CHAPTER IX.

PUBLIC HYGIENE.

§ 1. Public Health Legislation and Administration.

Reference to the various public health authorities, Commonwealth and State, their functions, and the legislation administered, may be found in earlier issues of the Official Year Book (see No. 22, pp. 493–5).

§ 2. Inspection and Sale of Food and Drugs.

Legislation in force in all States provides for the inspection of food and drugs with the object of ensuring that all those goods which are 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, and with respect also to the sale and custody of poisons, reference should be made to Official Year Book, No. 22, pp. 495–7.

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

1. **General.**—In earlier issues (see No. 22, p. 498), reference is 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.**—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, 1942.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust. (a)	Tasmania.
Premises registered ..	19,784	24,418	29,760	12,145	358	6,611
Cows in milk thereon ..	651,186	570,969	714,160	114,280	11,428	(b)

(a) Premises within a district extending 25 miles north and 90 miles south of Perth only. (b) Not available.

§ 4. 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 as to the expenditure of money specifically appropriated as money to be spent on the advice of this Council;

To advise the Commonwealth Government as to the expenditure of money upon medical research and as to projects of medical research generally;

To advise Commonwealth and State Governments upon the merits of reputed cures or methods of treatment which are from time to time brought forward for recognition.

The constitution of the Council consists of the Commonwealth Director-General of Health as Chairman, with 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, 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 sixteenth session met at Canberra in November, 1943.

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;
(*d*) in the training of persons in medical research.

Approved Research Institutions under this system now number 26. During the year 1942, grants numbered 22 in the following fields: bacteriology, biochemistry, clinical medicine, dentistry, neurology, nutrition, obstetrics, ophthalmology, 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 work that is being done under these grants is already yielding results; 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.

§ 5. The Commonwealth Department of Health.

1. **General.**—An Order-in-Council dated 3rd March, 1921, defined various functions to be performed by the Commonwealth Department of Health in addition to quarantine, which is the only specific public health power of the Commonwealth Parliament under the Commonwealth Constitution. Many essential services have been developed by the Department to meet current needs and to further public health throughout Australia. In earlier issues of the Official Year Book reference has been made to several features of this development, including: The Royal Commission on National Health, 1925 (see No. 22, pp. 509–10), the International Pacific Health Conferences (see No. 22, p. 510 and No. 29, p. 334), Industrial Hygiene (see No. 18, pp. 522–55), Tropical Hygiene (see No. 22, pp. 506–7, No. 25, pp. 416–7, and No. 32, p. 226), and the Commonwealth Advisory Council on Nutrition (see No. 32, p. 222). Reference to quarantine is made below (see § 6, par. 2.)

2. **The Commonwealth Serum Laboratories.**—The establishment for the preparation of Jennerian vaccine situated at Royal Park, near Melbourne, formerly known as the "Calf Lymph Depot" was in 1918 greatly enlarged by the Commonwealth. The remodelled institution is designated the "Commonwealth Serum Laboratories" and is administered by the Commonwealth Department of Health. The Laboratories are now installed in fully equipped buildings and a large staff is employed. At Broadmeadows a farm of 254 acres has been developed, under veterinary supervision, for the many thousands of animals required for the work of the laboratories.

The list of biological preparations produced by the laboratories has been extended until at the present time almost the whole range of these products is manufactured and Australia is practically independent of other countries in thus producing its own requirements. War needs have greatly increased all activities. Constant research is being conducted into every relevant aspect of bacteriology and immunology and new sera and prophylactic agents are being tested as the growth of medical knowledge opens up new avenues of treatment, prevention and diagnosis. Other original and applied research relating to all aspects of public health is maintained. The laboratories serve as the national centre for the maintenance in Australia of the international standards of the Permanent Commission on Biological Standards of the League of Nations.

For the past eighteen years the production of veterinary biological products has been a feature of the work of the laboratories. In recent years an extensive development has occurred in this direction and the products are being used in greatly increased amounts in all States for the prevention or treatment of diseases in domestic animals and stock.

3. **The Commonwealth Health Laboratories.**—The twelve Health Laboratories of the Department are situated at strategic points throughout Australia. They are located at Darwin, Cairns, Townsville, Rockhampton, Toowoomba, Lismore, Bendigo, Launceston, Hobart, Port Pirie, Kalgoorlie and Broome. 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 Weil's disease 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 hitherto 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 Sydney School of Public Health and Tropical Medicine.

A major part of the work performed at the Kalgoorlie Laboratory, since its establishment in 1925, has been the medical examination, on behalf of the State Department of Mines, of employees and applicants for employment in the metalliferous mines in that State. These examinations are performed in accordance with the provisions of the State Mines Regulation Act and the Mine Workers' Relief Act, the objects of which are to provide a healthy body of men for the industry and to free the industry of, and protect the future of, those found to be suffering from serious pulmonary disease. The examinations include clinical, laboratory and radiographic investigation. By means of a mobile X-ray unit an annual tour is also made of outlying mining centres.

In the seventeen years since the inception of this service over 30,000 men have been examined.

X-ray facilities are also provided at the Bendigo Laboratory as part of the campaign against tuberculosis, for the examination of miners and other radiographic work in the district.

4. **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 tropical 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, and lay officers and nurses in the tropical services and missionaries.

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. Further details may be found in previous issues of the Official Year Book (see No. 29, p. 334).

5. **The Australian Institute of Anatomy.**—Information concerning the Australian Institute of Anatomy at Canberra is given in previous issues of the Official Year Book (see No. 32, p. 919). In 1931 the Institute became an integral part of the Commonwealth Department of Health. The work of the Institute on general problems of comparative anatomy has now been concentrated on aspects of structure and function with special reference to the development of the growing child. Biochemical and biological research in this field is being developed in close association with the model kindergarten centres established by the Department in each capital city (see par. 8 below) and in specialized aspects of nutrition. The background of comparative anatomy and the museums of the Institute are maintained as part of the general plan of work, and an expert zoologist is a member of the body of research workers at the Institute.

6. **The Northern Territory Medical Service.**—As from 1st April, 1939, the Commonwealth Department of Health assumed administrative responsibility for the medical and health services of the Northern Territory, absorbing the Northern Territory Medical Service of the Territory Administration. The Health services of Darwin were strengthened with the growing importance of that town as the northern gateway to Australia and as an administrative and service centre. A new hospital at Darwin, not yet entirely completed, is now in use. The hospital at Alice Springs has been enlarged and in normal times the medical officer of the hospital acts as the flying doctor for the local base of the Australian Aerial Medical Services which provide for pilot, aircraft and ground services.

7. **National Fitness.**—Health authorities in Australia have closely followed the world-wide movement for the advancement of physical fitness and in several States active work has been proceeding over some years. In 1938, following 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 have been held at regular intervals; a sixth session was held in October, 1941. Meanwhile active State Councils have been formed in all States. As a result of the recommendations of the central Council, the Commonwealth Council 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. The movement continues to develop and to gain public interest and support throughout Australia.

8. **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 care of the infant and the welfare of the school child are already developed by State authorities as recorded in §§ 7 and 8 below. It was felt by the Commonwealth Government that more could be done for the child of the pre-school age, and it was decided to give a lead by making possible a demonstration of the possibilities of effort and of the practical methods which could be employed.

In pursuance of these objectives the Commonwealth Government therefore decided to establish in each capital city a pre-school demonstration 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 piece of land was secured in each capital city and the necessary school structure was built. The administration of these buildings is under the direction of the local Kindergarten Union, but the employment of staff and the technical methods used are approved by the Commonwealth Department of Health. 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. In view of the importance, which has been indicated, of the study of growth and of nutrition of this age-period, these centres provide by reason of the children there available a considerable mass of human material for control and study. 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 of the States centres is carried on 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.

9. **Organization for the Control of Cancer.**—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. Since 1928 the Australian Cancer Conferences, convened by the Department, have 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 and further development. The tenth conference in this series met in New Zealand in February, 1939, and so marked an association which has been maintained between Australia and the Dominion since the inception of the conferences.

A large amount 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. Records of treatment and the results obtained are kept by all treatment centres on uniform lines and are collected and analysed. These records, in respect of certain parts of the body, are also collated in accordance with the international inquiry which was carried out under the auspices of the Cancer Commission of the Health Organization of the League of Nations in collaboration with the International Radiological Association.

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

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 has now extended the work of the Commonwealth Radium Laboratory, which was established in 1929, to include the investigation of the physical problems of radiation therapy generally. This laboratory, which is now known as the Commonwealth X-ray and Radium Laboratory, was established at the University of Melbourne by agreement with the Council of the University, and is maintained,

controlled and staffed by the Commonwealth Department of Health. It is accommodated in a separate laboratory building of sixteen rooms specially designed for X-ray and radium work, and is well provided with all necessary equipment for research work, including a high-tension generator capable of supplying 500,000 volts to an X-ray tube. This laboratory is actively at work and its specialist officers co-operate closely with the local physical services which are being developed at the Universities in the other capital cities of Australia. The laboratory also continues its earlier work of production of radon for treatment, the repair of radium apparatus, and research into problems of treatment and protection During the year 1943 a total quantity of 67,540 millicuries of radon was prepared and issued by this laboratory and the associated centres in Sydney, Adelaide, Brisbane and Perth. Used in the treatment of cancer and for research purposes this production represents a continuing increase over the output of previous years.

10. **Veterinary Hygiene and Plant Quarantine.**—In 1927 Directors were appointed to control divisions of the Commonwealth Department of Health which have been created to deal with veterinary hygiene and plant quarantine.

§ 6. 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 uniformity of procedure has been established in respect of all vessels, persons and goods arriving from oversea ports or proceeding from one State to another, and in respect of all animals and plants brought from any place outside Australia. In regard to interstate movements of animals and plants, the Act becomes operative only if the Governor-General be of opinion that Federal action is necessary for the protection of any State or States; in the meantime the administration of interstate quarantine of animals and plants is left in the hands of the States. The Commonwealth possesses stations in each State for the purposes of human and of animal quarantine.

Further information concerning the chief provisions of the Act and its administration is given in some detail in earlier issues of the Official Year Book (see No. 22, p. 500).

3. **Notifiable Diseases.**—A. General.—(i) *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.

(ii) *Details by States.* In earlier issues of the Official Year Book (see No. 22, p. 501) information was given concerning the notification, etc., of diseases under State headings.

(iii) *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 the year 1942 the diseases which are notifiable in each State and the Australian Capital Territory 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 AND NOTIFICATIONS FOR THE YEAR ENDED 31st DECEMBER, 1942.

Disease.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T.†	Aust. Cap. Terr.	Aust.
Anchylostomiasis	*	..	10	..	..	..	..	..	10
Anthrax	*	1	..	..	..	..	..	..	1
Beriberi	*	*	*	*	*	*	..	*	..
Bilharziasis	*	..	..	..	..	..	..	..	..
Cerebro-spinal Meningitis	879	575	204	280	353	77	..	3	2,371
Cholera	..	..	..	..	..	..	..	..	..
Coastal Fever(*a*)	*	*	4	*	*	*	*	*	4
Dengue	*	*	*	*	*	*	..	*	..
Diphtheria	1,454	1,309	478	630	792	291	..	5	4,959
Dysentery(*b*)	*	11	29	17	..	1	..	..	58
Encephalitis Lethargica	12	2	2	5	..	..	..	..	21
Erysipelas	*	*	*	99	*	*	..	..	99
Filariasis	*	*	1	..	..	..	..	..	1
Helminthiasis	*	1	*	*	*	*	*	*	1
Hydatid	*	22	*	*	*	*	*	..	22
Influenza	*	*	*	130	*	*	..	*	130
Leprosy	4	..	2	1	47	..	..	..	54
Malaria	*	10	566	26	5	..	..	..	607
Measles	*	*	*	8,085	390	*	..	322	8,797
Plague	..	..	..	..	..	..	..	..	..
Poliomyelitis	34	23	7	3	18	7	..	..	92
Psittacosis	*	..	*	..	*	*	*	*	..
Puerperal Fever	244	14	140	25	2	9	..	..	434
Rubella	*	*	*	*	*	*	..	93	93
Scarlet Fever	1,576	3,150	603	856	160	72	..	4	6,421
Smallpox	..	..	..	..	..	..	..	..	..
Tetanus	*	6	*	*	*	*	*	*	6
Trachoma	*	..	*	*	*	*	*	*	..
Tuberculosis(*c*)	1,916	845	474	307	137	173	..	3	3,855
Typhoid Fever(*d*)	31	16	78	18	11	9	..	..	163
Typhus (Endemic)(*e*)	8	..	36	1	18	..	..	..	63
Undulant Fever	..	6	..	..	..	..	..	..	6
Weil's Disease(*f*)	*	*	10	*	*	*	*	*	10
Whooping Cough	*	*	*	1,313	*	*	..	4	1,317
Yellow Fever	..	..	..	..	..	..	..	..	..

* Not notifiable. † Publication withheld.

(*a*) Includes "Mossman" and "Sarina" Fevers. (*b*) Includes amœbic and bacillary. (*c*) Includes all forms except in New South Wales and Northern Territory where only pulmonary tuberculosis is notifiable. (*d*) Includes Enteric Fever and Paratyphoid. (*e*) Cases reported are all of the mild type known as Brill's Disease or Endemic Typhus. (*f*) Includes Leptospiroses, Weil's and Para-Weil's Disease.

B. Venereal Diseases.—(i) *General.* 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 except South Australia, where the Venereal Diseases Act has not yet been proclaimed. 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.

For several years the Commonwealth Government granted a subsidy to each of the States to assist in providing hospital treatment and administrative control of venereal diseases, but this subsidy has been discontinued.

In 1927 a Division of Tuberculosis and Venereal Disease was established in the Commonwealth Department of Health, with a medical officer as Director. This Division ceased to exist in April, 1932.

(ii) *Details by States.* A statement of the preventive provisions in each State together with certain statistical data, appeared in earlier issues of the Official Year Book (see No. 22, pp. 503–4).

4. Vaccination.—(i) *Demand for Vaccine.* In New South Wales there is no statutory provision for compulsory vaccination, though in all the other States such provision exists. Jennerian vaccine for vaccination against small-pox is prepared at the Commonwealth Serum Laboratories in Melbourne. A moderate demand exists for the vaccine in Victoria, but in the other States the normal requirements are small, as is also the proportion of persons vaccinated.

(ii) *Details by States.* In earlier issues of the Official Year Book (see No. 22, pp. 504-5) information was given concerning the provisions regarding vaccination in each State.

§ 7. Medical Inspection of School Children.

1. General.—Medical inspection of school children is carried out in all the States. 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.—A complete system of medical inspection of school children came into operation in this State in 1913. The scheme includes, in country districts, the medical examination of every child at least twice during the usual period of school attendance (6–15 years). In the metropolitan area, the scheme provides for the full medical examination of all children in first and sixth classes, and the review of children in other classes who have been found defective in previous years. Parents are notified of the defects found, and urged to have them treated. In the metropolitan area, these notices are reinforced by "follow-up" work of school nurses, who also arrange hospital and clinic treatment in many cases.

At the beginning of 1942 the staff comprised 13 medical officers (including 2 psychiatrists for the Child Guidance Clinics, and 1 oculist), 18 dental officers, 8 dental assistants, 8 school nurses, 3 psychologists, 3 social workers and 5 clerical officers. Two speech therapists were appointed during the year. Two medical officers were engaged in country districts, and 7 in the metropolitan area, and of the 18 travelling dental clinics (8 of which were each staffed by a dental officer and dental assistant), 9 were engaged in metropolitan schools and 9 in country districts. One of the metropolitan officers was also engaged half-time at the clinic attached to the Out-patients' Department of the Royal Alexandra Hospital for Children.

Special attention is paid to the supervision of the health of high school pupils, both girls and boys, and high schools in the metropolitan area, as well as certain country schools, are medically inspected annually.

Every student, before entering the Teachers' College, is medically examined, and any defects found must be remedied before final acceptance. Health supervision is maintained at these Colleges by women medical officers—whole-time at the Sydney College and part-time at the Armidale College. Also, a course of lectures on hygiene, which every student attends, is given by these officers assisted part-time at the Sydney College by one other medical officer.

The Child Guidance Clinics examine children referred by school medical officers, teachers, officers of the Child Welfare Department and various outside bodies, no fee being charged for any examination. During the year 1942, 1,118 boys were examined at the Clinic at the Metropolitan Boys' Shelter attached to the Children's Court.

Similar examinations are made in the case of girl delinquents.

The medical and/or psychological examination of many children referred from schools, also certain children under the jurisdiction of the Child Welfare Department, Widows' Pensions Branch and the Society for Crippled Children is also carried out by medical officers of this service, either at this Department or at Child Welfare Department institutions. From July to December, 2,281 treatments were given by the two speech therapists to children referred through school medical examinations or the Child Guidance Clinics.

The following summary furnishes particulars of children medically examined in schools in 1942 :—

Number fully examined (routine inspection)	38,993
Number reviewed	20,809
Of those examined—percentage notified for defects, medical and/or dental	38.84 per cent.

These figures do not include record of the medical examination and health supervision of children in residence at the Glenfield Special School for backward children, which is carried out by a woman medical officer.

The School Medical Service carries out regular and/or periodical investigations into problems affecting the health of children, such as goitre, crippling, mental deficiency, stammering, left-handedness, faulty nutrition, trachoma, acute rheumatism, and special investigations into outbreaks of infectious diseases occurring in schools. The sanitary condition of school buildings is also inspected.

The foregoing statement does not include record of the numerous medical examinations of teachers, and other Departmental work of a medical nature, done by the School Medical Service.

The cost of this service, excluding administration charges, for the year ended 30th June, 1943, was £33,442.

3. **Victoria.**—Medical inspection of school children was established in 1909. One of the objectives of the system is to have each child medically examined once every three years in its school life. In 1925 the Department concentrated on country work, and medical inspection has been undertaken since that date in country and rural districts, reaching the most remote corners of the State. In spite of the comparatively small medical inspection staff, the plan for triennial visits to State schools is being fairly well maintained and all State High Schools, nearly all other State schools in the country, and some in the densely populated inner-metropolitan area are visited once in three or four years. Only a few of the registered and institutional schools are, however, visited.

At the medical inspection every child is first weighed and measured, tested for vision and hearing, then undressed to the waist and medically examined as for life assurance, but with a fuller investigation of many hygienic factors, which at that age greatly influence the health and growth of the child. Opportunity is also taken to teach the child healthy habits and how to correct faults, and to get its co-operation for the remedying of defects found. In schools with an attendance of 70 or more, the older boys are examined by a medical man and the older girls by a medical woman. School nurses employed by the Department are devoted to "follow-up" work, *i.e.*, visiting the homes and getting treatment for children found defective by the school medical officers. Owing to the smallness of the staff their work is confined to the metropolitan area.

In addition to the medical examination, each child in those schools visited by the school dentist receives dental treatment on entrance to school (if under 8 years of age), and each year thereafter, until it is 12 years of age, when it is left dentally fit. The present staff is arranged so that 3 dentists and 4 dental attendants are always on duty at the Melbourne Dental Centre, where children from the inner metropolitan schools are brought by the teacher for dental treatment. Two dentists with dental attendants and equipment travel along the railway line far enough to give one year's work, using practically every town large enough to provide a day's work as a base. The school committees of the outlying schools are notified of the visit, and the parents are invited to bring to the base all children eligible for treatment, *i.e.*, all children under 8 years of age, and all other children treated by the school dentists on previous visits. The time of another dentist is fully occupied treating the children in the three largest country centres.

Bendigo, Ballarat and Geelong. In each of these cities a centre with a dentist, dental attendant and equipment is established for about four months of the year, where children from the infant classes of the neighbouring schools are brought by the teacher or parents. Three dentists with dental attendants are in charge of three fully-equipped dental vans, each of which has an annual itinerary.

The staff of the medical branch consists of 7 full-time medical officers, 9 dentists, 11 dental attendants and 12 school nurses.

During the year ended 30th June, 1942, 50,524 children and 1,927 teachers were medically examined, and 29,678 children received dental treatment. In addition 3,559 homes were visited by the school nurses.

The cost of this service for the year 1942–43, was £22,743.

4. **Queensland.**—The School Health Services Branch, under the direction of the Chief Medical Officer, consists of three sections known as the Medical, Dental and Nursing Sections.

Medical inspection of schools and school children is carried out by one part-time officer under the general direction of the Chief Medical Officer, School Health Services. This officer as far as possible, examines children for cardiac and pulmonary conditions, and in addition makes a thorough examination of all children referred to him by the school nurses.

The nurses now number thirteen. Each nurse is assigned a group of schools and is instructed to make a list at each school of those children who should be seen by the medical inspector at his next visit. She supervises the sanitation, cleanliness and ventilation of the school and notifies the head teacher of all infectious or verminous children or those suffering from impetigo, scabies, etc., who are then excluded. During 1942, school nurses examined 36,645 children. In the metropolitan area the nurses examine the teeth and report all eligible carious cases to the Dental Hospital for treatment.

The Department has in its employ a staff of 15 dentists. These officers are each assigned a district, and such district is not changed for three years unless for reasons which the Chief Medical Officer, on the recommendation of the Chief Dental Inspector, considers advisable. During 1942, 30,392 children were examined; 17,736 extractions were performed; and there were 25,486 fillings and 8,594 other treatments.

At the Wilson Ophthalmic School Hostel children suffering from trachoma are treated and educated. They are admitted from time to time on the recommendation of the part-time Ophthalmic Officer. Beneficial results have already been obtained. The Institution is situated at Eildon Hill, Windsor, and is fully equipped to treat all types of eye case.

The work of Hookworm Control (the dealing with ankylostomiasis duodenale and Necator Americanus infestation) throughout the State is under the control of the Director-General of Medical Services and his deputy. This activity has resulted in a marked reduction in the incidence of this dangerous menace on the northern coastal belt. Several sisters of the School Health Services are seconded for hookworm duty. The personnel consists of a microscopist, a health inspector and two trained sisters.

In order to give the same medical and dental facilities to the children of the back country as are obtainable by city dwellers, a Rail Dental Clinic equipped on the most modern lines has been constructed. A motor car is carried on a railway waggon for use at each stopping place to visit the surrounding villages served by the rail centre.

This service cost £24,527 in 1942–43.

5. **South Australia.**—The system of medical inspection in force requires the examination of all children attending primary, junior technical, high and technical high schools. Children in the primary schools are examined in grades I., IV. and VII.; in the junior technical and high schools, children are examined in their second and fourth years. Reports are furnished to the parents of any remediable defects found during these examinations. The medical inspectors meet the parents after the examination of the children and give an address on the prevention and treatment of the conditions which were found during the inspection. After these lectures the parents are given an opportunity to ask questions regarding their children. When there is an epidemic or a threatened epidemic in a district, similar lectures are given and special visits paid to all the schools in that

locality. All students are examined before they enter the Teachers' College. Medical and physiological tests are conducted on all candidates taking the Diploma of Physical Education four times during the course (2 years). Courses of lectures in Hygiene and in First Aid are also given to these students.

The medical staff consists of a principal medical officer, 2 medical inspectors and a trained nurse. A psychologist, an assistant psychologist, a dentist, 2 dental assistants and a speech therapist are attached to the Medical Branch. The psychologist, in addition to examining retarded children and supervising their work in the opportunity classes, lectures to the students at the Teachers' College, and examines children referred by the Children's Court, or by the Children's Welfare Department, etc. The speech therapist examines children with defective speech, ascertains the nature of the defect and teaches the child to overcome it.

During 1942, 15,915 children were examined by medical inspectors; of these 834 required notices for defective vision, 87 for defective hearing, and 1,349 for tonsils and adenoids. Eight hundred and forty-two children were examined by the psychologists.

Of the 38,116 boys who have been examined in recent years 3.5 per cent. were wearing glasses at the time of the examination. The lenses were measured and the defects classified as follows:—myopia and myopic astigmatism, 396 (29.3 per cent.); hypermetropia and hypermetropic astigmatism, 852 (63.1 per cent.); and mixed astigmatism, 102 (7.6 per cent.). The annual cost of these services is approximately £5,600.

6. **Western Australia.**—Under the Public Health Act 1911–1935 the medical officers of health appointed by the local authorities became medical officers of schools and of school children. The principle aimed at is that each child shall be examined twice during its school life, once between the ages of 7 and 8 years and again between the ages of 12 and 13 years. In the Health Department there are 2 full-time medical officers for schools, whose duty is to conduct medical examinations, and 2 school nurses are employed. During 1942, 15,088 (8,086 metropolitan and 7,002 country) children were examined. In addition 352 metropolitan and 29 country school children were re-examined. There were 74 schools visited in the metropolitan area and 129 in country districts.

Three dental officers visited 44 schools and gave attention to 3,000 children. Cost of this service for 1942–43 was £4,644.

7. **Tasmania.**—The School Medical Service came under the administration of the Department of Public Health on 1st January, 1939. During 1942, 16 full-time Government Medical Officers and 7 school nurses were engaged in the work. An essential part of the School Medical Service is concerned with the condition of the children's teeth. During 1942, a permanent dental clinic functioned in each of the cities of Hobart and Launceston, while three travelling clinics operated in many of the remaining districts throughout the State.

The following summary furnishes particulars of (*a*) children medically examined in schools during 1942; and (*b*) children who received dental treatment for the same period:—

Number of children examined by medical inspectors, 6,377, of whom 4,602 had defects. First visits to dentists, 7,827, repeat visits 14,295.

Cost of services for year ended June, 1943, was £7,466.

8. **Australian Capital Territory.**—By arrangement education facilities are provided by the Education Department of New South Wales. The Commonwealth Department of Health, however, took over from the State in 1930 the medical inspection of school children and carried out examinations of entrants and those leaving during 1930.

Subsequent to 1931, examinations of entrants and those leaving the primary schools have taken place. During 1937 this examination was supplemented by examinations of all pupils of all rural schools (including Duntroon and Molonglo). During 1941 the examinations of entrants and those leaving the primary schools showed that 39.3 per cent. had dental defects, 6.0 per cent. had some pathological condition of the nasopharynx, 10.9 per cent. had eye defects, 2.8 per cent. had ear defects, 8.1 per cent. showed some

evidence of minor deformity, and 2.4 per cent. were 10 per cent. or more underweight for their height and age. Of the pupils recommended for medical advice 70 per cent. received this advice, and 53 per cent. of those recommended for dental treatment received such treatment. No examinations were undertaken in 1942.

§ 8. Supervision and Care of Infant Life.

1. **General.**—The number of infantile deaths and the rate of infantile mortality for the last five years are given in the following table, which shows that during the period 1938 to 1942 no less than 24,828 children died in Australia (excluding Territories) before reaching their first birthday. Further information regarding infantile mortality will be found in Chapter XIII. "Vital Statistics":—

INFANTILE DEATHS AND DEATH RATES.

State.	Metropolitan.					Remainder of State.				
	1938.	1939.	1940.	1941.	1942.	1938.	1939.	1940.	1941.	1942.
NUMBER OF INFANTILE DEATHS.										
New South Wales	712	667	758	942	877	1,268	1,302	1,169	1,322	1,239
Victoria ..	510	494	655	655	888	528	591	606	591	609
Queensland ..	215	181	201	244	234	569	541	520	598	502
South Australia..	124	161	171	209	245	163	175	185	147	203
Western Australia	115	148	181	163	184	194	221	222	194	181
Tasmania ..	48	83	49	69	60	147	120	127	186	165
Australia(a) ..	1,724	1,734	2,015	2,282	2,488	2,869	2,950	2,829	3,038	2,899
RATE OF INFANTILE MORTALITY.(b)										
New South Wales	38.35	34.51	38.01	42.12	37.73	44.10	45.41	39.71	45.02	42.10
Victoria ..	34.19	32.15	39.69	34.68	43.93	34.22	39.07	39.20	38.07	38 76
Queensland ..	42.36	33.93	37.40	40.23	37.49	40.89	36.04	34.58	38.08	33.57
South Australia..	27.36	34.82	35.37	36.40	39.48	33.42	35.05	35.70	28.14	40.02
Western Australia	29.76	37.98	47.15	35.21	37.51	36.76	42.97	42.03	35.34	36.24
Tasmania ..	40.03	47.09	40.56	48.97	42.37	39.64	38.58	33.54	48.99	42.43
Australia(a) ..	35.80	34.31	38.98	38.62	39.98	39.87	40.55	38.18	40.59	39.17

(a) Excludes Territories. (b) Number of deaths under one year per 1,000 births registered.

During recent years greater attention has been paid to the fact that the health of the community depends largely on pre-natal as well as after-care in the case of mothers and infants. 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. Government 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 VIII. "Public Benevolence".) Under the provisions of the Maternity Allowance Act 1912-1943, a sum of £5 is payable to the mother in respect of each confinement at which a living or viable child is born. Where there are already one or two children under 14 the amount payable is £6, and where there are three or more other children under 14 the amount

payable is £7 10s. In addition a payment of £1 5s. is made for each of the four weeks immediately before and immediately after the birth. Detailed particulars regarding Maternity Allowances are given in Chapter XVII " Public Finance ".

3. **Nursing Activities.**—(i) *General.* In several of the States the Government maintains institutions which provide treatment for mothers and children, while, 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 and 516) information, with certain statistical data, concerning the activities of institutions in each State may be found.

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

BABY HEALTH CENTRES AND BUSH NURSING ASSOCIATIONS, 1942.

Heading.	New South Wales.	Victoria. (a)	Queensland. (a)	South Australia.	Western Australia. (a)	Tasmania.	Aust. Capital Territory. (b)	Total.
Baby Health Centres—								
Metropolitan No.	60	83	38	49	14	3	..	247
Urban-Provincial and Rural No.	169	150	128	19	16	30	11	523
Total No.	229	233	166	68	30	33	11	770
Attendances at Centres .. No.	985,992	654,798	271,137 (c)	138,583	114,998	65,742	9,044	2,240,294
Visits paid by Nurses .. No.	67,982	75,279	18,902	29,051	17,103	21,620	2,567	232,504
Bush Nursing Association—Number of Centres	37	77	12	29	6	18	..	179

(a) Year ended 30th June, 1942. (b) Year ended 30th June, 1941. (c) Excludes non-expectant mothers accompanying infants.

The number of attendances at the Baby Health Centres has increased very considerably in recent years. The following are the figures for the years 1937 to 1941 :— 1937, 1,657,052; 1938, 1,597,124; 1939, 1,869,770; 1940, 2,035,299; and 1941, 2,128,961.