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CHAPTER XIV.

PUBLIC HEALTH AND RELATED INSTITUTIONS.

A. PUBLIC HEALTH.

§ 1. State Public Health Legislation and Administration.

1. **New South Wales.**—The Department of Public Health comes under the jurisdiction of the Minister for Health, with an Under-Secretary as Permanent Head of the Department for administrative purposes.

There is also a Director-General of Public Health and Chief Medical Adviser to the Government, who is *ex-officio* President of the Board of Health and Chairman of the Nurses' Registration Board. He is assisted by a Deputy Director-General.

The Inspector-General of Mental Hospitals is responsible for the administration of that part of the Lunacy Act relating to the care and treatment of mental patients. There is also a Deputy Inspector-General.

The following statutory authorities are constituted under Acts administered by the Minister for Health:—Board of Health (Public Health Act), Hospitals Commission of N.S.W. (Public Hospitals Act), Milk Board (Milk Act), Dental Board (Dentists Act), Pharmacy Board (Pharmacy Act), Medical Board (Medical Practitioners Act), Board of Optometrical Registration (Opticians Act), N.S.W. State Cancer Council (N.S.W. State Cancer Council Act), Ambulance Transport Service Board (Ambulance Transport Service Act), Physiotherapists Registration Board (Physiotherapists Registration Act) and Nurses Registration Board (Nurses Registration Act).

The Department's activities extend over the whole of the State and embrace all matters relating to public health and the greater part of the general medical work of the Government. These include the following:—(a) Supervision of the work of local authorities (municipal and shire councils) in relation to public health matters connected with the following Acts—Public Health Act, Noxious Trades Act and Pure Food Act; (b) Scientific Divisions (Government Analyst, Microbiological Laboratory, and Division of Industrial Hygiene); (c) Tuberculosis and Social Hygiene Divisions; (d) Medical Officers of Health at Sydney, Broken Hill, Newcastle, Wollongong, Bathurst and Lismore; (e) State Hospitals and Homes and State Sanatoria; (f) Mental Hospitals; (g) Public Hospitals (Hospitals Commission); (h) Maternal and Baby Welfare (Baby Health Centres); (i) School Medical and Dental Services; and (j) Publicity, Nutrition and Library Services.

2. **Victoria.**—The Ministry of Health Act 1943 created the position of Minister of Health and made the Minister holding that position responsible for all Acts formerly administered by the Minister of Public Health as well as all other legislation, including the Mental Hygiene Acts and the Hospitals and Charities Acts, which related to the health and well being of the people of the State.

The original Department of Public Health became the General Health Branch of the Department of Health controlled by a Chief Health Officer. Subsequently various functions were taken from that Branch to form the Maternal and Child Hygiene Branch and the Tuberculosis Branch. With the Mental Hygiene Branch these three make up the four branches of the Department.

At the end of 1951, an Authority was established under the Mental Hygiene Authority Act 1950 to take charge of the Mental Hygiene Branch. The Authority consists of three members of whom one, an expert in psychiatry, is Chairman. Although the Authority is Head of the Branch, detailed administration can be carried out by its officers leaving the Authority free to deal with major problems relating to the improvement of

treatment and accommodation for the mentally ill. The efforts of the Authority at the present time are principally concerned with improving existing hospitals and providing additional accommodation made necessary by the increase in population in the State and with developing preventive out-patient psychiatric services designed to reduce the need for in-patient beds.

The General Health Branch, in collaboration with local government health authorities, is actively carrying on its fight against infectious diseases. The success of this campaign may be illustrated by the following figures concerning diphtheria, 3,254 cases with 93 deaths in 1927 and only 107 cases with 4 deaths in 1954.

New legislation, the Infectious Diseases Hospitals Act 1954, was introduced late in 1954. This Act repealed all previous legislation relating to infectious diseases hospitals and made the State Government, through the Hospitals and Charities Commission, responsible from 1st October, 1954 for the whole of the cost of treating cases of infectious disease.

Work in regard to the treatment and prevention of venereal disease and improvements in methods of treatment have resulted in a very marked advance. It is now no longer necessary to maintain a special hospital unit in this State for the treatment of cases of venereal disease. Special clinics for prophylaxis and treatment are attached to several public hospitals in the State and treatment may be obtained at all public hospitals.

The Poliomyelitis Division which has been operating since 1949 provides a consultant diagnostic service and maintains an aftercare treatment service for the whole of the State. Three medical officers and a number of visiting physiotherapists and nurses provide such treatment for a great number of patients mainly in their own homes.

The Industrial Hygiene Division staffed by medical and scientific officers with a number of specially trained inspectors supervises the working conditions of the 325,000 persons employed in industry in this State.

The Tuberculosis Branch under the control of a Director of Tuberculosis carries on work aimed at preventing as far as possible the spread of tuberculosis. Using improved diagnostic facilities and better methods of treatment, it has been possible to reduce greatly the incidence of this disease. No longer is there a waiting list for entry into a sanatorium, in fact, the closure of one of the State sanatoria at an early date is contemplated.

The Maternal and Child Hygiene Branch has been largely responsible for the reduction of Victoria's infant mortality rate to a point where it is now probably the lowest in the English-speaking world. This Branch is also concerned with pre-natal hygiene, the development of pre-school services generally and the school medical and dental services.

The Cancer Institute, set up in 1949, under the provisions of the Cancer Institute Act 1948, is now operating a very active out-patients treatment centre as well as a small in-patient unit. Facilities provided at the Institute for radiation therapy are being extended by installing a 4 m.e.v. linear accelerator. It will be the first of this type of machine to operate in Australia.

Legislation which is the concern of the Minister of Health includes the following :—Anti-Cancer Council Act, Births Notification Acts, Cancer Institute Act, Cemeteries Acts, Dietitians Registration Act, Part V. of the Goods Act, Hairdressers Registration Acts, Health Acts, Hospitals and Charities Acts, Infectious Diseases Hospitals Act, Masseurs Acts, Medical Acts, Mental Deficiency Act, Mental Hygiene Acts, Midwives Act, Nurses Acts, Opticians Registration Act, Poisons Acts and Venereal Diseases Act.

3. *Queensland.*—(i) *General.* The Health Acts 1937 to 1949 are administered by the Director-General of Health and Medical Services subject to the Minister for Health and Home Affairs. A Central Staff controls the following Divisions :—

(a) *Division of Public Health Supervision.* This Division is controlled by the Deputy Director-General of Health and Medical Services and comprises separate sections of environmental sanitation, food and drug control, enthetic (venereal) diseases, hookworm control and Hansen's disease control. Qualified full-time officers are in charge of each

section. Free treatment of venereal diseases is offered at the Department's male and female clinics in Brisbane, and at any public hospital. Two institutions (one at Peel Island in Moreton Bay for white patients and one at Fantome Island near Townsville for aboriginal patients) are maintained for the treatment of Hansen's disease. Modern therapy with sulphone drugs has caused a dramatic decline in numbers of patients at these institutions. Free immunization against diphtheria, whooping cough and tetanus is offered by most of the Local Authorities. A recent survey showed that 94 per cent. of school children in the Greater Brisbane area and 90 per cent. in the rest of the State had been immunized against diphtheria.

(b) *Division of Tuberculosis.* The Director, assisted by medical officers and nurses, exercises control of patients with tuberculosis. A central chest clinic in Brisbane offers Mantoux tests, X-ray examinations, and inoculations of Mantoux negative reactors free of charge and this service is extensively used. A mobile X-ray unit visits country districts. Children in the final grade of primary schools are now being Mantoux tested and given B.C.G. vaccine.

(c) *Division of Industrial Medicine.* This Division exercises supervision over the health of workers in both primary and secondary industries, including control of leptospirosis (Weil's disease) scrub typhus and other fevers of occupational origin in the sugar-cane growing districts north of Ingham.

(d) *Division of Maternal and Child Welfare.* The Director, assisted by full-time and part-time health officers and a staff of qualified nurses, offers supervision and advice on the rearing and health of infants and pre-school children at 217 baby health centres throughout the State. Outlying centres are visited by air or by special rail car. Homes for in-patient treatment of infants with feeding problems have been established at Brisbane, Toowoomba, Ipswich and Rockhampton.

(e) *Division of School Health Services.* This Division comprises the Chief Medical Officer, School Health Services, and a staff of medical officers, dentists and visiting school nurses. Every child has a medical examination at least once in three years.

(f) *Division of Mental Hygiene.* The Director is responsible for the care and treatment of mentally sick patients in the State's four mental hospitals, at Brisbane, Toowoomba, Ipswich and Charters Towers.

(g) *Division of Laboratory Services.* Two laboratories—the Laboratory of Microbiology and Pathology and the Government Chemical Laboratory—are maintained to ensure the purity of a wide range of foodstuffs and materials. The former also offers a service in clinical pathology to country hospitals and private medical practitioners.

(ii) *Hospitals.* All public hospitals operate under the district system, which provides for the constitution of Hospitals Districts and Hospitals Regions and a Hospitals Board for each district. The State is divided into 11 Hospitals Regions with a base hospital for each region which comprises a number of Hospitals Districts. The purpose of the regional scheme is to co-ordinate the public hospitals in the region with the base hospital. The administration of the hospitals services, including public dental services, in each Hospitals District is vested in the Hospitals Board which comprises not less than four members nor more than eight members appointed by the Governor-in-Council and one member elected by the component Local Authorities. There are 54 Hospitals Boards controlling 130 public hospitals.

4. *South Australia.*—The Department of Public Health embraces the activities of the Central Board of Health, the School Medical Services, and the public health aspect of the control of tuberculosis, including the State X-ray Health Survey, under the control of the Director of Tuberculosis.

The Central Board of Health consists of five members, three of whom (including the chairman) are appointed by the Governor while one each is elected by metropolitan local boards and all other local boards. The Central Board of Health administers the Health, Food and Drugs, Dangerous Drugs, Noxious Trades, Bakehouses Registrations and Early Notification of Birth Acts. The Board is also concerned to some degree with

Acts relating to local government, abattoirs and cremation. Other legislation administered by the Department of Public Health relates to venereal diseases and vaccination.

The Health Act, 1935-1954 constitutes every municipal council and every district council a local board of health for its municipality or district. There are 143 of these local boards under the general control and supervision of the Central Board. Under the Food and Drugs Act each local board is constituted the local authority for its respective district, except in the metropolitan area, for which the Metropolitan County Board is the local authority.

The medical staff of the Department includes the Director of Tuberculosis, a Senior Medical Officer and the Principal Medical Officer for Schools, six full-time medical officers, one temporary medical officer and seven part-time medical officers. Two dentists, one dental assistant and seven nurses are engaged in connexion with the School Medical Services. There are seven full-time and fourteen part-time inspectors directly responsible to the Board. There is also a nurse inspector employed to advise and assist local boards in connexion with infectious diseases. A consulting radiologist, three radiographers and three nurses are engaged in the State X-ray Health Survey and one nurse in B.C.G. vaccination. The inspectors appointed under the Health and Food and Drugs Acts periodically visit the local districts and see, generally, that the local boards are performing their duties.

5. *Western Australia.*—The legislation in this State is the Health Act 1911-1954. This was consolidated and reprinted in 1948 and amended in 1950, 1952 and 1954. The Central Authority is the Department of Public Health, controlled by a Commissioner, who must be a qualified medical practitioner. The State is covered by Local Authorities which are constituted as Municipalities or Road Boards.

It is provided that a Local Board of Health may be set up in lieu of a Road Board, but this method of control is no longer used. In any emergency the Commissioner may exercise all the powers of a Local Health Authority in any part of the State.

Interesting features of recent legislation are as follows:—(a) Act No. 70 of 1948 gave compulsory power to control sufferers from tuberculosis and established a Tuberculosis Control Branch; (b) Act No. 11 of 1952 gave wide powers to regulate the sale and use of pesticides; (c) Act No. 34 of 1954 provides for the licensing of manufacturers of therapeutic substances. The Act has not yet been proclaimed; and (d) Act No. 45 of 1954 requires every medical practitioner who attends a child which dies within 28 days of birth to notify the Commissioner.

6. *Tasmania.*—The Department of Public Health is under the jurisdiction of the Minister for Health, and the administration of the various services is controlled by the permanent head of the Department, the Director-General of Medical Services, who is also responsible for the administration of the Hospital and Medical section. Associated with the permanent head are the Director of Public Health, the Director of Tuberculosis, and the Director of Mental Hygiene.

The Hospital and Medical Services section is responsible for administration of the laws relating to hospitals and nurses' registration, and the following services: Government Medical Service, Cancer Clinics, Bush Nursing Service, and Institutions for the Aged and Infirm at St. John's Park and Cosgrove Park.

Public Health functions comprise administration of laws relating to public health, food and drugs, places of public entertainment, cremation, and the following services: School Medical and Dental, Maternal and Child Welfare, Infectious and Venereal Disease control, Analytical Laboratory, and Mothercraft Home.

The Tuberculosis section is responsible for administration of the laws relating to tuberculosis, for conducting a continuous State wide X-ray survey and for the management of chest clinics in four centres in the State and of the chest hospitals at New Town and Evandale.

The Mental Hygiene section is responsible for administration of the laws relating to mental hospitals and mental defectives, and for the management of Lachlan Park Hospital (Mental Hospital) and Millbrook Psychopathic Home.

§ 2. The Commonwealth Department of Health.

1. **General.**—The Commonwealth Department of Health was created by an Order-in-Council of 3rd March, 1921. This Order specified the functions to be performed by the Department in addition to Quarantine. An amendment to the Constitution in 1946 gave the Commonwealth power to make laws with respect to pharmaceutical, hospital and sickness benefits, and medical and dental services.

As part of the National Health Service the following benefits and services are provided under the National Health Act 1953: a free general practitioner medical service to pensioners and their dependants, and pharmaceutical, hospital and medical benefits to the community generally.

Assistance to sufferers from tuberculosis is provided under the Tuberculosis Act 1948 and free milk for school children under the States Grants (Milk for School Children) Act 1950. Details of these services are provided in the following paragraphs.

The functions of the Department, apart from the National Health Service, are very widespread. They include Quarantine (Human, Animal and Plant), the fostering of medical research through the National Health and Medical Research Council, the provision of hospital and medical services in the Northern Territory, the manufacture of a large number of sera and pharmaceuticals by the Commonwealth Serum Laboratories, and the maintaining of fourteen Health Laboratories throughout Australia to provide X-ray, pathological and other services to the surrounding communities. A short description of these and other activities is provided below. (For additional information see Official Year Book No. 40, p. 515.)

2. **The National Health Service.**—(i) *Pharmaceutical Benefits.* Since September, 1950, under the provisions of the Pharmaceutical Benefits Act 1947–1952 and the National Health Act 1953, certain life-saving and disease-preventing drugs have been provided free of charge to the general community. Such drugs are supplied free if they have been duly prescribed by a medical practitioner registered within Australia.

The number of drugs listed as available as general pharmaceutical benefits has steadily increased and at present 251 separate preparations are supplied. Before a drug is listed as being available it must first be approved by the Pharmaceutical Benefits Advisory Committee, a body appointed by the Minister for Health.

All drugs listed in the British Pharmacopœia and other drugs as specified, are supplied free to eligible pensioners (i.e., those receiving age, invalid, widows' and service pensions and persons receiving a tuberculosis allowance) and their dependants.

Total expenditure on pharmaceutical benefits in the year 1954–55 was £10,739,467.

(ii) *Hospital Benefits.* The payment of hospital benefits to the States is authorized under Part V. of the National Health Act 1953. This Act continues the agreements entered into with the various States under the Hospital Benefits Act 1951. Under these agreements the Commonwealth pays the States certain sums of money which vary according to the number of occupied beds in public hospitals.

The rates of payment for occupied beds in public hospitals are determined by the category into which patients are grouped. Payment of 12s. per day is made for a patient who is a pensioner or a dependant of a pensioner. The rate of 8s. per day is paid for all other qualified patients.

A payment of 8s. per day is made also for patients in approved private hospitals. This payment is made to the proprietor of the private hospital.

An additional benefit of 4s. per day is paid in the case of patients who are members of an approved hospital benefit fund. This payment is made through the benefit organization and is normally paid to the patient with the amount payable by the organization.

Australian residents who are temporarily living overseas and their dependants who receive hospital treatment are eligible to receive the benefit of 8s. a day.

Total payments made for all types of hospital benefits (excluding patients in mental hospitals) in 1954–55 were £9,320,603.

(iii) *Medical Benefits.* A Medical Benefits scheme commenced to operate as from July, 1953, being authorized under the National Health (Medical Benefits) Regulations. These regulations were superseded by the National Health Act 1953. The basic principle of the scheme is the support of voluntary insurance against the costs of medical attention. The scheme provides for the payment of benefits by the Commonwealth, through medical insurance organizations that have been registered for the purpose. The Commonwealth benefits supplement the benefits paid by the registered organizations in respect of medical expenses incurred by members of those organizations and their dependants.

In 1954-55 Commonwealth expenditure on medical benefits was £4,209,495.

(iv) *Pensioner Medical Service.* The Pensioner Medical Service which commenced on 21st February, 1951 was introduced under the authority of the National Health (Medical Services to Pensioners) Regulations made under the provisions of the National Health Service Act 1948-1949. The service has been continued under the provisions of the National Health Act 1953.

Under this scheme pensioners and their dependants, as defined in the section above describing pharmaceutical benefits, are provided with a free general practitioner service. Specialist services are not provided. A small fee may be charged by practitioners who attend qualified patients outside normal surgery or visiting hours. Practitioners in the scheme are remunerated on a fee-for-service basis by the Commonwealth.

At the 30th June, 1955 there were 4,567 medical practitioners enrolled in the Pensioner Medical Service to provide medical services to approximately 640,200 eligible persons. More than 97 per cent. of eligible persons have now been enrolled in the scheme and more than 80 per cent. of general practitioners are participating.

In the year ended 30th June, 1955 medical practitioners in the scheme made 4,721,481 visits or surgery consultations to persons enrolled in the scheme. For these services they were paid a sum of £2,516,077. The average number of medical services rendered by practitioners to enrolled persons in this period was 7.5.

(v) *Tuberculosis Act.* The main provisions of this Act, which was assented to on 25th November, 1948, are as follows :—(a) Section 5, which authorizes the Commonwealth to enter into an arrangement with the States for an effectual national campaign against tuberculosis ; (b) Section 6, which empowers the Commonwealth to take over or provide specified facilities for the diagnosis, treatment and control of tuberculosis ; (c) Section 8, which provides for the setting up of an Advisory Council to advise the Commonwealth Minister for Health on matters relating to the national campaign ; and (d) Section 9, which authorizes the Commonwealth to pay allowances to sufferers from tuberculosis and their dependants to enable sufferers to give up work and undergo treatment, and thus minimize the spread of infection.

The Commonwealth has completed an arrangement with each State, whereby each State is required to conduct an effectual campaign against tuberculosis and to provide adequate facilities for that purpose. In consideration of this, the Commonwealth undertakes to reimburse the State for all approved capital expenditure in relation to tuberculosis on and after 1st July, 1948, and for net maintenance expenditure to the extent that it is in excess of net maintenance expenditure for the base year 1947-48. Thus, the States are required to carry out the actual physical or field work of the national campaign with the Commonwealth acting in an advisory, co-ordinating and financial capacity. For this reason, the Commonwealth has not found it necessary to make much use of its powers under Section 6.

An Advisory Council, known as the National Tuberculosis Advisory Council, has been set up and has already held seven meetings. There are eleven members under the chairmanship of the Commonwealth Director-General of Health. The members are the Commonwealth Director of Tuberculosis, the six State Directors of Tuberculosis, the Consultant (Chest Diseases) of the Department of Repatriation, two specialist private practitioners, and the Chief Administrative Officer of the Commonwealth Department of Health.

A system of tuberculosis allowances has been drawn up and is an important factor in the campaign against the disease. Payments under the scheme were commenced on 13th July, 1950. The rates of allowance from 27th October, 1955 were £9 12s. 6d. a week for a married sufferer with a dependent wife, £6 2s. 6d. a week for a sufferer without dependants (reducible to £4. when maintained free of charge in an institution), and 10s. a week for each dependent child under the age of sixteen (which is additional to child endowment). There is a means test, generous to the sufferer, which has regard only to income and not to property.

(vi) *Free Milk for School Children Scheme.* In 1950 the States Grants (Milk for School Children) Act was passed. The object of this Act was to improve the diet of school children by the addition of a small quantity of milk each day. All children under the age of thirteen years attending public or private primary schools, including nursery schools, kindergartens, crèches and aboriginal missions, are eligible to receive this issue. Wherever practicable the milk is given to the children in one-third of a pint bottles. The cost of the milk plus half the capital or incidental costs, including administrative expenses incurred in administering the scheme is reimbursed by the Commonwealth to the States. All States are now participants in the scheme, and at 30th June, 1955 approximately one million children were receiving free milk.

In the years 1953-54 and 1954-55 the following amounts were reimbursed to the various States and Territories:—1953-54, New South Wales £881,600, Victoria £429,000, Queensland £204,600, South Australia £156,000, Western Australia £107,138, Tasmania £219,580, Northern Territory £552, Australian Capital Territory £6,891, Total £2,005,361. 1954-55, New South Wales £980,589, Victoria £498,000, Queensland £323,349, South Australia £156,000, Western Australia £127,015, Tasmania £145,695, Northern Territory £921, Australian Capital Territory £10,760, Total £2,242,320.

3. *Other Activities of the Commonwealth Department of Health.*—(i) *Human Quarantine.* All passengers and crews arriving in Australia from overseas, either by air or sea are subjected to a medical inspection by quarantine officers for the purpose of preventing the introduction of disease into Australia.

At the major ports full-time quarantine officers carry out the work but in the minor ports use is made of local medical practitioners acting as part-time quarantine officers. In each State quarantine activities are controlled by a medical officer of the Commonwealth Department of Health with the title of Commonwealth Director of Health.

The main concern of the examining officers is to detect cases of quarantinable diseases smallpox, cholera, yellow fever, plague and typhus fever. These are not endemic in Australia and it becomes a matter of extreme moment to prevent their entry. In addition, infectious diseases such as chicken pox, mumps, scarlet fever and measles discovered on vessels are directed to appropriate care and placed in isolation where necessary.

For the quarantinable diseases quarantine stations are provided at the major ports and at Darwin, Thursday Island and Townsville. These are kept ready for occupation at all times and in them a case is kept until it is no longer a danger to the community.

The increasing use of air travel has created particular quarantine problems. Before the use of air transport Australia was some ten days travelling time from the nearest overseas port, e.g. Colombo. Persons suffering from an infectious or quarantinable disease would show the rash or other signs on arrival and before disembarkation. Passengers travelling by air, however, can arrive well within the incubation period, even from as far as England, which is only four days away by air.

It is for this reason that all intending passengers are required to be vaccinated against smallpox before departure and those from an area infected with cholera or yellow fever are in addition required to be inoculated against the particular disease. Passengers arriving by air are required to report any sickness which they might suffer within the fourteen days after arrival. All passengers are required to give their intended place of residence so that they may be traced if a case of disease occurs among the passengers on the aircraft or ship.

It will be seen that the security given to Australia for many years by its isolated geographic position is no longer complete and increasing reliance needs to be placed on a vigilant and flexible quarantine organization.

(ii) *Animal Quarantine.* Animal quarantine is authorized by the provisions of the Quarantine Act 1908-1950 and has as its objective the prevention of the introduction or spread of diseases of animals. This legislation covers the importation of all animals, raw animal products, biological cultures, etc., associated with animal diseases and goods associated with animals.

Domesticated animals, i.e., horses, cattle, pigs, sheep, goats, dogs, cats and poultry, are admitted from a limited number of countries depending on diseases present in the country of origin. All must be accompanied by health certificates which include prescribed tests. On arrival in Australia they are subject to quarantine detention.

Zoological specimens are imported into registered zoos where they remain in permanent quarantine. Circuses are also registered if exotic species of animals are kept. In a somewhat similar manner, animals for scientific purposes are imported to approved laboratories. All of these premises are kept under constant surveillance. Raw animal products such as hair, special types of wool, skins, hides, etc., are subjected to special treatment under quarantine control, whilst such items as raw meat, sausage casings and eggs, which cannot be sterilized, are admitted from very few countries. Other items such as harness, fittings, fodder, ship's refuse, etc., are appropriately treated to destroy possible infection.

The Division of Veterinary Hygiene was created in 1926 to deal with the administration of animal quarantine: formerly the full responsibility for this administration fell on the Director of Quarantine. The organization of the Division provides an excellent example of Commonwealth and State co-operation. The Central Administration is situated within the Health Department at Canberra, with a Director, an Assistant Director and Veterinary Officers. By provision in the Quarantine Act and by arrangement with the States, the Principal Veterinary Officer of the Department of Agriculture in each State is appointed Chief Quarantine Officer (Animals) of the State and members of his staff Quarantine Officers (Animals). These State officers, acting in their Commonwealth capacity, carry out the quarantine policy formulated by the Central Administration. Quarantine accommodation is provided at permanent animal quarantine stations at each Capital City.

The Division participates in world-wide international notification of the more serious contagious diseases of animals and maintains a census of such diseases throughout the world. Information regarding animal diseases and parasites in Australia is also collected and disseminated by means of service publications. Consultation on technical matters is maintained with various scientific institutions, notably the Commonwealth Scientific and Industrial Research Organization. In matters of policy and the quarantine control of imports there is a close liaison with the Department of Customs and Excise.

The Division collaborates with the "General" and "Plant" Divisions of the Quarantine Service. Many diseases of animals are communicable to man and for this reason "Animal" and "General" quarantine administration are in some respects inseparable. Similarly the interests of "Animal" and "Plant" Divisions overlap, many items such as insects, fodder, straw, etc., being the subject of combined control.

In each alternate year the Director of the Division convenes the Biennial Conference of Principal Commonwealth and State Veterinarians which meets under the aegis of the Australian Agricultural Council. At this Conference problems of animal health and disease control are discussed from a national point of view and consideration is given to Animal Quarantine matters. A report is made to the Agricultural Council.

In the Australian Capital Territory the control of animal disease, dairy and piggyery hygiene, advice to stockowners and management of the Canberra abattoir are carried out by veterinary officers of the Division.

(iii) *Plant Quarantine.* Since 1st July, 1906, the importation into Australia of all plants or parts of plants, cuttings, seeds and fruits, whether living or dead, has been subject to an increasingly stringent quarantine with the object of preventing the introduction of insect pests, plant diseases and weeds not yet established in this country. Under the Quarantine Act 1908-1950 general powers are held by which the quarantine inspectors are required to examine all plant material at the first port of entry and to release only such material as is free from diseases and pests. Everyone entering Australia is required to declare if he or she has any plant material in luggage or personal effects. Heavy penalties are laid down for those found deliberately evading the regulations. All plant material entering as cargo must also be declared.

When the Commonwealth became responsible for all plant quarantine, the State Governments agreed to co-operate by providing and maintaining inspection facilities and personnel for which they are reimbursed by the Commonwealth. In 1921 the administration of the regulations came under the newly-formed Department of Health, and in 1927 the Division of Plant Quarantine was created under a Director who is responsible for policy and legislation and for co-ordinating the work of the State Officers who carry out the detailed administration in their capacity as Commonwealth Officers.

Any plant material found carrying diseases or pests or suspected of doing so may be ordered into quarantine for remedial treatment, or if the treatment be impracticable, may be destroyed. Such treatments are paid for by the importer. Air transport has created many new problems in maintaining effective control. It is impossible in this summary to give details of regulations governing the different types of plants, but the following will indicate certain broad principles in them:—(a) The importation of plants likely to be infected with plant diseases, noxious fungi or poison plants is prohibited; (b) Agricultural seed must conform to standards of purity, insect pest and disease freedom; (c) Many commodities such as hops, cotton, peanuts in shell, nursery stock, potatoes, certain crop seeds, vines and specified plants may only be imported by approved importers under special conditions; (d) Certain plant products such as bulbs and timber (in logs or sawn), from specified areas may only be imported if accompanied by certificates showing that prescribed treatment has been given in the country of origin.

The regulations are constantly being amended in the light of experience, with the object of maintaining for Australia the freedom from a large number of serious diseases and pests of plants which ravage crops in other lands.

(iv) *The Commonwealth Serum Laboratories.* The laboratories were established in 1916 under the administration of the Quarantine Branch, Department of Trade and Customs (later the Commonwealth Department of Health, Order-in-Council, March, 1921). Work began in temporary quarters, but new buildings were erected and occupied in 1918 at Royal Park, Melbourne, where the Commonwealth had acquired 23 acres. In 1936, a farm of 325 acres was purchased for experimental and other purposes at Broadmeadows, 9 miles from Melbourne. The laboratories function as a Public Health Institute and are part of the Commonwealth Department of Health, conducting research and training of laboratory personnel. In addition, biological products are prepared on a large scale for use in the diagnosis, prevention and treatment of human and animal diseases.

Since their foundation 39 years ago, the laboratories have been greatly extended in size and scope. The number and variety of biologicals available for issue have thus been increased to the extent that Australia is practically independent of oversea supplies.

Continuous research is being conducted into all relevant aspects of Bacteriology and Immunology and related fields of work. New kinds of biological agents are prepared and tested as the growth of medical or scientific knowledge provides fresh means of diagnosis, prevention and treatment. Investigations are also made into other aspects of public health work. For the past 30 years the production of veterinary biologicals has been a feature of the work, and in recent years extensive development has occurred in this direction.

The result of increasing employment of veterinary products in the prevention of diseases of domestic animals and stock is reflected in the diminution of incidence of certain infectious diseases amongst stock with economic benefit to the community.

The laboratories also serve as a national centre for the maintenance in Australia of the International Standards of the Permanent Commission on Biological Standards (World Health Organization), and act as the regional reference centre for the World Health Organization in collating reports of prevalence of certain infectious diseases in Australia, and at the same time conduct laboratory investigations for the identification of diseases thus reported.

(v) *The Commonwealth Health Laboratories.* The fourteen health laboratories of the Department are situated at strategic points throughout Australia. They are located at Canberra, Darwin, Cairns, Townsville, Rockhampton, Toowoomba, Bendigo, Launceston, Hobart, Port Pirie, Kalgoorlie, Lismore, Tamworth and Albury. These laboratories were established as an essential part of the quarantine system but were also to undertake research into local health problems and to provide medical practitioners of each district with up-to-date facilities for laboratory investigation and diagnosis. It was realized that co-operation between the general practitioner with his clinical observations and knowledge of the environment of disease on the one hand, and the staff of a well-equipped laboratory on the other hand, is essential to the efficient investigation of disease and the effective operation of control measures.

From this standpoint, the laboratories have already proved their value in the determination of leptospirosis and endemic typhus in North Queensland, in the investigation of special local problems at Darwin, of undulant fever throughout Australia, of silicosis and tuberculosis at Kalgoorlie and of plumbism at Port Pirie. In these investigations close co-operation has existed with State and local health and hospital services; especially is this so in Queensland where collaboration has yielded exceptionally valuable results in differentiating the groups of fevers previously unclassified in that State. In this investigational work, as well as in more routine activities, the laboratories have at their disposal the full resources and technical and specialist facilities available at the Commonwealth Serum Laboratories and the School of Public Health and Tropical Medicine, Sydney.

(vi) *The School of Public Health and Tropical Medicine.* The Commonwealth Government, under an agreement with the University of Sydney, established a School of Public Health and Tropical Medicine at the University of Sydney as from 4th March, 1930, for the purpose of training medical graduates and students in the subjects of public health and tropical medicine. The organization of the Australian Institute of Tropical Medicine at Townsville was merged in the new school, and the staff, equipment and material were transferred to Sydney.

The work of the school comprises both teaching and investigation. Courses are held for the University post-graduate diploma of public health and the diploma of tropical medicine and hygiene. Lectures are given in public health and preventive medicine as prescribed for the fifth year of the medical curriculum. Other classes include students in architectural, social and school hygiene, lay officers and nurses in the tropical services, and missionaries, while training is also provided to certain personnel of the Armed Services, to sister tutors, and laboratory workers from various services and institutions.

Investigational work covers a wide field of public health and medical subjects, both in the laboratory and in the field. Field work has been carried out not only in Australia but in co-operation with the local administrations in Papua, New Guinea, Norfolk Island and Nauru and with the South Pacific Commission. Sections of Child Health, Occupational Health and Medical statistics have been recently added.

(vii) *Commonwealth Acoustic Laboratories.* The Department of Health established the first of the series of Acoustic Laboratories in January, 1947, in Sydney. The laboratory continued and expanded the work of the Acoustic Research Laboratory which was sponsored by the National Health and Medical Research Council during the years

1942-46 for the purpose of investigating problems of noise and difficulties of intercommunication in aircraft and tanks. After the 1939-45 War the Acoustic Research Laboratory directed its attention to the problem of deafness in children, particularly the group whose affliction was caused by the mothers contracting rubella in the early months of pregnancy.

The taking over of the Acoustic Research Laboratory by the Department of Health was influenced by a request from the Repatriation Commission for technical assistance in the matter of providing hearing aids for deafened ex-servicemen. Arrangements for this purpose were completed and branch laboratories were established in all other State Capital Cities.

During 1948 the Acoustic Laboratories Act was passed to allow the expansion of activities on the following lines :—(1) To carry out the requirements of the Repatriation Commission for deafened ex-Service personnel and to provide a similar service for the Commonwealth Department of Social Services in respect of deafened ex-Service personnel whose disability was not caused by war service ; (2) to assist the Education Departments of the States in measuring deafness, by providing and maintaining portable audiometric equipment ; (3) to act on behalf of various State and other authorities who desire to have independent tests made before assisting financially in the purchase of hearing aids for people under their care ; (4) to investigate problems associated with noise in industry ; (5) to make hearing tests on Civil Aviation aircrew as required by International agreement ; (6) to give advice to the Armed Services on noise problems as required ; and (7) to provide hearing aids to school children.

The laboratory in Sydney is responsible for the training of personnel for the whole Acoustic Service, the production of equipment, the calibration of hearing aids and audiometers and the technical administration of the branch laboratories.

(viii) *Commonwealth Bureau of Dental Standards.* The National Health and Medical Research Council sponsored the Dental Materials Research Laboratory during the years 1939-46, for the purpose of assisting the Defence Services, the Medical Equipment Control Committee and other Government Departments in the selection and purchase of suitable dental equipment and materials. Valuable assistance was also given to Australian manufacturers of dental materials in relation to improvement of their products and the development of new materials.

Much of the work was of a routine nature and after the 1939-45 War the National Health and Medical Research Council decided to cease its sponsorship, but recommended that the Department of Health should take over the laboratory as it was serving a good purpose. This was done in January, 1947, and the laboratory was renamed the Commonwealth Bureau of Dental Standards and is at present situated in the grounds of the University of Melbourne.

The functions of the Bureau are as follows :—(1) Original research into dental equipment, materials, techniques and processes ; (2) the development, through the Standards Association of Australia, in consultation with a committee representative of the Commonwealth Department of Health, of the Australian Dental Association and of manufacturers and distributors, of specifications for dental materials and equipment ; (3) regular systematic surveys of dental materials on sale to the profession in Australia, and the reporting of the results of such investigations in recognized Australian scientific journals ; and (4) the provision of a consultative service and testing facilities for local manufacturers and distributors of dental materials with the view to assisting them in the improvement of existing products and the development of new materials.

(ix) *Commonwealth X-ray and Radium Laboratory.* The persistent increase in cancer mortality has led to the development in Australia of a national organization directed towards the control of this disease. The Commonwealth Department of Health has actively participated in this movement. Annual cancer conferences, convened by the Department from 1928 onward, provided an opportunity each year for those actively engaged in the campaign against the disease to meet for the discussion of problems and

the determination of lines of action for further development. The tenth conference in this series met in New Zealand in February, 1939 and so marked an association which had been maintained between Australia and the Dominion since the inception of the conferences.

Cancer Conferences were not held during the war years and have not been revived, primarily because facilities for the discussion of the various aspects of the treatment of cancer have been provided by the regular Congresses of the British Medical Association and of the different specialist Colleges and Associations. The Department has, however, continued to maintain liaison in the general programme against cancer and in March, 1955, convened a conference in Canberra of representatives of the Commonwealth and States to discuss the co-ordination of anti-cancer activities. This conference recommended that an annual Conference of State-sponsored Anti-Cancer Organizations should be convened by the Commonwealth Government and that consideration should be given to the formation of a nation-wide Anti-Cancer Organization comprising representatives of the Statutory Anti-Cancer Organizations.

A total of 10 grams of radium, purchased in 1928 by the Commonwealth Government for use in treatment and research, has been distributed on loan to treatment centres throughout Australia. Under the terms of this loan, treatment at well-equipped clinics is available to all requiring it, irrespective of ability to pay. This work is co-ordinated by the Department. From time to time portions of the original radium holding have been remounted by the Department in forms more suitable for the more modern techniques which have been developed.

Realizing the essential importance of accuracy in determining the quality of radiation used in the treatment of cancer and in measuring the dosage of this radiation actually delivered to the tumour, and the need for the investigation of physical problems in connexion with the utilization of X-rays and radium in the treatment of disease, the Commonwealth Department of Health in 1935 extended the work of the Commonwealth Radium Laboratory, established in 1929, to include the investigation of the physical problems of radiation therapy generally. This laboratory, known as the Commonwealth X-ray and Radium Laboratory, is situated by agreement with the University of Melbourne within the University grounds, and is maintained, controlled, and staffed by the Commonwealth Department of Health. It is accommodated in a building specially designed for work with X-rays and radium, and is amply provided with all necessary equipment for research work, including a 500,000 volt high tension generator.

The laboratory co-operates closely with the local physical services which have been developed in the other capital cities of Australia to provide local facilities for the production of radon, for the calibration of X-ray therapy equipment, and for the measurement of radiation exposure of X-ray and radium workers. The laboratory has continued to repair radium containers. It also undertakes investigations into physical problems arising in the use of X-rays and radium in treatment.

During the year 1954-55, a total of 94,774 millicuries of radon was prepared and issued from the laboratory in the form of implants, needles and tubes for use in Victoria, Tasmania, South Australia and Western Australia. A further 30,663 millicuries were issued by the associated centres in Sydney and Brisbane. The corresponding figures for 1953-54 were 99,454 and 34,423 millicuries respectively. The issue of radon from a few centres to serve hospitals all over the continent is a unique Australian development and enables a very efficient use to be made of the radium available.

The development of atomic energy programmes overseas has made available supplies of artificial radio-isotopes which can be used either as an alternative to natural isotopes such as radium and radon, or may be applied internally when they are selectively secreted in a particular organ. All radio-isotopes in use in Australia in medicine, research and industry are subject to the approval of the laboratory and are imported by the laboratory. Regular supplies of radio-phosphorus and radio-iodine are obtained and are distributed free of charge for the treatment of patients throughout Australia according to a policy developed by the Committee on Radio-isotopes of the National Health and Medical

Research Council. The laboratory has been responsible for the development of a scheme of physical measurements required in the use of radio-iodine which can be readily carried out in individual hospitals.

Supplies of radio-gold and radio-chromium have also been obtained when required, while applicators for special purposes, containing radio-strontium and radio-cobalt have been purchased and issued to some hospitals.

Close co-operation is maintained between the medical men engaged in the clinical investigation and treatment of cancer and research workers, physicists, and biochemists, so that problems are mutually investigated and treatment applied with the highest obtainable degree of scientific accuracy.

(x) *The Northern Territory Medical Service.* The Commonwealth Department of Health is responsible for the administration of hospital health and medical services in the Northern Territory.

Four general hospitals have been established. The Darwin Hospital has accommodation for 187 in-patients, Alice Springs Hospital, 90, Katherine Hospital, 25, and Tennant Creek Hospital, 25. A modern institution for the treatment of leprosy, known as the East Arm Settlement, was opened in August, 1955. A full range of ancillary services is available at the Darwin Hospital which serves as a base hospital for the Territory.

Dental clinics, which provide a fine service have been set up at Darwin and Alice Springs. Medical and dental services to outback areas are fully developed and are provided either by road or air.

Two Drovser aircraft are stationed at Darwin and one is stationed at Alice Springs. These are staffed and serviced by Trans-Australia Airlines and are extensively used in ambulance and survey medical work. At Alice Springs medical officers of the Northern Territory provide the medical services to the Flying Doctor Service (South Australian) Base.

A section of the Department undertakes continuous investigation of native health.

School Medical and Dental Officers move throughout the area providing diagnostic and treatment facilities. Public Health Services are provided and health inspectors periodically visit all settlements.

Darwin as a first port of entry for oversea aircraft and shipping is provided with a quarantine station.

(xi) *National Fitness.* A national fitness movement was launched in Australia in 1939 following the world-wide movement for the advancement of physical fitness which preceded the last world war. In 1938, arising from a recommendation of the National Health and Medical Research Council, the Commonwealth Government agreed to appoint a Commonwealth Council for National Fitness, under the Commonwealth Minister for Health, to effect collaboration of Commonwealth, State and Local Government authorities in the movement. Meetings of this Council are held at regular intervals, and an annual report submitted to Parliament. Autonomous State National Fitness Councils operate in all States, each sending one representative to the Commonwealth Council meetings. Following the recommendations of the first Commonwealth Council meeting in 1939, the Commonwealth Government agreed to make available an annual sum of £20,000 for five years and grants were allocated to each State for purposes of organization and to each of the six Australian universities to establish lectureships in physical education. In July, 1941 a National Fitness Act was passed by the Commonwealth Parliament to ensure greater permanence to the movement, and in June, 1942, the Commonwealth grant was increased to £72,500 to include grants to State Education Departments and for the work in the Australian Capital Territory. In 1951 the total grants were extended for a further period of three years. The movement continues to develop and to gain public interest and support throughout Australia, particularly through its physical and recreational activities with voluntary youth organizations and amateur sports organizations.

(xii) *The Pre-school Child.* Sessions of the National Health and Medical Research Council and the reports of the Commonwealth Advisory Council on Nutrition have called attention to the need for greater effort throughout Australia directed towards the care of the growing child, especially during the pre-school period. Movements for the welfare of the school child and the care of the infant are already developed by State authorities as recorded in §§ 7 and 8 below. The Commonwealth Government felt that more could be done for the child of pre-school age, and it was decided to give a lead by making it possible to demonstrate what could be done and the practical methods which could be applied.

The Commonwealth Government therefore decided to establish in each capital city a pre-school demonstration centre, known as the Lady Gowrie Child Centre, and in order to achieve the best results in association with those who have had experience in this field, it has secured the co-operation of the Federal Organization of Kindergarten Unions, which is operating under the title of "The Australian Association for Pre-school Child Development". A suitable site was secured in each capital city and the necessary school structure was built. Formerly the administration of these centres was under the direction of the local Kindergarten Union and the employment of staff was made with the approval of the Commonwealth Department of Health. Recently the local Lady Gowrie Child Centre Committees were given a greater degree of autonomy, so that while the technical supervision still rests with the Australian Association for Pre-school Child Development, the management of each centre, including staffing, is in the hands of the local Committee. This development is associated with a change in the method of financial control. An annual grant is made to each Committee towards the cost of the centre, the disbursement of these funds being at the discretion of the local Committee, subject to the general supervision of the Australian Association for Pre-school Child Development. This applies in so far as the educational side is concerned, and in this field advantage is being taken of the opportunity to try new methods and to make systematic records of observations with the object of securing reliable knowledge of the educational technique of this pre-school period.

Along with this educational practice there proceeds also the study of physiological requirements of the child and of the interaction between physical and mental health under varying conditions. The children at these centres provide a considerable mass of human material for control and study, which is of great value in view of the importance of the study of growth and of nutrition of their age-period. Not only are routine measurements made of height, weight and other bodily data, but problems of nutrition are studied in detail. The medical work at each State centre is conducted on a uniform basis, according to a scheme formulated at, and directed from, the Australian Institute of Anatomy, Canberra, where parallel investigations on the laboratory side are being undertaken.

An annual grant of £30,000 is paid by the Department to the Australian Association for Pre-school Child Development to assist this body in its work.

(xiii) *The Australian Institute of Anatomy.* The Australian Institute of Anatomy, situated in Canberra, occupies a monumental building erected by the Commonwealth Government under the Zoological Museum Agreement Act of 1924 on a site which adjoins that of the Australian National University. Prior to the passing of this Act, the Commonwealth Government had expressed regret that the Australian nation possessed neither a collection of specimens of the unique and fast disappearing fauna of Australia, nor a museum in which such specimens could be preserved for future generations. Comparative anatomy is the basis of medical science, and while the importance of a study of Australian animals in the solution of various medical problems had for years been recognized by other countries and steps taken by them to procure specimens for their museums, national effort in this direction was neglected in Australia. The late Sir Colin MacKenzie, the first Director of the Institute of Anatomy, however, very kindly presented to the Commonwealth Government his entire private collection, and this magnificent gift was acquired and provision was made for its proper housing under special legislation

by the Commonwealth Government. In 1931 the Institute became an integral part of the Commonwealth Department of Health, and the original collection has been greatly augmented. A list of gifts to the Australian nation may be found in Official Year Book No. 39, p. 1277. In addition to these donations of material, there have been several endowments for orations and lectures, particulars of which are shown in previous issues of the Official Year Book.

The Institute consists of two separate and distinct entities: A museum section and a laboratory section. In the museum section there is displayed a portion of the original collection of anatomical specimens assembled by the late Sir Colin MacKenzie, together with ethnological collections which have been added since the foundation of the Institute. The materials in the museums, which are open to the general public, has been arranged so as to present simple lessons in human hygiene, to display the anatomical features and peculiarities of the Australian fauna, and to display interesting aspects of the character of Australian Aborigines and Natives of Papua and New Guinea.

A number of Health Department units are now concentrated within the Institute. These include the Museum and Medical Artistry Section; the Nutrition Section; the Diabetes and Enzyme Research Section; the Commonwealth Health Laboratory for the Australian Capital Territory; the Veterinary Laboratory; and the office of the Australian Pre-school Association.

The scientific research work of the Institute has now been concentrated on problems of nutrition. These take the form of field surveys of the dietary status of the Australian population and laboratory investigations into the biochemistry of nutrition and metabolism. For further information concerning the Institute see Year Book No. 32 pp. 919-21.

§ 3. The National Health and Medical Research Council.

In 1926 the Commonwealth Government established a Federal Health Council, in accordance with a recommendation of the Royal Commission on Health (1925), "for the purpose of securing closer co-operation between Commonwealth and State Health Authorities". This Council held sessions each year except in 1932. In 1936 the Commonwealth Government decided to create a body with wider functions and representation, and the National Health and Medical Research Council was established with the following functions:—

- To advise Commonwealth and State Governments on all matters of public health legislation and administration, on matters concerning the health of the public and on medical research.
- To advise the Commonwealth Government on the expenditure of money specifically appropriated to be spent on the advice of this Council.
- To advise the Commonwealth Government on the expenditure of money upon medical research and on projects of medical research generally.
- To advise Commonwealth and State Governments upon the merits of reputed cures or method of treatment which are from time to time brought forward for recognition.

The Council consists of the Commonwealth Director-General of Health (as Chairman), two officers of his Department, the official head of the Health Department in each State, together with representatives of the Federal Council of the British Medical Association, the Royal Australasian College of Surgeons, the Royal Australasian College of Physicians, the Australian Regional Council of the Royal College of Obstetricians and Gynaecologists, the Australian Dental Association, and (jointly) the four Australian Universities having medical schools. A prominent layman and laywoman, appointed by the Commonwealth Government, also serve on the Council.

The first session of the National Health and Medical Research Council met at Hobart in February, 1937. The thirty-ninth session met at Sydney in May, 1955.

Under the Medical Research Endowment Act 1937, the Commonwealth Government has made an annual appropriation of funds to provide assistance :—(a) to Departments of the Commonwealth or of a State engaged in medical research ; (b) to Universities for the purpose of medical research ; (c) to institutions and persons engaged in medical research ; and (d) in the training of persons in medical research.

Approved research institutions under this system now number 51. During 1954 grants for projects numbered 55 in the following fields :—bacteriology, biochemistry, biophysics, clinical research, dental research, epidemiology, haematology, medical chemistry, neurology, neuro-physiology, obstetrics, pathology, physiology and pharmacology, tuberculosis and virus diseases. In certain instances, equipment and apparatus have been made available by the Council ; this has greatly facilitated some specialized lines of research. The wide scope of work being carried out is greatly assisted by the formation of committees which meet regularly and advise the Council in such subjects as industrial hygiene, public health, epidemiology, maternal and child welfare, radioactive isotopes, antibiotic distribution, tropical physiology and hygiene, tuberculosis, dental research and the latest developments in X-ray technology and application.

The research work being done under these grants is of a high standard, many of the individual investigators enjoying international reputation. Beyond this practical achievement, the original objectives of the Council are being attained in encouraging young graduates to take up research work and in securing a continuity and permanence of medical research in Australia.

An insurance benefit scheme for such medical workers on the lines of the Federated Superannuation System for Universities is now in operation.

§ 4. Control of Infectious and Contagious Diseases.

1. *General*.—The provisions of the various Acts in regard to the compulsory notification of infectious diseases and the precautions to be taken against the spread thereof may be conveniently dealt with under the headings—Quarantine ; Notifiable Diseases, including Venereal Diseases ; and Vaccination.

2. *Quarantine*.—The Quarantine Act is administered by the Commonwealth Department of Health, and has three sections of disease control, as follows :—(i) Human quarantine which controls the movements of persons arriving from overseas until it is apparent that they are free of quarantinable disease ; (ii) Animal quarantine which controls the importation of animals and animal products from overseas and the security of other animals present on vessels in Australian ports ; and (iii) Plant quarantine which regulates the conditions of importation of all plants and plant products with the object of excluding plant diseases, insect pests and weeds. (See pages 521 to 523 above.)

In regard to interstate movements of animals and plants, the Act becomes operative only if the Governor-General considers that Federal action is necessary for the protection of any State or States ; in general, the administration of interstate movements of animals and plants is left in the hands of the States.

The Commonwealth controls stations in each State for the purposes of quarantine of humans, animals and plants.

3. *Notifiable Diseases*.—(i) *General*. (a) *Methods of Prevention and Control*. Provision exists in the Health Acts of all the States for the observance of precautions against the spread and for the compulsory notification of infectious disease. When any

such disease occurs, the local authority must at once be notified, and in some States notification must be made also to the Health Department. The duty of making this notification is generally imposed, first, on the head of the house to which the patient belongs, failing whom on the nearest relative present, and, on his default, on the person in charge of or in attendance on the patient, and, on his default, on the occupier of the building. Any medical practitioner visiting the patient is also bound to give notice.

As a rule, the local authorities are required to report from time to time to the Central Board of Health in each State as to the health, cleanliness and general sanitary state of their several districts, and must report the appearance of certain diseases. Regulations are prescribed for the disinfection and cleansing of premises, and for the disinfection or destruction of bedding, clothing, or other articles which have been exposed to infection. Bacteriological examinations for the detection of plague, diphtheria, tuberculosis, typhoid and other infectious diseases within the meaning of the Health Acts are continually being carried out. Regulations are provided in most of the States for the treatment and custody of persons suffering from certain dangerous infectious diseases, such as small-pox and leprosy.

(b) *Diseases Notifiable and Cases Notified in each State and Territory.* The following table, which has been compiled by the Commonwealth Department of Health, shows for each State and Territory the diseases notifiable in 1954 and the number of cases notified. Diseases not notifiable in a State or Territory are indicated by an asterisk.

DISEASES NOTIFIABLE IN EACH STATE AND TERRITORY OF AUSTRALIA AND NUMBER OF CASES REPORTED DURING THE YEAR ENDED 31ST DECEMBER, 1954.

Disease.	N.S.W.	Vic.	Q'ld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Acute rheumatism	208	128	128	..	60	*	2	..	526
Amoebiasis	*	2	1	3	14	1	2	..	23
Ankylostomiasis	295	1	16	1	2	..	63	..	378
Anthrax .. ..	*	..	..	..	..	..	..	..	..
Bilharziasis .. ..	*	..	..	..	..	..	..	..	..
Brucellosis	9	25	5	1	8	1	..	..	49
Chorea	20	28	*	..	6	*	..	..	54
Dengue .. ..	..	..	..	..	2	*	..	..	2
Diarrhoea, infantile	252	625	461	4	29	3	13	14	1,401
Diphtheria	366	107	82	5	119	4	4	17	704
Dysentery, bacillary	*	62	125	17	42	33	5	..	284
Encephalitis	33	29	5	26	..	..	2	4	99
Filaria's	*	..	1	..	..	..	..	..	1
Homologous serum jaundice	*	3	*	..	..	..	..	..	3
Hydatid	*	19	*	..	..	9	..	..	28
Infective hepatitis	1,610	1,235	*	..	165	2	15	46	3,073
Lead poisoning	*	36	27	..	2	*	..	..	65
Leprosy .. ..	..	1	6	..	47	..	23	..	77
Leptospirosis	8	1	79	..	..	*	..	..	88
Malaria .. ..	..	25	25	..	29	1	3	..	83
Meningococcal infection	198	149	52	22	48	21	4	3	497
Ophthalmia	*	1	*	..	52	..	..	..	52
Ornithosis	3	1	*	3	..	*	..	..	7
Paratyphoid fever	7	2	..	2	1	1	..	1	14
Polio-myelitis	555	569	134	176	436	10	..	26	1,906
Puerperal fever	17	3	26	2	2	..	..	..	51
Rubella	*	657	6	..	627	..	2	7	1,299
Salmonella infection .. ..	..	*	*	..	32	*	..	..	32
Scarlet fever	703	1,340	274	224	91	28	..	3	2,663
Tetanus	*	12	27	..	4	*	3	..	46
Trachoma	*	..	*	..	3,686	*	61	..	3,747
Trichinosis .. ..	..	*	*	..	..	..	..	..	..
Tuberculosis	2,159	1,143	717	308	378	185	58	4	4,952
Typhoid fever	24	13	8	7	12	3	..	..	67
Typhus—flea, mite or tick borne	3	..	34	7	19	..	..	..	63

* Not notifiable.

NOTE.—No cases of cholera, plague, smallpox, epidemic typhus or yellow fever were notified.

(ii) *Venereal Diseases.* The prevention and control of venereal diseases are undertaken by the States. Each State has a Venereal Diseases Act, or provisions in the Health Act govern the working of the measures taken to combat these diseases. Under these Acts notification has been made compulsory in every State. Steps have been taken to ensure free treatment by medical practitioners or in subsidized hospitals and clinics. Registered pharmaceutical chemists are allowed to dispense prescriptions only when signed by medical practitioners. Clinics have been established and, in some cases, beds in public hospitals have been set aside for patients suffering from these diseases.

Penalties may be imposed on a patient who fails to continue under treatment. Clauses are inserted in the Acts which aim at preventing the marriage of any infected person and the employment of an infected person in the manufacture or distribution of foodstuffs.

4. *Vaccination.*—There is statutory provision for compulsory vaccination in all States except New South Wales. Jennerian vaccine for vaccination against smallpox is prepared at the Commonwealth Serum Laboratories in Melbourne. There has been a considerable increase in the demand for vaccination, especially by people about to travel overseas by air, so that they may conform with the quarantine requirements of countries to which they are travelling.

§ 5. Inspection and Sale of Food and Drugs.

Public Health legislation in force in all States provides for the inspection of foods and drugs with the object of ensuring that all goods sold shall be wholesome, clean and free from contamination or adulteration; and that all receptacles, places and vehicles used for their manufacture, storage or carriage shall be clean. For further particulars in this connexion see § 1. State Public Health Legislation and Administration, p. 515.

§ 6. Supervision of Dairies, Milk Supply, Etc.

1. *General.*—In earlier issues of the Official Year Book (*see* No. 22, p. 498) reference was made to the legislation in force in the various States to ensure the purity of the milk supply and of dairy produce generally.

2. *Number of Dairy Premises Registered, 1954.*—The following table shows, so far as the particulars are available, the number of dairy premises registered and the number of cows in milk thereon. In some States registration is compulsory within certain proclaimed areas only.

DAIRY PREMISES REGISTERED, AND COWS IN MILK THEREON, 1954.

Particulars.	N.S.W. (a)	Victoria. (b)	Q'land. (a)	S. Aust. (c)	W. Aust. (c)	Tasmania. (a)
Premises registered ..	16,572	26,794	21,500	9,971	652	7,258
Cows in milk thereon	568,593	829,366	647,500	98,073	23,180	97,288

(a) March, 1954.

(b) Year 1954-55.

(c) Dairies registered with the Milk Board for whole milk or sweet cream for table use.

§ 7. Medical Inspection of School Children.

1. *General.*—Medical inspection of school children is carried out in all the States and the Australian Capital Territory. Medical staffs have been organized, and in some States travelling clinics have been established to deal with dental and ocular defects.

2. New South Wales.—(i) *School Medical Service.* A definite scheme of medical inspection of school children was established by the Department of Education during the years 1913-14. About the same time travelling Dental Officers were appointed, and inspection and treatment were carried out mainly in country districts.

The School Medical Services have gradually been extended since that time, additional services, such as child guidance clinics, speech therapy clinics and hearing clinics, having been introduced.

Up till the year 1946, the School Medical Service was attached to and under the control of the Department of Education, but since 1946 it has been under the control of the Department of Public Health. In 1947 the dental section was separated from the School Medical Service and a Division of Dental Services was formed.

Establishment. There are 32 permanent and 2 part-time medical officers; 5 psychiatrists; 2 part-time ear, nose, and throat surgeons; 5 psychologists; 29 nurses; 9 social workers; 10 speech therapists; 8 trainees in speech therapy; 13 clerical officers; and a telephonist.

The primary object of the service is the medical examination of children to discover any departure from normal in the health of a child, either physical or mental, and to notify the parent or guardian, in order that the child may be further investigated to determine the need for treatment. In many cases it is not possible to make a diagnosis of the conditions found at the time of the examination. This is due partly to the fact that only a limited time can be devoted to each individual examination, and also to lack of facilities within the Service for further investigation. Treatment is accepted as the responsibility of the practising medical profession.

The children attending all schools administered by the Department of Education are medically examined, as are also children attending the majority of other schools in the State. Medical officers visit schools annually in the metropolitan, Newcastle and Wollongong areas, and in five country towns (Armidale, Tamworth, Bathurst, Orange and Wagga), and examine children in kindergarten or 1st grade in primary schools and 1st and 4th years in secondary schools. Children in other classes are examined or reviewed, as necessary. The vision and hearing of pupils are re-tested in 4th grade.

In country areas the object is for medical officers to visit schools every three years, and for all children attending to be examined. Owing to insufficient staff, the country portion of the programme cannot be completed each year.

When an abnormal condition has been found by the examining medical officer and it is not under effective treatment, the parent is informed in writing by the medical officer. If possible, the parent is called in for interview, with the examining medical officer. In the metropolitan, Newcastle and Wollongong areas school nurses follow up these cases with the object of persuading parents to seek medical advice.

It is considered that the full medical examination on entrance to school, on entrance to secondary school, and in 4th year, together with the referral of children to the school medical officer by parent, teacher or school nurse, will provide sufficient cover so that the great majority of children with defects, either physical or mental, will be seen by the medical officer.

During 1954, medical officers of this service examined 152,138 children, compared with 164,845 examinations carried out in 1953. Of the total number, 108,806 children were fully examined, equalling 17.34 per cent. of the school population for the State. In addition, the cases of 43,332 children were reviewed during the year.

Defects of notifiable standard, including unhealthy mouths, were found in 27.2 per cent. of the children fully examined. It was found necessary to notify 52.0 per cent. of the total 29,633 defects recorded to parents or guardians, in order that further investigation and/or treatment could be effected.

Arrangements are made for oculists to visit schools in the more remote areas. As well as carrying out a full examination the oculist refracts the eyes of children found to have defective eyesight and prescribes glasses where necessary.

Surveys. Various surveys of school children are undertaken from time to time, e.g. hookworm survey, height-weight survey, nutrition surveys, and investigations to determine the incidence of enlargement of the thyroid gland, defective vision, postural defects, etc.

Hearing Surveys. In addition to the hearing tests carried out by the school nurses and medical officers in the course of the routine medical examination, audiometric surveys and follow-up tests are undertaken. Part-time ear, nose and throat specialists review the condition of children found to have any significant degree of deafness, give advice with regard to treatment, and, if necessary, advise whether the use of a hearing aid is indicated. Their suitability for admission to an opportunity deaf class or school for deaf children is also considered.

Teachers' Colleges. Medical officers of the School Medical Service are attached to Teachers' Colleges. They lecture in school health and other subjects to students in the colleges. These officers are also responsible for the health supervision of college students.

Child Guidance Clinics. Starting with the appointments of a psychiatrist and a psychologist in 1936, five child guidance clinics have now been established under the administration of the school medical service. They are all located in the metropolitan area. One clinic functions at the Yasmir Boys' Shelter and deals exclusively with cases before the Children's Courts.

Each clinic is now staffed by a psychiatrist, a psychologist and social workers.

Speech Therapy Clinics. The establishment provides for a staff of ten speech therapists. Treatment is undertaken in clinics in the metropolitan area.

Bush Nursing Association. An arrangement exists whereby bush nurses act as school nurses in schools at or near the Bush Nursing Centres and carry out a limited inspection for the detection of defects or unhygienic conditions.

(ii) *School Dental Service.* There are 21 School Dental Clinics. The aim of the School Dental Service is not only to provide dental treatment for children on school premises, but also to train them in the care of their teeth, and teach them the principles of dental health.

The visit of a dental clinic to a school is of educational value, and should be treated as part of the school routine. Teachers, parents and children become interested in the clinic and therefore in dental health.

Of the total number of children examined in both city and country schools, 32,974 were included in a Sound Mouth Survey. Of these 6.9 per cent. were found to have naturally sound mouths, whilst an additional 16.6 per cent. were found to have sound mouths as a result of treatment. 76.5 per cent. were in need of treatment.

In 1954, the clinic treated 19,362 children in 50,786 visits; 36,016 teeth were extracted; 36,727 permanent fillings and 46,816 other treatments were provided. There was a general increase in the work compared with 1953.

The number of clinics has never been sufficient to provide more than a limited service. It has been found necessary to restrict treatment to the ages 6-8 years in the metropolitan area, and 6-9 years in large country centres. In small outlying rural schools children of all ages are included.

In addition to the normal dental services in schools, treatment was carried out for the children at the Glenfield Special School.

3. *Victoria.*—The School Medical and Dental Services are gradually being extended throughout the State. The objective of the medical service is to ensure that each child is examined to ascertain any physical defects at least once in every three years of school life. Parents are informed concerning such defects and advised how treatment may best be obtained. In 1954, 117,154 children were examined, 70 per cent. of them being in the metropolitan area.

Nurses employed for the purpose perform valuable follow-up work in interviewing parents to ensure that as far as possible treatment recommended is carried out. There are at present 25 medical officers and 36 nurses employed in this service.

The School Dental Service affords dental treatment to children attending primary schools and resident in institutions in certain parts of the State. The districts included are progressively extending as facilities and staff increase.

Children from metropolitan schools in industrial suburbs are transported to the School Dental Centres by contract bus service. Country schools are visited by mobile dental units.

Six dental vans and five semi-trailer (two-surgery) units are operating in the mobile service.

The Dental Service has a staff of 35 dentists and 37 dental attendants. During 1954, 35,000 children attending 392 schools were examined and all necessary dental treatment carried out. This treatment included 40,129 extractions and 67,477 fillings.

4. Queensland.—During 1953-54 the School Health Services Branch employed 3 full-time and 1 part-time medical officers, 21 nurses, 19 dentists and 1 part-time dentist.

The medical officers and nurses examined school children regularly, referring children with defects to their own medical advisers. During 1953-54 76,801 medical examinations were conducted.

Advice is given on school sanitation, infectious diseases in schools and health education.

During 1953-54 school dentists gave treatment to 10,796 school children whose parents could not afford private treatment. The treatment was carried out at four Rail Dental Clinics and at schools with portable equipment. In addition school children are treated at Hospital Dental Clinics in the larger towns.

In Western Queensland local practitioners act as part-time Ophthalmic Officers.

In North Queensland two school sisters assist in the control of hookworm.

During 1953-54 the cost of the service was £76,878.

5. South Australia.—Children in State schools are examined while in Grades 1, 4 and 7 in the primary schools and in their second and fourth years in secondary schools. Efforts are made to visit country schools every three or four years and all the children are examined. Students who wish to become teachers are examined on appointment as preliminary probationary students while still attending secondary schools, again immediately prior to entering the Teachers' College and finally when they leave the college to take up teaching duties. Courses of lectures in hygiene and in first aid are given to all college students and, in addition, domestic arts students are lectured on home nursing.

The medical staff consists of a principal medical officer, 3 full-time and 3 part-time medical officers and 7 trained nurses. One part-time senior dentist and one full-time dentist and his assistant are attached to the Branch.

During 1954, 26,482 children were examined by medical officers and of these 1,713 required notices for defective vision, 726 for defective hearing, and 940 for their tonsils and adenoids.

Expenditure for the year 1953-54 was £24,351.

The Psychology Branch consists of a senior psychologist, 2 psychologists, a senior guidance officer, 2 guidance officers, 2 social workers, an advisory teacher of opportunity classes, an advisory teacher of hard-of-hearing children, a part-time speech therapist, a part-time consultant psychiatrist and a part-time consultant neurologist. The work of the Branch may be divided into three sections—clinical, educational and vocational.

Clinical. The clinical work involves examining difficult children of many types, including those with such problems as backwardness, truancy, delinquency, etc. In addition, the parents of all children examined are interviewed and their co-operation is sought.

Educational. In addition to supervising opportunity and special classes for children backward in school work, the Branch advises on questions of placement and types of education for ordinary children in schools.

Vocational. The guidance officers test and advise all children about to leave school. The guidance officers are also responsible for the supervision of record cards where used in primary schools.

The Branch also lectures to students of the Teachers' College as well as to other interested organizations such as mothers' clubs.

6. **Western Australia.**—Under the Health Act 1911–1954 the medical officers appointed by the local authorities became medical officers of schools and of school children.

In the Health Department there are five full-time medical officers for schools. During 1955, 40,964 children were examined (metropolitan 20,150, country 20,814), of whom 20,189 were boys and 20,775 girls. There were 295 schools visited, comprising metropolitan, 43 State schools, 24 convents and 9 kindergartens, and country, 167 State schools, 45 convents and 7 kindergartens. The principle aimed at is to examine every school child once every two years.

During 1954 the 10 full-time dental officers employed visited 17 metropolitan schools, 86 country schools, and 9 metropolitan orphanages. The number of children examined was 6,938 of whom 4,222 were treated with their parents' consent. The cost of this service for 1953–54 was £38,865.

7. **Tasmania.**—During the year 1954, 2 full-time and 2 part-time medical officers were employed in the examination of school children. Some Government medical officers also performed routine examinations as part of their ordinary duties. One part-time and 12 full-time sisters visited homes and schools regularly. Of the 19,996 children examined by medical officers 10,222 were found to have defects, 7,347 requiring dental treatment.

There are static dental clinics at Hobart, Launceston and Devonport and six mobile clinics operated in various parts of the State. Each clinic has a full-time dental surgeon in charge. During the year 11,498 children were examined by school dentists.

The cost of the school medical and dental services for the year ended June, 1954 was £32,585.

8. **Australian Capital Territory.**—Education facilities are provided in the Australian Capital Territory, under agreement, by the Education Department of New South Wales. In 1930, however, the Commonwealth Department of Health took over from the State the medical inspection of school children and carried out examinations of entrants and those leaving in that year. From 1943 to 1951, all primary pupils of Government schools in the Territory had an annual medical examination.

During 1951, with the appointment of an Infant Welfare and Schools Medical Officer, a plan for triennial examinations of children in primary and secondary schools was introduced, more attention being paid to those children with defects who were marked for review.

In 1954, 775 school children were fully examined and 568 given review examinations. At the Pre-School Play Centres 578 were fully examined as entrants and 278 were given review or other special examination.

Diphtheria immunisation in schools was introduced in October, 1954. Initial treatments numbered 350. Reinforcing treatments numbered 1,220. Preliminary Schick testing was carried out for the majority of children over 8 years of age.

Infants and pre-school children numbering 228 were immunised at Infant Welfare Centres.

§ 8. Supervision and Care of Infant Life.

1. *General.*—The number of infant deaths and the rate of infant mortality for the five years 1950 to 1954 are given in the following table, which shows that during this period 23,446 children died in Australia (excluding Territories) before reaching their first birthday. Further information regarding infant mortality will be found in Chapter XVII.—Vital Statistics.

INFANT DEATHS AND DEATH RATES.

State.	Metropolitan.					Remainder of State.				
	1950.	1951.	1952.	1953.	1954.	1950.	1951.	1952.	1953.	1954.

NUMBER OF INFANT DEATHS.

New South Wales	754	661	604	620	787	1,182	1,234	1,214	1,226	1,063
Victoria ..	511	549	610	544	576	490	594	588	589	479
Queensland ..	232	277	259	228	206	487	484	513	541	489
South Australia ..	235	218	210	196	199	181	210	203	179	189
Western Australia	180	185	179	180	153	206	240	205	198	206
Tasmania ..	52	56	50	51	58	120	140	122	126	128
Australia(a) ..	1,964	1,946	1,912	1,819	1,979	2,666	2,902	2,845	2,859	2,554

RATE OF INFANT MORTALITY.(b)

New South Wales	25.44	22.89	20.71	21.45	22.51	28.18	28.57	26.96	26.66	27.85
Victoria ..	19.13	20.66	21.69	19.56	18.26	21.20	24.78	22.96	22.88	20.72
Queensland ..	31.98	26.83	23.73	21.02	18.95	22.37	25.04	25.60	27.14	24.08
South Australia ..	24.68	22.45	21.29	19.71	19.82	23.25	27.09	25.31	21.79	23.08
Western Australia	25.41	26.38	23.52	23.28	19.59	28.83	30.84	26.27	24.36	25.37
Tasmania ..	23.29	26.37	21.62	22.16	25.45	23.96	26.75	21.77	23.18	23.31
Australia(a) ..	23.82	23.00	21.73	20.78	20.30	24.97	27.06	25.38	25.23	24.70

(a) Excludes Territories.
registered.

(b) Number of deaths under one year of age per 1,000 live births

During recent years greater attention has been paid to the fact that the health of mothers and infants depends largely on pre-natal attention as well as after-care. Government and private organizations, therefore, provide instruction and treatment for mothers before and after confinement, while the health and well-being of mother and child are looked after by the institution of baby health centres, baby clinics, crèches, visits by qualified midwifery nurses, and special attention to the milk supply, etc.

2. *Government Activities.*—In all the States acts have been passed with the object of supervising and ameliorating the conditions of infant life and reducing the rate of mortality. Departments control the boarding-out to suitable persons of the wards of the State, and wherever possible the child is boarded out to its mother or near female relative. Stringent conditions regulate the adoption, nursing and maintenance of children placed in foster-homes by private persons, while special attention is devoted to the welfare of ex-nuptial children. (*See also* in this connexion Chapter XV.—Welfare Services.) Under the provisions of the Maternity Allowances, Part V. of the Social Services Act 1947–1955, from 1st July, 1947 a sum of £15 is payable to the mother in respect of each confinement at which a living or viable child is born. Where there are one or two other children under 16 the amount payable is £16, and where there are three or more other children under 16 the amount payable is £17 10s. Where more than one child is born at a birth the amount of the allowance is increased by £5 in respect of each additional child born at that birth. Detailed particulars regarding Maternity Allowances are given in Chapter XV.—Welfare Services.

3. *Nursing Activities.*—(i) *General.* In several of the States the Government maintains institutions which provide treatment for mothers and children, and, in addition, subsidies are granted to various associations engaged in welfare work.

(ii) *Details by States.* In earlier issues of the Official Year Book (*see* No. 22, pp. 515–6) information may be found concerning the activities of institutions in each State.

(iii) *Summary.* The following table gives particulars of the activities of Baby Health Centres and Bush Nursing Associations :—

BABY HEALTH CENTRES AND BUSH NURSING ASSOCIATIONS, 1954.

Heading.	N.S.W.	Vic.	Qld.(a)	S. Aust.	W. Aust.	Tas.	A.C.T. (a)	Total.
Baby Health Centres—								
Metropolitan No.	92	145	53	78	21	26	7	422
Urban-Provincial No.	223	(b) 370	164	149	24	66	..	996
Total No.	315	515	217	227	45	92	7	1,418
Attendances at Centres No.	1,063,357	1,096,907	362,008	200,402	190,463	126,254	23,575	3,062,966
Visits paid by Nurses No.	25,358	105,459	25,284	24,105	18,714	79,774	2,225	280,919
Bush Nursing Associations—								
Number of Centres	31	58	8	33	10	27	?	167

(a) Year ended 30th June, 1954.

(b) Includes eight mobile units.

In the last twenty years the number of attendances at the Baby Health Centres has more than trebled. The numbers of attendances, at five-yearly intervals, since 1930 were as follows :—1930, 919,893 ; 1935, 1,355,306 ; 1940, 2,035,299 ; 1945, 2,927,764 ; 1950, 3,049,375. During the year 1953 the number of attendances was 3,153,008.

§ 9. Disposal of the Dead by Cremation.

The disposal of the dead by cremation has been in existence in Australia for many years, as the first crematorium was opened in South Australia in 1903. The number of crematoria in New South Wales is five; the first was opened in 1925. There are two crematoria in Victoria; the first opened in 1905, but was closed in 1926 and re-opened in 1936, while the other one was opened in 1927. There are two crematoria in Queensland, the first being opened in 1934. In South Australia there is one crematorium which opened in 1903. In Western Australia there is one crematorium which opened in 1939. In Tasmania there are two crematoria; the first was opened in 1936.

The following table shows the number of cremations in each State for the five years 1950 to 1954 :—

CREMATIONS.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.(a)	W. Aust.	Tas.	Aust.
1950	9,170	4,425	(a) 2,155	225	726	421	17,122
1951	9,815	4,808	(a) 2,377	280	874	485	18,639
1952	10,165	5,338	2,569	347	929	532	19,880
1953	10,556	5,533	2,723	348	924	538	20,602
1954	10,962	5,593	2,879	309	1,007	573	21,323

(a) Year ended 30th June.

B. INSTITUTIONS.

§ 1. General.

In Australia, institutions related to public health may be classified to three groups, (a) State; (b) public; and (c) private. To the first group belong those institutions wholly provided for by the State, such as the principal mental hospitals in the various States and the Government and leased hospitals in Western Australia. To the second group belong public institutions of two kinds, namely :—(i) those partially subsidized by the State or by State endowments for maintenance, but receiving also private aid, and (ii) those wholly dependent upon private aid. To the first of these two kinds belong such institutions as the principal metropolitan hospitals; in the second are included institutions established and endowed by individuals for the benefit of the needy generally. All institutions of a private character are included in the third group. A more or less accurate statistical account is possible in classes (a) and (b), but in regard to (c) general tabulation is impossible. Owing to differences in the dates of collection and tabulation it is impossible to bring statistics of some charitable institutions to a common year.

§ 2. Public Hospitals (other than Mental Hospitals).

1. General.—All the State capitals have several large and well-equipped hospitals, and there is at least one in every important town. In large centres there are hospitals for infectious diseases, tubercular patients, women, children, chronic diseases, etc.

The particulars given herein refer to public hospitals at the latest available date and include all institutions affording hospital relief, whether general or special, with the exception of mental hospitals, repatriation hospitals and private hospitals conducted commercially. The particulars for New South Wales in the following tables relate to public hospitals operating under the control of the Hospitals Commission.

2. Number, Staff and Accommodation, 1953-54.—Details regarding the number of hospitals, staffs and accommodation for the year 1953-54 are given in the following table:—

PUBLIC HOSPITALS : NUMBER, STAFF AND ACCOMMODATION, 1953-54.

Particulars.	N.S.W.	Vic.(a)	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Total.
Number of Hospitals	259	114	138	62	95	26	4	1	699
Medical Staff—									
Honorary ..	3,083	1,274	167	400	264	87	..	24	5,299
Salaried ..	718	588	556	122	88	99	13	4	2,188
Total ..	3,801	1,862	723	522	352	186	13	28	7,487
Nursing Staff ..	10,015	6,460	4,291	2,023	2,095	1,046	94	92	26,116
Accommodation—									
Number of beds and cots ..	10,235	11,786	9,071	3,431	4,090	2,226	320	250	50,812

(a) Year ended 31st March, 1954.

The figures for accommodation shown in the table above include particulars, where available, of a considerable number of beds and cots for certain classes of cases in out-door or verandah sleeping places.

3. In-Patients (Cases) Treated.—The following table furnishes particulars of in-patients treated (newborn are excluded).

PUBLIC HOSPITALS : IN-PATIENTS (CASES) TREATED, 1953-54.

Particulars.	N.S.W.	Vic.(a)	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Total.
In-patients at beginning of year—									
Males ..	6,102	3,519	3,462	1,094	893	747	88	56	15,961
Females ..	8,178	4,655	3,622	1,316	997	807	97	84	19,756
Total ..	14,280	8,174	7,084	2,410	1,890	1,554	185	140	35,717
Admission and re-admissions during year—									
Males ..	150,308	72,042	81,630	25,926	32,863	12,135	2,595	1,602	379,011
Females ..	234,275	117,127	99,343	33,802	37,444	19,366	2,481	2,722	546,560
Total ..	384,583	189,169	180,973	59,728	70,307	31,501	4,986	4,324	925,571
Total in-patients (cases) treated—									
Males ..	156,410	75,561	85,092	27,020	33,756	12,882	2,593	1,658	391,972
Females ..	242,453	121,782	102,965	35,118	38,441	20,173	2,578	2,806	566,316
Total ..	398,863	197,343	188,057	62,138	72,197	33,055	5,171	4,464	958,288
Discharges—									
Males ..	143,393	68,498	78,497	24,417	31,184	11,541	2,422	1,531	361,483
Females ..	229,039	111,024	97,127	32,807	36,394	18,817	2,388	2,674	533,270
Total ..	372,432	189,522	175,624	57,224	67,578	30,358	4,810	4,205	894,753
Deaths—									
Males ..	6,690	3,749	3,029	1,385	1,263	574	74	55	16,819
Females ..	4,912	3,106	2,152	1,068	760	476	59	51	12,584
Total ..	11,602	6,855	5,181	2,453	2,023	1,050	133	106	29,403
In-patients at end of year—									
Males ..	6,327	3,314	3,566	1,218	1,309	767	97	72	16,670
Females ..	8,502	4,652	3,686	1,243	1,287	880	131	81	20,462
Total ..	14,829	7,966	7,252	2,461	2,596	1,647	228	153	37,132
Average daily number resident ..	13,961	7,291	6,768	2,352	2,511	1,351	212	141	34,587

(a) Year ended 31st March, 1954.

In addition to those admitted to the hospitals there are large numbers of out-patients. During 1953-54 there were 1,083,857 out-patients (cases) treated in New South Wales, 447,838 in Victoria, 544,795 in Queensland, 108,542 in South Australia, 104,986 (estimated) in Western Australia, 106,950 in Tasmania, 55,275 in the Northern Territory and 6,388 in the Australian Capital Territory, making a total for Australia of 2,458,631.

4. **Revenue and Expenditure.**—Details of the revenue and expenditure for the year 1953-54 are shown in the next table. The revenue includes the Commonwealth Hospital Benefits Scheme which operated in Victoria, Queensland, Western Australia and Tasmania from 1st January, 1946, in South Australia from 1st February, 1946, and in New South Wales and the Australian Capital Territory from 1st July, 1946.

PUBLIC HOSPITALS : REVENUE AND EXPENDITURE, 1953-54.
(£'000.)

Particulars.	N.S.W. (a)	Vic.(b)	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Total.
Revenue—									
Government aid ..	14,054	8,466	7,631	2,170	2,845	1,283	..	199	42,775
Commonwealth Hospital Benefits, etc.		2,267	2,173	627	793	214	31	22	
Municipal aid ..	(c)	108	..	118	..	..	..	..	226
Public subscriptions, legacies, etc. ..	115	1,360	..	109	32	1	..	..	1,617
Fees ..	4,785	2,507	532	463	762	250	..	36	9,335
Other ..	293	194	72	206	88	8	..	1	862
Total ..	19,247	14,902	10,408	3,693	4,520	1,756	31	258	54,815
Expenditure—									
Salaries and wages	12,445	6,371	4,652	2,058	2,171	1,095	257	107	29,156
Upkeep and repair of buildings and grounds ..	697	339	169	167	217	29	88	8	1,714
All other ordinary ..	5,942	4,716	3,122	1,099	1,281	587	50	76	16,873
Capital(d) ..	(e)	3,479	1,624	369	592	..	12	66(f)	6,142
Total ..	19,084	14,905	9,567	3,693	4,261	1,711	407	257	53,885

(a) Excludes loan receipts and expenditure. (b) Year ended 31st March, 1954. (c) Included in "Other". (d) Includes such items as Purchases of Land, Cost of New Buildings and Additions to Buildings. (e) Not available. (f) Incomplete.

5. **Summary, 1938-39 and 1950-51 to 1953-54.**—A summary, for the years 1938-39 and 1950-51 to 1953-54, of the number of public hospitals in Australia, medical and nursing staffs, beds, admissions, in-patients treated, out-patients, deaths, average daily number resident, revenue, and expenditure is given in the following table. The figures relate to both general and special hospitals.

PUBLIC HOSPITALS : AUSTRALIA.

Particulars.	1938-39.	1950-51.	1951-52.	1952-53.	1953-54.
Hospitals ..	563	664	675	694	699
Medical Staff ..	4,059	6,424	6,889	7,246	7,487
Nursing Staff ..	13,582	23,055	24,556	25,940	26,116
Beds and cots ..	35,711	46,417	47,328	50,076	50,812
Admissions during year ..	527,055	835,022	863,058	905,492	925,571
Total in-patients (cases) treated ..	552,051	867,721	896,020	939,856	961,288
Out-patients (cases) (a) ..	1,272,147	2,206,499	2,286,183	2,422,302	2,458,631
Deaths ..	23,372	28,648	28,746	28,604	29,403
Average daily no. resident ..	25,608	33,050	33,552	34,552	34,587
Revenue .. £	7,106,642	32,406,461	41,216,677	51,141,059	54,814,436
Expenditure .. £	6,351,055	32,582,450	43,327,700	50,541,100	53,884,574

(a) Partly estimated.

§ 3. Leper Hospitals.

Isolation hospitals for the care and treatment of lepers have been established in New South Wales (Little Bay); Queensland (Peel Island, near Brisbane, and Fantome Island, North Queensland); Western Australia (Derby); and the Northern Territory (East Arm Settlement, near Darwin). At the end of 1954 there were 6 cases in residence at Little Bay, 24 at Peel Island, 49 at Fantome Island, 245 at Derby, 195 at East Arm Settlement, 3 in Victoria and 6 cases at Wooroloo, Western Australia. Of the 528 cases, 472 were full-blood aborigines, 14 half-caste aborigines, 2 Asians and 40 Europeans.

§ 4. Mental Hospitals.

1. *General.*—The methods of compiling statistics of mental diseases are fairly uniform throughout the States, but there is an element of uncertainty about possible differences in diagnosis in the early stages of the disease. The figures for the States cannot be brought to a common year; consequently the following particulars relate to a combination of calendar and financial years. Licensed houses are included in all particulars excepting revenue and expenditure for New South Wales. The figures exclude those of reception houses and observation wards in gaols. In New South Wales the expenditure includes the cost of Broken Hill patients treated in South Australian mental hospitals.

2. *Hospitals, Staff, etc., 1953-54.*—Particulars regarding the number of hospitals, the medical and nursing staffs, and accommodation are given in the following table for the year 1953-54 :—

MENTAL HOSPITALS : NUMBER, STAFF, ACCOMMODATION, 1953-54.(a)

Particulars.	N.S.W.	Vic.	Q'land. (b)	S. Aust.	W. Aust.	Tas.	Total.
Number of Hospitals	13	10	4	2	4	1	34
Medical Staff—							
Males	36	64	{ 10 1	12	5	3	140
Females	9						
Total	(c) 45	64	11	12	5	3	140
Nursing Staff and Attendants—							
Males	984	873	496	191	187	106	2,837
Females	985	827	348	208	98	112	2,578
Total	1,969	1,700	844	399	285	218	5,415
Accommodation—							
Number of beds and cots ..	12,398	7,123	4,553	2,624	1,611	780	29,089

(a) The figures relate to years ended as follows :—New South Wales, Queensland, South Australia and Tasmania—30th June, 1954; Victoria and Western Australia—31st December, 1953. (b) Includes the Epileptic Home. (c) In addition there are 59 visiting specialists who are paid for their services.

3. *Patients, 1953-54.*—Information regarding patients treated, deaths, etc., for 1953-54 is given in the following table :—

MENTAL HOSPITALS : PATIENTS, DEATHS, ETC., 1953-54.(a)

Particulars.	N.S.W.	Vic.	Q'land. (b)	S. Aust.	W. Aust.	Tas.	Total
Number of distinct persons treated during year (c)—							
Males	7,306	4,283	2,916	1,515	1,109	523	17,682
Females	7,851	4,842	2,779	1,537	786	577	18,372
Total	15,157	9,125	5,695	3,082	1,895	1,100	36,054

(a) See footnote (a) to previous table.
transfers to other institutions.

(b) Includes the Epileptic Home.

(c) Excludes

MENTAL HOSPITALS: PATIENTS, DEATHS, ETC., 1953-54(a)—*continued*.

Particulars.	N.S.W.	Vic.	Q'land. (b)	S. Aust.	W. Aust.	Tas.	Total.
Number of patients at beginning of year—							
Males	6,334	3,553	2,321	1,268	987	343	14,806
Females	6,645	4,154	2,233	1,266	679	407	15,384
Total	12,979	7,707	4,554	2,534	1,666	750	30,190
Admissions and re-admissions (excluding absconders retaken and transfers from other hospitals)—							
Males	972	730	595	277	122	180	2,876
Females	1,206	688	546	271	107	170	2,988
Total	2,178	1,418	1,141	548	229	350	5,864
Discharges (including absconders not retaken)—							
Males	483	374	318	114	42	133	1,464
Females	587	300	401	131	24	121	1,564
Total	1,070	674	719	245	66	254	3,028
Deaths—							
Males	421	257	188	102	61	27	1,056
Females	497	258	167	91	47	48	1,108
Total	918	515	355	193	108	75	2,164
Number of patients at end of year—							
Males	6,402	3,652	2,410	1,329	1,006	363	15,162
Females	6,767	4,284	2,211	1,315	715	408	15,700
Total	13,169	7,936	4,621	2,644	1,721	771	30,862
Average daily number resident—							
Males	5,448	3,256	2,259	1,309	947	359	13,578
Females	6,160	3,713	2,068	1,223	635	411	14,210
Total	11,608	6,969	4,327	2,532	1,582	770	27,788
Number of patients at end of year per 1,000 of population—							
Males	3.72	3.01	3.56	3.29	3.08	2.31	3.37
Females	3.97	3.56	3.44	3.34	2.34	2.69	3.57
Total	3.85	3.28	3.51	3.32	2.72	2.50	3.47
Average number of patients resident in mental hospitals per 1,000 of population—							
Males	3.18	2.71	3.38	3.29	2.95	2.28	3.04
Females	3.64	3.11	3.27	3.15	2.11	2.71	3.26
Total	3.41	2.91	3.33	3.22	2.55	2.49	3.15

(a) See footnote (a) to previous table.

(b) Includes the Epileptic Home.

Persons who are well advanced towards recovery are allowed to leave the hospitals and live with their relatives or friends, but they are under supervision and their names are kept in the records.

4. Revenue and Expenditure, 1953-54.—The revenue of Government mental hospitals is small in comparison with their cost, and consists chiefly of patients' fees, and mental

institution benefits. The agreements made between the Commonwealth and the States under the 1948 Mental Institution Benefits Act, lapsed in the latter half of 1954.

Under the State Grants (Mental Institutions) Act, No. 67, 1955, the Commonwealth is authorised to make payments to the States of amounts equal to one-third of the amounts expended by the States for or in connexion with the buildings or equipment of mental institutions on or after 1st July, 1955. The Commonwealth grants are limited to the following maximum amounts—

New South Wales, £3,830,000; Victoria, £2,740,000; Queensland, £1,460,000; South Australia, £895,000; Western Australia, £720,000; Tasmania, £355,000; Total, £10,000,000.

The proportion of expenditure borne by the State amounts to about 90 per cent. In New South Wales the expenditure includes the cost of Broken Hill patients treated in South Australian mental hospitals :—

MENTAL HOSPITALS : FINANCES, 1953-54.

(£.)

Particulars.	N.S.W.	Vic.	Q'land. (a)	S. Aust.	W. Aust.	Tas.	Total.
Revenue (excluding Government Grants)—							
Fees of patients	210,702	..	11,213	39,173	31,705	13,428	306,221
Mental Institution .. ..	..	..	..	..	..	..	..
Benefits	209,772	156,871	..	36,257	18,280	..	421,180
Other	(b) 88,798	19,315	4,133	40,420	7,789	825	161,280
Total	509,272	176,186	15,346	115,850	57,774	14,253	888,681
Expenditure—							
Salaries and wages	1,936,789	1,633,554	744,381	427,116	332,620	191,736	5,266,196
Upkeep and repair of buildings, etc.	192,762	282,098	12,611	45,168	30,781	6,010	569,430
All other	1,482,440	1,338,080	556,033	298,025	200,071	98,269	3,972,918
Capital (c)	562,390	1,015,262	93,490	152,955	49,255	..	1,872,452
Total	4,174,381	4,268,994	1,406,515	922,364	612,727	296,015	11,680,996
Expenditure per average daily resident	£359/12/3	£612/11/5	£325/1/1	£364/5/8	£387/6/3	£384/8/8	£420/7/3

(a) Includes the Epileptic Home. (b) Includes £33,181 Commonwealth Hospital Benefits. (c) Capital expenditure includes Purchases of Land, Cost of New Buildings, and Additions to Buildings.

5. Summary for Australia, 1938-39 and 1950-51 to 1953-54.—The following table gives a summary relating to mental hospitals in Australia during 1938-39 and for each of the years 1950-51 to 1953-54 :—

MENTAL HOSPITALS : SUMMARY. AUSTRALIA.

Particulars.	1938-39.	1950-51.	1951-52.	1952-53.	1953-54.
Hospitals	35	33	33	33	34
Medical Staff	92	138	167	149	140
Nursing Staff and Attendants	4,922	4,826	4,985	5,132	5,415
Beds	25,654	27,512	27,573	28,546	29,089
Admissions	3,757	5,325	5,508	5,753	5,864
Discharged as recovered, relieved, etc.	1,800	2,356	2,711	2,823	3,028
Deaths	1,632	1,959	2,166	2,303	2,164
Patients at end of year	26,509	28,932	29,563	30,190	30,862
Average daily resident	24,063	25,996	26,489	27,259	27,788
Revenue (excluding Government Grants)	£ 262,817	811,495	861,083	866,561	888,681
Expenditure—Total	£ 1,903,817	6,449,862	8,749,187	10,713,747	11,680,996
„ —Per average daily resident	£79/2/4	£248/2/2	£330/5/11	£393/0/7	£420/7/3

6. Number of Mental Patients, 1938-39 and 1950-51 to 1953-54.—The total number returned as under treatment shows slight increases during the period but the proportion to total population shows a slight decline. A more rational attitude towards the treatment of mental cases has resulted in a greater willingness in recent years to submit afflicted persons to treatment at an early stage, and an increase in the number of recorded cases, therefore, does not necessarily imply an actual increase in mental diseases.

MENTAL PATIENTS IN HOSPITALS.

State.	1938-39.	1950-51.	1951-52.	1952-53.	1953-54.
NUMBER.					
New South Wales	11,678	12,505	12,873	12,979	13,169
Victoria	7,326	7,472	7,568	7,707	7,936
Queensland(a)	3,650	4,295	4,388	4,554	4,621
South Australia	1,747	2,411	2,425	2,534	2,644
Western Australia	1,477	1,567	1,599	1,666	1,721
Tasmania	631	682	710	750	771
Australia	26,509	28,932	29,563	30,190	30,862
PER 1,000 OF POPULATION.					
New South Wales	4.25	3.81	3.85	3.84	3.85
Victoria	3.92	3.34	3.29	3.26	3.28
Queensland(a)	3.59	3.50	3.48	3.53	3.51
South Australia	2.93	3.29	3.21	3.27	3.32
Western Australia	3.16	2.74	2.71	2.72	2.72
Tasmania	2.66	2.38	2.40	2.47	2.50
Australia	3.81	3.47	3.46	3.46	3.47

(a) Includes the Epileptic Home.

The difference between States in the number of mental patients in hospitals per 1,000 of population may to some extent be the result of differences in classification.