.

During the year, 2,242 samples of explosives were examined for the Portmaster.

These samples were received from the Government Magazines at Dakabin and Bajool, and they represent consignments of imported explosives from the Manufacturers, Nobels (Australian) Proprietary Limited, Deer Park, Victoria.

The explosives passed the required tests and were certified as safe for storage, transport and use.

An explosion which occurred during the unloading of a drum of liquid Zinc Chloride was found to be due to excessive gaseous (hydrogen) pressure. Other drums were found to be ruptured. Apparently, the drums had not been occasionally vented, with the result that with a little more residual acidity in the preparation than usual, plus interaction with the galvanised interior of the drum, a pressure build up occurred.

It is usual to use drums with uncoated steel interiors for the transport of this commodity.

Section 4.

FEDERAL DEPARTMENTS, STATE STORES, MAIN ROADS, PUBLIC WORKS, &c.

J. Adamson, A.R.A.C.I., Senior Chemist, Officer-in-Charge.

There was a falling off in the number of samples reported by this section, when compared with the previous year. The main decrease was in the Federal Departments of Customs and Excise and the Department of Primary Industry. These results were due to the imposition of import licensing with the consequent restriction of imports; and also to the effects of drought on our primary industries.

The following table gives in detail the samples examined by this section:—

TABLE CXX.

Customs and Excise	1,683
Primary Industry	982
Public Works Department	697
Queensland Housing Commission	703
State Stores Board	494
Main Roads Commission	162
Explosives (Fireworks)	209
Other Government Departments	105
Public	2
	5,037

Commonwealth Departments again provided the bulk of the work carried out by this section. The work performed for these departments is exceedingly varied and the section is often called upon to deal with substances which have been but recently developed in overseas countries, and about which little or no information is available. The Department of Primary Industry (formerly Commerce and Agriculture) submitted a wide variety of samples, chiefly with a view to the maintenance of export standards.

The Public Works Department and the Housing Commission again availed themselves of the services of the laboratory in checking the quality of paints used by them. Generally the paints were of a highly satisfactory quality, paints containing lead compounds being conspicuous by their absence.

The State Stores Board again submitted a wide range of materials for testing and evaluating. They included, amongst other things, textiles of all varieties, inks, office paste, detergents, insecticides, soaps, cordials, and disinfectants. The advice of this section is also sought by the officers of the Board on many problems which confront them during the year.

The examination of bitumen, bitumen emulsion, tars, and other roadmaking materials was again undertaken for the Main Roads Department. Fireworks imported into this country were again examined by this section and none of the imports contravened the regulations of the Explosives Act. Although this section received a lesser number of samples than in the previous year, the staff was kept fully occupied, and was able to devote some time to the perusal of current literature.

DIVISION OF NURSING.

Adviser in Nursing: D. Bardsley, A.T.N.A., F.C.N.A.

Introduction.

The survey of the causes of wastage of student nurses from Queensland hospitals has now covered a period of over one year and a more accurate assessment of the problems it presents can therefore be made.

From the figures supplied to the Division of Nursing by the matrons of all training schools it can be seen that from 1st July, 1956, to 30th June, 1957, some hundreds of young women, many of whom in the beginning were genuinely attracted to nursing as a career, left hospitals without completing their training for reasons which show an infinite variety even though the majority fall into fairly well defined groups.

But the problem of wastage cannot be dealt with by a simple assessment of numbers.

A. R. J. Wise says in his book "Your Hospital"—"At the root of the problem is the great diversity of the human material. Girls who are attracted to nursing, at school or later, as a sudden whim that must be developed at impact point or as a strong inclination that may need to be "deglamourised' without being discouraged, fall into no identifiable pattern. They may be rich or poor; resourceful or timid; highly intelligent or dull; ultra-sensitive or stolid."

The few contacts with ex-student nurses which the Adviser has been able to make have pointed to the fact outlined above—that in the long run it was the individual reaction of each of these girls to a life so totally different from that to which they had been accustomed before their entrance to hospital which formed the basis of the problem.

The "Working Party Report on the Recruitment and Training of Nurses" published in 1947 by direction of the combined Ministeries of Health, and Labour and National Service, England, and the Department of Health, Scotland, and one of the best known of the many national surveys on nursing which have been carried out in the last few years, after analysing hundreds of letters submitted by ex-student nurses states—"The type of discipline pervading the nursing schools is the most important cause of student nurse wastage—a discipline far removed from the pattern of life to which girls are accustomed today."

Australian student nurses meeting in Conference in Brisbane about eighteen months ago and themselves setting out to find an answer to the question "Why do nurses discontinue their training?" gave "Difficulty of the new trainee to adjust to her new environment," "Non-suitability of certain types of girls to the occupation" and "homesickness" as the three reasons other than marriage which in their opinion cause the biggest problems of wastage.

A comparison of these various statements with the results on the present survey is interesting and may form a useful basis for further investigation.

The Division of Nursing continues to be in demand as a nursing information and advisory bureau for both trained and student nurses and prospective students. In this connection a large number of personal interviews, letters, and telephone calls have been dealt with.

Work in connection with the Salk vaccination campaign made a great demand on the Adviser's time especially in the early stages of the campaign and of necessity some of the original work of the Division has had to be curtailed.

The Matrons' Conference in which the Adviser is required to take a prominent part again proved its value in developing mutual interest and co-operation between hospital matrons throughout the State. The study programme arranged for the matrons once again proved a useful instrument for stimulating interest and broadening the viewpoint of senior administrative officers compelled to work very much alone in the confined sphere of individual hospitals, most of them unable, for various reasons, to undertake full length post-graduate courses.

Matrons continued to communicate with the Adviser for help and guidance in a number of their problems and the close liaison which has been developed between the Division and matrons and other hospital administrators has shown good results, notably in the excellent co-operation received in the survey on wastage and certain aspects of the Salk campaign.

Survey on Wastage of Student Nurses.

After some initial difficulties this survey has been developed into a fairly efficient routine in which every nurse training school in the State now takes part.

In addition to the particulars given in the 1955-56 report matrons were asked to supply the age and educational standard of girls leaving hospitals without completing their training in order to check the validity of statements about the causes of wastage which are made to the public from time to time by persons concerned with nurse training.

From the figures supplied it is noted that marriage has now moved into first place as a cause of wastage but only in respect of the country hospitals.

Insufficient preliminary education and lack of ability to cover the theoretical study involved certainly appear as causes but not by any means to the extent that is often implied.

In the absence of figures covering the total number of girls with post-primary education admitted to training it is not possible to make a positive statement but as the number is known to be comparatively small in relation to the total intake it would seem that girls with post-primary education up to senior standard decide not to continue their nursing training in

numbers which are proportionately as high as those who have entered with the minimum educational standard.

Ill-health as a cause of wastage would appear to be too high when it is assumed that a thorough medical examination is given when a nurse is admitted to training. As the research into wastage continues, medical reports of initial and subsequent medical examinations will be obtained in order to ascertain if there is any relation between ill-health and training and, if necessary, what steps can be taken to prevent this as a cause of wastage.

The number of nurses in the 19-20 year age group who resigned compared with the 17 years group is interesting in that it is generally accepted that there would be a much higher proportion in the latter and this might be worth further investigation. However, the greatest proportion of wastage does occur in the first year of training and this is to be expected. The girl who is stated to be "unsuitable for nursing" or "does not like nursing" is likely to discontinue her training during the first year and this is often dismissed as inevitable and the best thing that could happen.

But it is through this group—the young nurse in her first year of training—that the problem of wastage must be tackled if anything is to be done with it at all; if only from the angle that every young nurse who enters training full of enthusiasm and a desire for service as so many of them do and who leaves nursing disappointed or dissatisfied is not only an economic loss to her hospital but a bad advertisement for nursing among other girls in her group and their parents.

It is interesting to note at this stage that in the majority of cases the matrons' reports on nurses who have resigned stated that their work and conduct have been satisfactory to good and in some cases that they were good nurses or had the qualifications for good nurses.

As stated in the last report it becomes obvious that the reasons for resignation given to the hospital authorities are not always the correct ones and where the reason is stated to be "personal" the question of human relations looms large. A number of these girls remained interested in nursing and after a talk with the Adviser asked to be assisted to continue their training at other hospitals. A number had found other occupations unsatisfying after nursing and later applied to other hospitals to continue their training. But these were in the minority.

The Working Party Report in its summary of main conclusions states "a new procedure in selecting student nurses is required."

The importance of the selection interview is still not sufficiently appreciated by many matrons. Many ex-student nurses have received little or no information about nursing and remain completely ignorant of the many opportunities open to the registered nurse which would provide a goal during the difficult early months of training.

The dramatisation of the personal interview given to members of the Matrons' Conference in Townsville in 1956 has proved of value but absences of a number of matrons from such conferences means that they are not reached by the teaching programmes provided.

The number of already general trained nurses who discontinued their obstetric training because they did not like midwifery would seem to make it advisable to do some research into this particular course to find the reason why, in its present form, it is not proving interesting to the trained nurse.

There is no doubt that with the competition of the many other fields of employment open to the type of girl whom it is desired to attract into nursing plus the increasing number of trained nurses required, the problem of the wastage of student nurses becomes one of increasing importance. It is hoped the results of this survey may form a useful starting point from which the problem may be tackled.

However, during compilation and study of the returns in this survey it has been realised that publication of figures at this stage would be premature. Further details will be required from hospitals before an accurate wastage percentage for each hospital can be arrived at, and to present a true picture the survey should be carried out for a longer period than one year.

In order to reduce the clerical work required of matrons or other officers co-operating in the survey the supply of a pro forma of details required will be supplied by the Department.

Salk Vaccination Campaign.

Since June, 1956, the time of the Adviser in Nursing has been divided between the increasing work of the Division of Nursing and the Salk campaign.

Visits to School Health Service teams working the campaign in country districts were shared with the campaign organiser prior to commencement of vaccinations in July, 1956, and where necessary visits have since been made to check on special problems of organisation. Where possible visits to hospitals were made at the same time.

In order that no interference should occur to the campaign as planned through the absence of staff the Adviser made special arrangements with matrons of country hospitals in towns where the headquarters of Salk teams had been established. Following these arrangements each matron developed a panel of relieving nurses who would hold themselves available to carry on with the work of the campaign should illness or other emergency cause absence from duty of the School Health sisters concerned with the campaign.

These sisters were instructed as to the procedure to adopt in such emergency and the relieving nurses attended the School Health offices and local schools and were instructed in clerical work and vaccination procedures. As a result of this organisation no case has occurred in which a Salk programme has been disrupted by absence of staff. In some cases matrons of hospitals have provided emergency or additional assistance from their own staffs and in other cases offered accommodation to the Salk teams.

Approaches have been made to the Queensland Country Women's Association and other bodies in cases where School Health sisters in country areas have had difficulty in obtaining living accommodation.

Appointments of temporary sisters to the Salk campaign and other matters relating to management of nursing staff have come under the control of the Adviser.

Queensland Country Women's Association Summer School.

In December, 1956, as the result of an approach to the Department by the Organiser of the Country Women's Association Summer Schools—Mrs. A. V. Sterne—the Adviser was requested to conduct the sessions on nursing to be included in the study programme for C.W.A. leaders attending the 1957 Summer School.

Accordingly the Adviser was in Atherton from January 15th to 18th, 1957, and conducted classes and study groups on such subjects as the importance of nursing and the well-trained nurse to the community; the influence of the home in developing attributes required of a nurse and what the C.W.A. could do for nursing publicity and the contentment of nurses in country hospitals.

In order to enhance the educational value of the sessions the Adviser distributed to the students duplicated copies of her talks and methods of conducting group studies. As the members attending the school were representative of most of the C.W.A. Branches in Queensland the question of the importance of nursing should, as a result, have been brought well under the notice of country women.

A number of the members took the opportunity of obtaining more detailed information on nursing training and discussed this with the Adviser in connection with their own daughters or those of relatives or friends. This provided a further opportunity of stressing the scope which nursing provides for suitable girls.

Letters of appreciation of the contribution of the course have been received from the C.W.A.

Annual Conference of the Matrons' Association.

This Conference was held in Brisbane from May 13th to 17th inclusive and attracted an attendance of over 60 matrons—the largest attendance since the Association was formed. A number of the matrons came from the most distant parts of the State.

The subject chosen by the matrons for this year's study was "Public Health" and the Adviser was again asked to arrange the programme.

In order to relate the subject of Public Health as closely as possible to the work of the hospital it was decided to include a comprehensive picture of the work of the State Health Department; some instruction on the meaning of vital statistics and to stress the various angles of mental health which because of her concern with the mental as well as the physical health of both patients and staff is an important subject for every matron.

The completed programme included lectures on "The Queensland Public Health Services" by the Director-General of Health and Medical Services, Dr. A. Fryberg, assisted by the heads of the various public health services; "Measurements of Public Health" by Dr. D. W. Johnson, Deputy Director-General; "The Effect of Hospitalisation on the Education or Occupation of the Patient" by Mr. John Damm, Research and Guidance Branch, Department of Public Instruction; a Symposium on "Mental Health in the Hospital" in which various aspects of the subject were covered by Professor J. Bostock, Department of Medical Psychology, Queensland University; Dr. B. F. R. Stafford, Director of Mental Hygiene; and Dr. N. Parker, Psychiatry Clinic. Mr. J. Holliday, Publicity Manager, Health Education Council, followed a talk on "Health Education in the Hospital" by a programme of films on the Rehabilitation of the Aged and the Physically Handicapped.

Visits were arranged for the matrons to the Brisbane Chest Hospital, Chermside, the new South Brisbane Hospital and the Brisbane Mental Hospital, Goodna.

The visit to the Mental Hospital at which modern treatments for the mentally sick were demonstrated and visits paid to wards, hospital block and recreational and occupational therapy units could have far reaching effects in developing among general nurses an understanding of the work of the Mental Hospital and the increasing scope of psychiatric nursing.

Group discussions on various public health services, arranged by the Adviser, proved informative and a useful way of encouraging the exchange of opinions among the matrons.

The Adviser in Nursing had talks with as many matrons as possible during the Conference week and a number discussed special problems with her.

The interest of the matrons in the work of the health services which supplement the work of the hospitals was most stimulating and many expressions of appreciation have been received.

Study Programme for Overseas Nurses.

The Adviser was again requested to arrange a post-graduate study programme for two public health nurses from Singapore studying in Australia under the Colombo Plan. The period to be covered by the programme was eight weeks—three weeks longer than that arranged for the two 1956 students.

Considerable planning was required in order to develop a useful and effective programme for nurses whose work has to be carried on in conditions which vary greatly from those in Australian cities. With the helpful co-operation of the administrators of the public health and education services and the Director of the Lady Gowrie Child Centre a comprehensive schedule was arranged.

The students were introduced personally to each department by the Adviser prior to commencing study there and had periodical meetings with her to assess the value of the studies. During these discussions they expressed great appreciation of the consideration and assistance they had received from medical, nursing and other staffs of the departments concerned.

Reference Books for Teachers in Schools of Nursing.

Owing to the very large number of books on all nursing subjects which are now published the problem of suitable reference books for teachers is being raised continually by hospitals through their requisitions for such books.

In order to simplify the matter the Adviser at Departmental request developed a short list of reliable works on general nursing subjects and important specialties which would seem to meet the needs of medical and nursing staffs required to teach student nurses. This has involved considerable reading in order to arrive at a true comparison of the many works available and it is hoped that the list as compiled will be of assistance especially in the smaller hospitals where the matron is required to carry out most of the teaching and may be unsure of the fields her own knowledge should cover.

Book Review.

The Adviser was asked by the International Council of Nurses to review in a 500-word article a recently published work on Gynaecology for Nurses for the International Nursing Review.

Co-operation with Interstate and Overseas Organisations.

A proposed information pamphlet on the nursing profession prepared by the Occupational Research Section of the Commonwealth Department of Labour and National Service was referred to the Adviser by the Department for comment and a check of the information contained therein as it related to Queensland. Parts of the pamphlet required considerable alteration and clarification before it could be returned to the Regional Director of the Department concerned.

Numbers of enquiries from organisations and individual nurses in other States and countries regarding nursing in Queensland have been dealt with.

The Management of the Georgina McRobert Memorial Hospital, Kanpur, India, requested that an interview be held with a prospective candidate for a nursing staff position and a similar request was received from the Overseas Nursing Association, England.

Special Interviews.

The assistance of the Adviser in Nursing has been sought in interviews with candidates for Government nursing positions and the Secretary of a large coastal hospital asked that a candidate for a Sister Tutor post be interviewed by the Adviser on behalf of the hospital.

Graduation Ceremonies and other Functions.

In November, 1956, the Adviser was asked to give a talk to the nurses at the graduation ceremonies at both Maryborough and Bundaberg Hospitals. Graduations at the Brisbane and Ipswich Hospitals and Maternal and Child Welfare Service were also attended, as well as the official opening of the Annual Conference of Health Inspectors and Annual Meetings of several organisations connected with nursing and nurses.

The Adviser has been notified by the International Council of Nurses that at the International Congress held in Rome recently she was re-elected to represent Public Health Nursing on the Nursing Service Committee of the International Council.

Conclusion.

It is desired to draw attention to the steady expansion of the work of this Division testifying to the useful part it is capable of playing in many aspects of nursing organisation. In order to achieve this to the full close co-operation must be maintained with officers of the Department, other Government Departments and administrative staffs of hospitals as well as outside organisations.

DIVISION OF SOCIAL SERVICES.

Welfare Officer: Mrs. V. Wills.

The Welfare Officer has been constantly engaged in the varied phases of the work covered by this section during the year.

The few temporary housing areas now remaining have been regularly visited and routine hygiene inspections carried out. In many instances appointments have been made for residents obviously in need of medical attention. Complaints regarding some State Rental houses have been investigated.

Arrangements have been made for the admission to Eventide of aged people found with no one to care for them; appointments have been made for persons requiring psychiatric, medical, and dental treatment, and assistance has been given others in the completion of applications for social service pensions.

Assistance has also been given unmarried mothers in obtaining accommodation, employment where necessary, and in the care of the child. Arrangements have also been made for domestic help to families where the parents are ill and for attendance at ante-natal clinics and maternal and child welfare clinics.

Complaints regarding neglected children have been investigated and referred to the State Children Department where necessary. In most instances, these matters have been quickly rectified.

Regular inspections have been made of toilet facilities provided for patrons in theatres, emporiums, and public parks.

The Welfare Officer has also maintained liaison with the Prisons Department and assisted in the rehabilitation of discharged female prisoners.

This section has also co-operated with the section of Enthetic Diseases.

Legislation.

By proclamation in the *Government Gazette* on 29th June, Breast Abscess and Infective Hepatitis were declared to be notifiable diseases.

Acknowledgments.

I desire to convey my thanks to all members of the staff for their unfailing and conscientious attention to duty. Thanks are again given to Government Departments, particularly the Government Statistician who, as usual, has been of great assistance in preparing the Vital Statistics Section in this report and has supplied other statistical details sought from time to time throughout the year.

I would again give thanks to the members of the Advisory Committee on Hospital Drugs and Surgical Appliances for their co-operation and would particularly mention Dr. A. D. D. Pye, General Superintendent of the Brisbane Hospital, for his ready and helpful assistance at all times.

I would also express my appreciation of the co-operation given by the Agent-General for Queensland and the Chief Medical Officer, Australia House, London, in interviewing medical practitioners who have applied for positions in Queensland hospitals.

Thanks are given to all who assisted in making the Salk vaccination campaign such a great success and, in addition to those mentioned earlier, I would thank Dr. E. A. Shaw of the Red Cross Blood Bank, Dr. A. R. Vickers of the Flying Doctor Service, and the *Courier-Mail* and *Telegraph* for arranging distribution of vaccine free of charge. Mention must be made also of the help given by the girls of St. John's Ambulance Brigade who freely gave of their time to assist at special clinics.

APPENDIX A.

ANNUAL REPORT OF THE NATIONAL MOSQUITO CONTROL COMMITTEE FOR 1956-57.

The work of the Committee during the year has included further field and laboratory studies of the Queensland mosquito fauna, identification of numerous specimens submitted from various sources, and an investigation of the mosquito problem at Rockhampton. Publication of the results of the research, and exchange of information and specimens with other workers have continued. Dr. E. N. Marks was granted leave to attend the A.N.Z.A.A.S. meeting at Dunedin, New Zealand, in January at which she presented a paper on "Recent Research on Queensland Mosquitoes."

1. Field Work.

General results were additions to the collections and new distribution records. The following list summarises the localities in which field work was undertaken:—Ashgrove, 1-8-56; Salisbury and Coopers Plains, 5-9-56; Bribie Island, 14–16-9-56; Beerwah, 22-9-56; Camp Mountain, 23-9-56, 21-5-57; Belmont, 14-9-56; Tamborine Mountain, 13-11-56; Scarborough, 17-11-56; various localities in New Zealand, January, 1957; Armidale, New South Wales, 13-2-57; Ebor and Dorrigo, New South Wales, 14-2-57; Yarraman and Cooyar, 3-3-57, 18–22-4-57; Rockhampton, 26-3-57—8-4-57.

Ashgrove.—Assistance and advice in collecting was given to a student studying the algal food of mosquito larvae.

Salisbury and Coopers Plains.—A visit with Mr. P. J. Sparks, Health Inspector, Brisbane City Council, to locate sites where Council inspectors had previously collected two species, *Anopheles corethroides* and *Hodgesia cairnsensis*, about which more information is required.

Yarraman.—*Aedes alocasicola* which normally is found in rainforest where it breeds in leaf axils of cunjevoi, was taken in this comparatively dry area where springs in the hoop pine forest allowed the growth of cunjevoi.

New Zealand.—Few specimens were previously available for comparison with Australian species. Twelve collections made included five of the ten species known to occur in New Zealand and have added very useful material to our collection.

Armidale.—A day was spent with Messrs. B. V. Fennessy and E. Waterhouse, of C.S.I.R.O. Wild Life Survey Section, inspecting the work on mosquitoes being done by the Section at Armidale. Numerous collections from the district, including several new species, had previously been identified for Mr. Waterhouse, and his collecting sites were visited.

Rockhampton.—A detailed report on this investigation was submitted to the Rockhampton City Council.

2. Publications.

Marks, E. N., 1956. A new species of *Anopheles* from Queensland and notes on related species (Diptera: Culicidae). Proc. Roy. Soc. Qd. 57 : 41-52.

Marks, E. N., 1957. Further mosquito records from the Tewantin district. *Qd. Nat.* 15 : 65.

Marks, E. N., 1957. Some mosquitoes from Western Samoa with a description of a new species of *Aedes* (*Stegomyia*) (Diptera: Culicidae). *Ann trop. med. Parasit.* 51 : 50-57.

Marks, E. N. and Rageau, J. (in press). *Culex pipiens australicus* Dobrotworsky and Drummond in New Caledonia. *Proc. Linn. Soc. N.S.W.*

Marks, E. N. (in press). The subgenus *Ochlerotatus* in the Australian Region (Diptera: Culicidae). I. Notes on classification, with the description of a new species. *Pap. Dep. Ent. Univ. Qd.*

3. Laboratory Studies.

Work has continued on species of *Aedes* and a paper "The subgenus *Ochlerotatus* in the Australian Region II." is in preparation. Some preliminary work on the subgenus *Lophoceraomyia* (genus *Culex*) has included completion of a number of figures. A short paper on the New Zealand mosquito *Opifex fuscus* is ready for publication. A day was spent at the Auckland Museum examining the mosquito collection and a loan of material for further study was obtained.

Three days were spent at the School of Public Health and Tropical Medicine, Sydney, comparing material from our collection with type specimens there and in the Macleay Museum collection, in order to determine the correct name and synonymy of some Queensland species and for the same purpose extensive searching of the literature has been needed. Over 200 slides of immature stages have been made for study in preparation of descriptions.

4. Identification.

Collections sent in ranged from a single specimen to seven of 50 or more, including one of over 200 specimens. Valuable additions to the collection and many interesting distribution records have been obtained from among specimens submitted by the following:—

Queensland.

Mr. D. O. Atherton (2 collections, Cairns, Julatten—specimens of the *Anopheles stigmaticus* complex collected in response to a special request); Mr. G. Brooks (4 collections, Bundaberg, Noosa and Brisbane districts); Mr. A. B. Cribb (Cape Hillsborough); Mr. H. Lavery

(Stapylton); Mr. M. Loveday (4 collections, Dalby, Gatton, Goombungee, Ravensbourne, Crow's Nest); Miss K. A. Walker (Lindeman Island); Mr. J. L. Wassell (Port Stewart); Mr. P. R. Wilkinson (St. Lucia); Dr. T. E. Woodward (Mossman); Mr. I. C. Yeo (Gladstone, Mount Larcom, Sarina, Eimeo, Lamington National Park).

Other States.

New South Wales.—Mr. A. Dyce, C.S.I.R.O. (Colo Vale and Merricumbene); Miss P. Hawken (Griffith); Mr. E. Waterhouse, C.S.I.R.O. (Armidale District).

Victoria.—Mr. N. V. Dobrotworsky.

South Australia.—Mr. E. W. Lines, C.S.I.R.O.; South Australian Museum.

Western Australia.—Mr. E. B. Britten, Department of Health (3 collections); Mr. D. L. McIntosh, C.S.I.R.O.

Northern Territory.—Mr. A. K. O'Gower.

Elsewhere.

New Guinea.—Mr. J. H. Ardley; Sir M. Burnet; Mr. S. H. Christian (4 collections); Dr. T. E. Woodward.

Fiji.—Mr. C. B. Symes.

New Caledonia.—Dr. J. Rageau.

New Zealand.—Auckland Museum.

Pitcairn Island.—Dominion Museum, Wellington.

Undescribed and hitherto unknown species which have been retained for description were included in collections from Messrs. Waterhouse (one from Ben Lomond, New South Wales), Britten (one from West Australia), and Dr. Woodward (three from New Guinea). New life histories, or previously unknown males were also included in Mr. Britten's and Dr. Woodward's collections.

5. Public Health.

Collections were received for identification through the Department of Health and Home Affairs from:—

Ayr Shire Council;
Blackall Shire Council;
Cooktown;
Emerald Shire Council;
Gympie Shire Council;
Isis Shire Council, Childers;
Milmerran Shire Council;
Rockhampton City Council (6 samples);
Sarina.

A collection was also identified for the Brisbane City Council.

Specimens from Ayr (Kalamia Sugar Mill) included *Hodgesia cairnsensis* which were reported as fierce biters very active at night outside dwellings. This species has not previously been reported as a pest.

Aedes aegypti was included in collections from Cooktown.

In addition, among specimens collected by Medicine IV. students were two specimens of *Aedes aegypti* taken at Kangaroo Point, Brisbane, in September. These are the first of this species from Brisbane submitted to the Committee for some years.

6. Education.

During her visit to Rockhampton, Dr. Marks gave talks to the Rotary Club and Railway Workshops and two radio interviews dealing with mosquito problems and control.

A tube collection of named adults of 16 of the commoner species occurring at Rockhampton, with accompanying notes on their identification was prepared for the City Council Health Department.

Medicine IV. students were instructed in mosquito collecting and the specimens collected by them examined.

7. Miscellaneous Activities.

Type and paratype material has been distributed to various institutions. Paratype specimens have been received for the collection from Messrs. N. V. Dobrotworsky and P. F. Mattingly and Dr. M. Laird.

Other specimens for study have been loaned or presented to Dr. J. N. Belkin (University of California), Mr. N. V. Dobrotworsky (University of Melbourne), Mr. P. F. Mattingly (British Museum (Nat. Hist.)), Dr. J. Rageau (Institut Francais d'Oceanie, New Caledonia), and Mr. H. Standfast (Health Department, New Guinea), and have been received as loans or gifts from Dr. Belkin, Mr. Dobrotworsky, Mr. A. K. O'Gower (School of Public Health & Tropical Medicine, Sydney) and Mr. R. H. Wharton (Institute for Medical Research, Malaya). An exchange of material was also made with Dr. A. Grjebine (Institut de Recherche Scientifique de Madagascar).

The laboratory was visited by Mr. R. H. Wharton, Mr. R. W. Paine (formerly of Fiji), Dr. W. Wirth (U.S. National Museum, Washington) and Mr. H. Standfast, with whom current work was discussed.

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