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LEAGUE OF NATIONS

HEALTH ORGANISATION

PUBLIC HEALTH SERVICES

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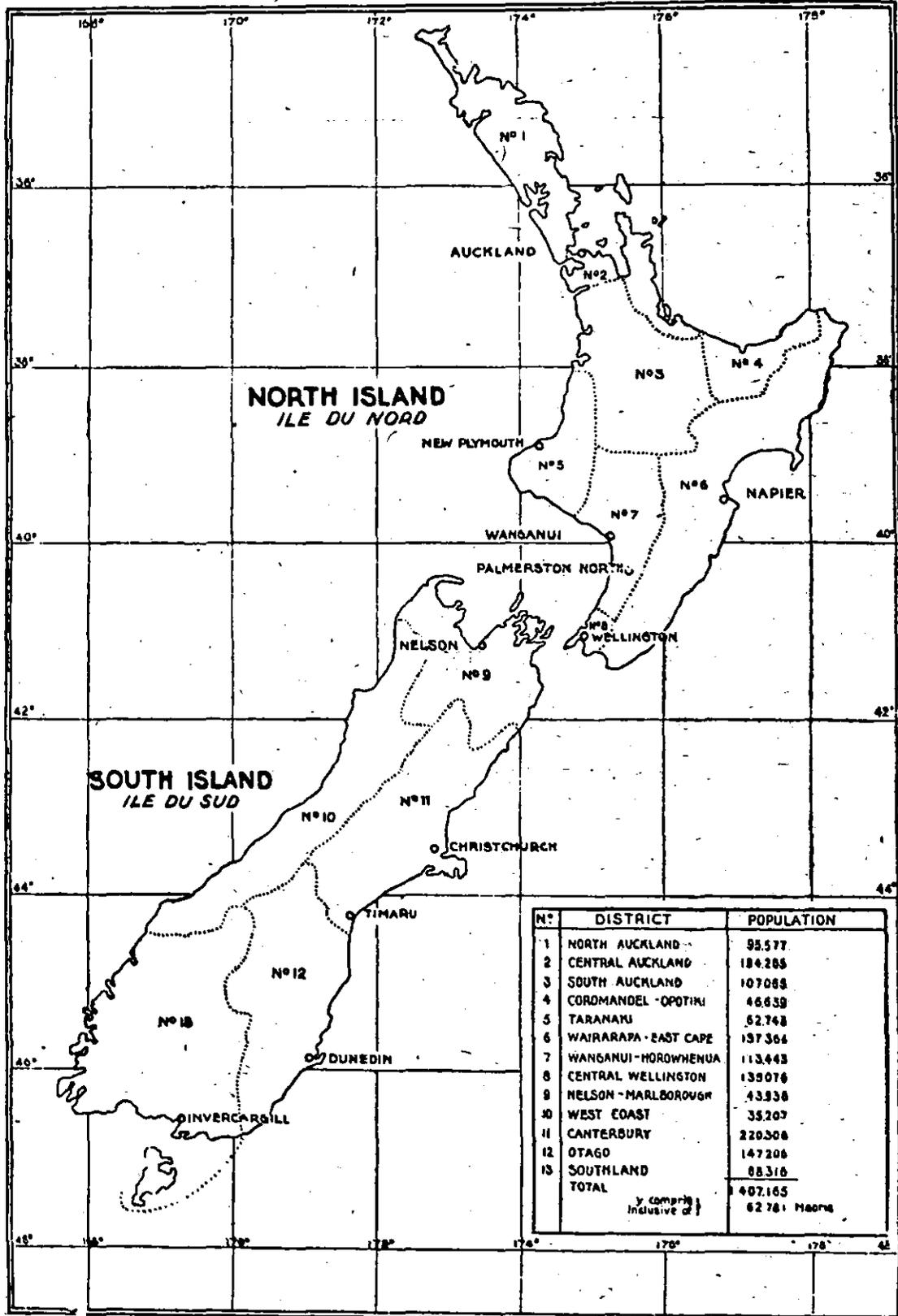
NEW ZEALAND

Publications of the League of Nations

III. HEALTH

1928. III. 3.

MAP OF NEW ZEALAND
 showing health districts and their population



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PREFACE

Health legislation and administration constitute one of many factors which go to form the public life of a nation. Like political institutions, health institutions do not arise out of an organic unity and cannot develop on a definite plan. The changes and innovations introduced in the course of years have, for the most part, been made haphazard. The problems have arisen from the vicissitudes of life itself. In short, the needs of the moment have determined the intervention of the legislator and of the administration. The health problem assumes very different aspects at different times and in different places.

The technical resources at the disposal of the various countries and the psychological factors involved have varied in every way and this has given a distinct character to every health organisation. Consequently, it is a matter of great difficulty, even for health specialists, to form an accurate opinion on foreign health organisations ; and yet the great complexity and ever-increasing number of international problems with which we have to deal makes it essential to gain at once some knowledge of these different institutions. Failing this knowledge, not only does co-operation become difficult but the opinion that may be formed regarding the condition of public health in a given country is extremely liable to error.

Furthermore, information on disease obtainable from several different countries is very difficult to compare, as it comes from such different sources.

An indispensable preliminary to any useful study of the problem is a process of standardisation requiring the most thorough knowledge of the international health administrations.

As the work of the Health Organisation of the League of Nations is strictly international, the primary aim of this body should be to remedy as far as possible the difficulties arising from the diversity of the sources of information. The Health Organisation has accordingly decided to publish a series of monographs describing the organisation and working of the health administrations of the different countries. For the writing

of these reports it has enlisted the services of experts occupying important positions in the various health administrations.

The original proposal was to make all these monographs conform to a fixed pattern. The Health Section of the Secretariat of the League of Nations accordingly sent a note to the authors of these monographs framed with a view to obtaining reports which could be directly compared ; but the majority of the authors preferred to present their work in a less stereotyped form.

The series of enquiries which we have undertaken to publish deals with health administration from the general standpoint only. We propose subsequently to publish investigations on certain special points in the field of public health which will give additional and more detailed information on these points.

* * *

The need for a ready and reliable source of detailed and descriptive information on the official vital statistics of the various countries has long been keenly felt by statisticians and public health officers. The difficulties which are at once encountered when data from two or more countries are assembled for comparative purposes are familiar to all. When the Health Committee of the League of Nations decided to collect and publish currently data on the prevalence of the chief communicable diseases, important questions arose concerning the comparability of the data. Subsequently, in organising its programme of statistical work, it was planned as a special activity to prepare a series of handbooks describing the official vital statistics of the various countries.

Therefore it is the purpose of these volumes to present a review of the existing practice and procedure in the collection and publication of statistics on population, births, deaths and notifiable diseases, including not only methods of registration but also the current published reports. Effort has been made to include especially those facts the knowledge of which is important when comparisons are made of statistics from two or more countries. The statistics themselves are discussed chiefly with regard to the form and contents of the official reports on which they are presented.

It is realised that, even when meticulous care is exercised in preparing such handbooks as these, errors may not be entirely avoided, and the ultimate utility of the work can be judged best only by actual experience. Nevertheless, it is confidently hoped that they will prove useful and valuable as reference books on the details of method and procedure in the various national offices which collect and publish vital statistics.

* * *

In publishing these general enquiries, we have been greatly helped by the generous financial grants provided by the International Health Board of the Rockefeller Foundation.

March 1928.

THE HEALTH SECTION OF THE SECRETARIAT
OF THE LEAGUE OF NATIONS.

PART I.

Public Health Services in New Zealand.

I. INTRODUCTORY.

1. LOCATION, BOUNDARIES AND AREA OF NEW ZEALAND.

The Dominion of New Zealand consists of two large and several small islands in the South Pacific. These may be classified as follow: (a) Islands forming the Dominion proper for statistical and general practical purposes: North Island and adjacent islets; South Island and adjacent islets; Stewart Island and adjacent islets; Chatham Islands. (b) Outlying islands included within the geographical boundaries of New Zealand as proclaimed in 1847: Three Kings Islands, Auckland Islands, Campbell Island, Antipodes Island, Bounty Islands, Snares Island. (c) Islands annexed to New Zealand: Kermadec Islands, Cook Islands, Niue (or Savage) Island, Palmerston Island, Penrhyn (or Tongareva) Island, Manahiki Island, Rakaanga Island, Pukapuka (or Danger) Island, Nassau Island, Suwarrow Island.

By mandate of the League of Nations, the New Zealand Government now administers the islands comprising the territory of Western Samoa. Jointly with the Imperial Government and the Government of Australia, it also holds the League's mandate over the island of Nauru.

The present account of the Public Health Services in New Zealand deals only with New Zealand proper, as defined under (a) in the opening paragraph.

With its adjacent islets, New Zealand proper has an area of 103,285 square miles. The North Island is 44,131 square miles in extent, the South Island 59,154 square miles. By way of comparison it may be stated that the South Island is slightly larger than England and Wales.

2. POPULATION.

According to the census of 1926, the figures were as follows :

(a) Whole Population.

	Males	Females	Total
Population (exclusive of Maoris)	686,384	658,085	1,344,469
Maori population	33,258	30,412	63,670
Population (inclusive of Maoris)	719,642	688,497	1,408,139

(b) Population by provincial districts.

Provincial districts	Population (excluding Maoris)			Population (including Maoris)		
	Males	Females	Total	Males	Females	Total
Auckland	219,391	205,140	424,531	242,787	226,671	469,458
Hawke's Bay	33,789	31,831	65,620	36,253	34,100	70,353
Taranaki	35,638	32,524	68,162	37,570	34,278	71,848
Wellington	140,076	133,424	273,500	144,061	136,959	281,020
Totals, North Island	428,894	402,919	831,813	460,671	432,008	892,679
Marlborough	9,671	8,646	18,317	9,933	8,860	18,793
Nelson	26,496	24,181	50,677	26,607	24,271	50,878
Westland	7,982	7,147	15,129	8,061	7,199	15,260
Canterbury	105,727	108,163	213,890	106,319	108,760	215,079
Otago : Otago portion	73,706	75,816	149,522	73,905	76,016	149,921
Southland portion	33,908	31,213	65,121	34,146	31,383	65,529
Totals, South Island	257,490	255,166	512,656	258,971	256,489	515,460
Grand totals, New Zealand.	686,384	658,085	1,344,469	719,642	688,497	1,408,139

3. CLIMATE.

The insular position and the latitude of New Zealand combine in giving a fine, equable and salubrious climate. With but a small annual and diurnal range of temperature, summers may be characterised as pleasant and winters as mild. Except upon the higher levels, snow is a rare phenomenon. Rainfall is fairly regular throughout the year. Covering nearly fourteen degrees of latitude, New Zealand is not without its variations in climate. That of the most northern districts resembles the climate of Italy ; the most southern localities are akin rather to England. Records

over many years give these annual averages : for the North Island, mean temperature 54.80° F., mean rainfall 43.87 inches, mean hours of bright sunshine 2110.90 ; for the South Island, mean temperature 51.50° F., mean rainfall 42.07 inches, mean hours of bright sunshine 1990.90.

4. GOVERNMENT.

In 1840, the native chiefs ceded all rights and powers of sovereignty to the British Crown and the islands became a British Colony. By Order in Council, the designation of the Colony of New Zealand was changed to " The Dominion of New Zealand " on and from September 26th, 1907.

The legislative power is vested in the Governor-General, representing the King, and a General Assembly, consisting of two Chambers — a Legislative Council and a House of Representatives.

The Legislative Council consists of some forty-two members, who hold their seats for seven years only, unless reappointed. Members are now appointed by the Governor-General, but provision has been made for the Legislative Council to be made elective at a date to be specified by Proclamation.

The House of Representatives consists of eighty members, including four Maoris, elected by the people for three years. Every man or woman registered as an elector is eligible as a member of the House of Representatives. A system of compulsory registration of electors was introduced in 1924.

The executive administration of the Dominion is entrusted to an Executive Council, consisting of the Governor-General and a number of Ministers nominated from the majority ruling in the House of Representatives and responsible to Parliament.

5. LOCAL GOVERNMENT.

Originally, New Zealand was divided into nine provinces, each with its own local government, but these were abolished in 1876 and the provincial district boundaries are now used for statistical purposes only. Geographically, the Dominion is divided into 129 counties, which comprise its total area. Boroughs and independent town-districts which are contained within the areas of the several counties are regarded as separate entities. Upon this foundation a considerable superstructure of districts of other types has been erected, each being identified with a specific function or group of functions. From an administrative point of view, however, the fundamental districts are counties, boroughs and independent town-districts. The Councils have particular powers in regard to housing, water supply, drainage, sanitation and public health administration generally.

II. THE PUBLIC HEALTH ORGANISATION OF NEW ZEALAND.

1. PRIOR TO 1920.

The creation of a public health system in New Zealand dates back to 1872, when the first Public Health Act was placed on the Statute-book of the colony. Prior to that year, there does not appear to have been any organised form of public health administration. However, on the passing of the 1872 measure, sanitation received a new and established recognition and a solid foundation was laid for future legislation. This Act, founded on English legislation, with such necessary modifications as rendered it applicable to the special circumstances of the colony, was amended in 1875 and consolidated in 1876. It made provision for a Central Board of Health, with the Colonial Secretary as President and six other members, and for Local Boards of Health, which were empowered to appoint legally qualified medical practitioners to perform such duties as the Central Board should instruct. The Central Board of Health had power to make regulations, *inter alia*, for the prevention of epidemic diseases. In the event of any local board failing to carry out its duties, its powers were transferred to the Central Board.

As the population of the country increased, the machinery of the 1876 Act and its amendments was found cumbersome and inadequate to deal effectively with the changing conditions. Consequently, in 1900, an improved measure came into force. The most important features of this Act were the constitution of a Department of Public Health, under the control of a Minister of the Crown, and the appointment of a Chief Health Officer, District Health Officers, Port Health Officers and Sanitary Inspectors. This Act, with its amendments, was consolidated in 1908 in conformity with the general consolidation of all New Zealand statutes in that year. During subsequent years, many changes occurred in the population of the Dominion and in its distribution, new facts came to light in relation to preventive medicine, and it became increasingly evident that there was need for a clearer definition of the relative duties of local authorities, hospital boards and the Department. These were some of the causes which led to the passing of the Health Act, 1920.

2. THE HEALTH ACT, 1920.

In the Health Act, 1920, the control of health matters is vested in a Department of State known as the Department of Health, which is directed by a member of the Executive Council known as the Minister of Health.

A Board of Health is constituted, which consists of the following eleven members : The Minister of Health, who is Chairman of the Board ; the chief administrative officer of the Department (the Director-General of Health); three medical practitioners, one of whom is a member of the Faculty of Medicine in the University of Otago ; a person (not being a medical practitioner) appointed on the recommendation of the New Zealand Municipal Association ; a person (not being a medical practitioner) appointed on the recommendation of the New Zealand Counties Association ; a member of a recognised association of civil engineers ; a person being a chairman of a hospital and charitable aid board ; a woman, representative of the interests of women and children ; and a person appointed on the recommendation of the Minister. The functions of the Board of Health are, in the main, of an advisory nature, but under certain circumstances it may exercise mandatory powers, especially in regard to requisitioning local authorities to provide sanitary works. Commissions of enquiry may be appointed in assistance of the Board, or it may call upon the Medical Council (constituted under the Medical Practitioners Act) for advice on any matter relative to the causes of disease or mortality.

The functions of the Department of Health are set out in the Act as follow :

- (a) The advising of local authorities in matters relating to public health.
- (b) The prevention, limitation and suppression of infectious and other diseases.
- (c) The promotion and carrying out of researches and investigations in relation to matters concerning public health and the prevention or treatment of disease.
- (d) The publication of reports, information and advice concerning public health.
- (e) The organisation and control of medical, dental and nursing services so far as such services are paid for out of public moneys.
- (f) Generally, the taking of all such steps as may be desirable to secure the preparation, effective carrying out and co-ordination of measures conducive to the public health.

The staff of the Department includes the Director-General of Health, who is a medical practitioner with special qualifications in sanitary science ; his Deputy, who is similarly qualified ; Directors of the Divisions of Public Hygiene, Hospitals, Nursing, School Hygiene, Dental Hygiene, Maori Hygiene and Maternal and Infant Welfare ; and such numbers of

medical officers of health, inspectors of health, medical practitioners, nurses and other officers as may be required.

The Dominion is divided into health districts, each of which is under the charge of a medical officer of health, who must be a medical practitioner with special qualifications in sanitary science. These officers are responsible for the due observance of all enactments and regulations relating to public health, and act as advisers of the local governing bodies in matters affecting public health. They undertake personal direction of all measures relating to quarantine, infectious diseases, housing, water supplies, drainage, the provision of pure food, etc., and exercise a general control and supervision over all other branches of departmental activity. The divisional directors at headquarters work through and with the medical officers of health.

In addition to being charged with the administration of the Health Act, the Department controls the registration of medical practitioners and the training and registration of nurses, midwives and maternity nurses, masseurs, and plumbers. It supervises the sale of food and drugs, and protects the public against exploitation by fraud in connection with alleged remedies. It exercises a general supervision over the cemeteries.

In the sections of this report which immediately follow, the work of the various divisions is considered in more detail.

III. THE DIVISION OF PUBLIC HYGIENE.

I. GENERAL.

The functions of this division include the supervision of those activities which relate to public health in the more restricted sense of that term, viz., public water supplies, drainage and refuse removal, housing, the notification and control of infectious and industrial diseases, quarantine, the purity of food and drugs and control of offensive trades.

While the Health Act throws on the local governing bodies the responsibility of providing health services, it recognises that these bodies in a young growing country such as New Zealand are for the greater part not yet strong enough to provide all the machinery required for securing the best results. By the Local Government Acts, the urban communities are divided into cities, boroughs and town boards, and the rural ones into counties and road boards. The largest of these bodies are represented by four cities, and, apart from them, the populations are too small to permit of complete local government in health matters. For this reason, the medical officers of the Health Department stationed in the various large health districts act as advisers of the local bodies, although not actually

their officers, and thus these bodies are saved the expense of appointing their own medical officer of health.

In certain emergencies, the Government medical officers, when authorised by the Minister or the Board of Health, may act on behalf and at the expense of the local authorities. In very exceptional circumstances, the Governor-General may direct that the Department of Health take over from a local authority all its sanitary duties and powers and administer the district at the expense of that local authority.

In regard to sanitary inspection, although the local authorities are compelled to appoint an adequate staff of trained inspectors, they may, as an alternative, contribute to the cost of a departmental inspector, who will then act for the time being as the officer of the local authority. This system has been adopted very widely by the rural and the smaller urban authorities where, owing to sparsity of population, there is not enough sanitary work to occupy the full time of a local inspector. The Department, therefore, has a considerable number of sanitary inspectors whose time is chiefly occupied in administering sanitary duties for the local bodies. The sanitary authorities are required to pass by-laws dealing with sanitation, but they also have the option of adopting the model regulations prepared by the Department, which can be brought into force in any sanitary area as the Minister of Health may direct.

Certain duties remain wholly under the control of the Health Department. These duties are chiefly the notification and control of infectious disease, the quarantine of overseas ships and securing the purity of food and drugs. It is thought that these matters should remain in the control of the central Department until the population of the country so increases that they may be economically administered by the local authorities.

2. SANITARY WORKS.

Sanitary works include water supplies, drainage, refuse collection and disposal, public sanitary conveniences, mortuaries, and so on. These have to be provided by the local governing bodies. To aid them in this, their sanitary works come within the scope of the Public Works Act, which confers on local bodies certain powers as to borrowing money and various rights to acquire land and so on. The Board of Health has power to require local bodies to carry out necessary sanitary works.

3. NUISANCES.

The term "nuisance" includes a comprehensive list of conditions which are "dangerous to health or offensive". The definition is such that it is not necessary to prove that a nuisance is dangerous to health.

Rat-infested premises, dampness in buildings, overcrowding, defective ventilation, chimneys evolving excessive smoke are all included in the term nuisance. While it is specifically the duty of the local authority to deal with nuisances, it is competent for an officer of the Health Department or any other person to lay an information in regard to these matters. The magistrate may make an order relating to the abatement of a nuisance, and if the order is not carried out the local authority or the medical officer of health may carry out the work and recover the cost from the owner or occupier of the premises on which the nuisance exists. The magistrate may prohibit the occupation of a building till the nuisance has been abated.

4. BUILDINGS.

The Act makes the usual provision for adequate water supply, privy accommodation and disposal of waste water in regard to dwellings. Local sanitary authorities are empowered to deal with insanitary buildings by any of the three following procedures :

(a) *A cleansing order*, which may be carried out at the cost of the owner or occupier if there be default.

(b) *A closing order*, which may be issued on the certificate of the medical officer of health or the engineer of the local body. This order is consequent on the failure of the owner or occupier to effect specified alterations. A penalty is provided if the premises are occupied while the order is in force.

(c) *A demolition order*, which can be issued, on the certificate of the medical officer of health or the engineer. It can apply to the whole or a part of a building. If the owner makes default, application can be made to a magistrate, who can authorise the local authority to remove the condemned structure at the cost of the owner. Should the local authority fail to issue these orders, the Board of Health may authorise the medical officer of health to take proceedings at the expense of the local authority.

5. OFFENSIVE TRADES.

A list of trades classed as offensive trades is gazetted. Before any of these or any cattle saleyard is established, it is necessary to get the consent both of the local authority and the medical officer of health. Such trades have to be registered and — subject to appeal — the local authority can refuse renewal of the registration.

6. WATER SUPPLIES.

The control of water supplies and their catchment areas can be placed by the Governor-General under any local authority he thinks necessary, whether the area be in the district of another local authority or not. Penalties are provided against persons whose acts may result in pollution of water supplies or of streams passing through towns. The medical officer of health can prohibit the use of water supplies which are dangerous to health.

7. BY-LAWS.

To enable local authorities to carry out their duties in regard to sanitation, they are given very wide powers as to the passing and enforcing of by-laws. These by-laws require to be submitted to the Department of Health, but it is not essential to get the approval of that Department. Such approval is not necessary, since the Governor-General may frame regulations applying to any special district on any of the matters as to which a local authority may make sanitary by-laws, and such regulations override the by-laws.

8. INFECTIOUS AND CONTAGIOUS DISEASES.

The Health Act deals specifically with three classes of disease, in regard to which medical practitioners and others have certain duties. These classes are :

- Notifiable infectious diseases ;
- Non-notifiable infectious diseases ;
- Notifiable non-infectious diseases.

A schedule of these different classes is gazetted and can be altered from time to time by the Governor-General in Council.

In regard to notifiable infectious disease, the duty of notification of its occurrence rests on the medical practitioner in attendance, who has to notify both the local authority and the medical officer of health, a fee being payable thereon. If there be no medical attendant, the occupier of the premises is required to notify the local authority if he suspects the presence of infectious diseases in any occupant of the place. Power to enter premises on suspicion of the existence of notifiable disease is given to the medical officer of health, who may order the removal of the patient to a hospital.

In regard to all forms of infectious disease, whether notifiable or not, the Act provides penalties against those who do not take due precautions

to prevent the spread of the disease either by an infected person or by the distribution of infected things, or by the letting of infected rooms. The local authority may require the disinfection of premises and things and its officers have power of entry for the purpose. The medical officer of health may demand such action at the hands of the local authority and, in default, may carry out the work at the expense of the local authority. The undertaker in charge of the burial of a person who has died from any infectious disease must, on becoming aware of the fact, notify the medical officer of health.

Notifiable diseases other than those which are infectious include such trade diseases as phosphorus and lead poisoning, and parasitic diseases such as hydatids. These have to be notified to the medical officer of health by the medical attendant, to whom a fee is payable.

In cases of emergency such as widespread epidemics, the Minister may confer extraordinary powers on the medical officer of health. Under these circumstances, the latter may take possession of land, premises, vehicles, drugs and foodstuffs to provide temporary hospitals and treat the sick. He may destroy insanitary things, establish land quarantine and close public schools, churches, theatres and all places of amusement. He may specifically prevent the attendance of children in places of public resort. Compensation to owners who have suffered loss from these acts is assessed by a magistrate.

Extensive regulations have been gazetted for the conservation or promotion of public health. Under these regulations, the duties of medical practitioners, inspectors of health and undertakers are defined in regard to the notifications, and the measures to be taken by medical men and by local authorities in the event of outbreaks of certain diseases and the occurrence of epidemics are set out.

New Zealand experiences the ordinary diseases found in temperate climates ; particulars of these will be found in the annual reports of the Department. Yellow fever and cholera are unknown, while smallpox and plague have never gained more than a temporary foothold. The last two outbreaks of smallpox were in 1913, when 529 cases were reported, and again in 1920, when 95 cases occurred. On both occasions the disease was of the comparatively mild type known as alastrim. Plague was introduced into Auckland City in 1900, and between that year and 1912 20 cases in all occurred, of which 10 proved fatal. Since 1912, there has been no plague in New Zealand, either human or rodent. Of venereal diseases there is a comparatively small amount. The Social Hygiene Act, 1917, and regulations under this Act and the Health Act, 1920, provide under certain circumstances for notification of these diseases and for the compulsory treatment of those affected.

9. QUARANTINE.

Power is given to proclaim places of inspection quarantine grounds and quarantine stations. Quarantine stations have been established at the chief ports of entry. All ships arriving from overseas are liable to quarantine, and also every ship on board which any infectious disease or suspected infectious disease has broken out or been discovered, or which has arrived from any infected place in New Zealand or otherwise. The Act in regard to shipping is constructed so that the Department's port health officer deals with the ship till it has received pratique or is quarantined ; then the medical officer of health controls it. These officers on many occasions must act in concert.

Medical practitioners and nurses are appointed by the Director-General to take charge of passengers and crew of a ship undergoing quarantine, and the owners or agents are liable for any cost incurred under this head. It is also the duty of owners or agents of the ship to supply persons undergoing quarantine with provisions, medicine, fuel, etc., as the medical officer in charge may require. All expenses incurred in connection with disinfection are a charge against the ship. Comprehensive regulations under the Health Act govern the whole matter of quarantine.

10. FOOD AND DRUGS.

The sale of food and drugs and their inspection is dealt with under the Sale of Food and Drugs Act and the Health Act. For preventing the adulteration of intoxicating liquors, regulating the inspection of milk and dairies and providing for the inspection before sale of meat, special powers are conferred in other Acts.

The Food and Drugs Act provides for the analysis by public analysts of any article of food or drink, or of any drug which may be sold, offered for sale or exposed for sale and for inspection of any place where there is any food or drugs intended for sale. If any such article be proved unfit for human consumption or likely to cause injury to health if consumed, heavy penalties may be inflicted on responsible persons. All commonly used foodstuffs are standardised and the labelling of packages controlled by regulations. Standards laid down are legal, and the magistrate accordingly, in the event of a prosecution, decides upon compliance or non-compliance with the standard defined for the quality of foodstuff in question. The definition of " drug " includes medicines used externally or internally by man, such as anæsthetics, soaps, ointments, disinfectants and tobacco. Stringent measures are provided for the prevention of adulteration of food, drink or drugs, and for the inspection of places where such things are manufactured or packed.

An enactment governing the importation and sale of dangerous drugs, *i.e.*, opium, cocaine, Indian hemp and preparations of these, has been placed on the Statute-book and comes into force on January 1st, 1928.

11. MEAT AND DAIRY PRODUCE.

The inspection of meat comes under the Live-stock Division of the Department of Agriculture. All meat exported is inspected by qualified officers. Cattle are inspected for tuberculosis and other bovine troubles ; sheep and swine also receive attention ; slaughter-houses are licensed and controlled ; and all stock exported and imported is examined by the veterinarians of this department. The Live-stock Division is provided with a laboratory mainly devoted to veterinary research.

Dairy produce comes under the administration of the Agriculture Department in so far as the inspection of dairy stock and factories or other places used for the manufacture of dairy produce is concerned. The sale of unwholesome milk or other dairy produce is prohibited. Provision is made for the framing of regulations for the registration of dairy factories and the licensing of persons carrying on the manufacture or sale of the produce.

The Department of Health controls the quality of the milk after leaving the farm. Regulations are in force under the Health Act for securing cleanliness and freedom from contamination of milk. Milkshops and stores are licensed by the local authorities. Inspections are carried out by medical officers of health and their inspectors and by the inspectors employed by the local authorities.

12. QUACKERY PREVENTION AND POISONS.

Section 2 of the Quackery Prevention Act of 1908 enacts that every person commits an offence who publishes or causes to be published any statement which is intended to promote the sale of any article as a medicine, preparation or appliance for the prevention, alleviation or cure of any human ailment or physical defect, and which is false in any material particular relating to the ingredients, composition, structure, nature or operation of that article or to the effects which have followed, or may follow, the use thereof.

The penalty inflicted is a fine not exceeding £100 in the case of the first conviction and not exceeding £200 for every subsequent conviction. The object of the Act is to prevent the exploitation of the public by means of medicines or treatment alleged to cure all and sundry complaints and ailments.

The Department of Health administers the Poisons Act. Licenses for the sale of poisons are issued through the magistrates' court.

IV. THE DIVISION OF HOSPITALS.

The Division of Hospitals is concerned with the administration of the Hospitals and Charitable Institutions Act. The staff of this division comprises a director (at the present time the Director-General of Health acts in this capacity) and such number of assistant inspectors as enable adequate inspection of the buildings and close supervision of the conduct and business management of the institutions.

The hospital system of New Zealand presents some unique features and for this reason the detailed survey which follows may prove of interest.

Early History : The early history of the hospital system of New Zealand is obscure. It is known, however, that some institutions were maintained entirely by the Government, whilst others were given subsidies ranging up to pound for pound or even higher on voluntary contributions. In 1884, there is record of fifteen hospitals maintained entirely by the Government at an annual cost of £43,639 and twenty-two receiving subsidies to the extent of £10,531.

In the Hospitals Act of 1885, hospital districts were constituted and the system of local body control was thus established, apparently for the first time. Under this Act, all money raised by levy, whether for capital or for maintenance purposes, carried a Government subsidy of pound for pound. A definite weakness of the 1885 Act, however, was the fact that there were several bodies dealing with hospital and charitable aid matters in the same district.

The Hospitals and Charitable Institutions Act, 1909. — The Act of 1909, a much-needed reform, was passed after a parochial but natural opposition on the part of those bodies which were superseded. This Act, which set up one Hospital and Charitable Aid Board for each district, was amended from time to time and finally consolidated in 1926.

Hospital Districts. — At present the Dominion is divided into forty-five hospital districts. Each district is controlled by a board of not more than twenty nor less than eight members, who are elected by the electors of the various contributory authorities in the hospital district, *i.e.*, borough councils, town boards, county councils, and road boards, or a combination thereof.

The representation on a board is proportioned to a mean between the population and the value of the rateable property in the contributory district. There is frequently agitation for an alteration in the method of apportionment, the farming class arguing that the representation should follow the levies and be on a valuation basis, or that the levies should be on a partly population and partly valuation basis; whilst, on the other hand, the town dwellers argue that representation should be

entirely on the parliamentary franchise. There seems to be no valid reason for altering the present method.

The representatives of a contributory district retire at every general election of the local authority of that district and their places are filled by an election held at the same time as such election. In the case of combined districts, the election is held on the date of the election of the principal local authority. The chairman of the board holds office for two years' certain tenure.

Functions of Hospital Board. — Subject to inspection and a modicum of Government control, a board is responsible : (a) for the management of hospitals and outdoor medical and nursing service ; and (b) for the administration of charitable relief.

In the larger districts a board is provided with :

- A base hospital ;
- An infectious diseases hospital ;
- Annexes or ward for consumptive patients in curable and incurable stages ;
- A consumptive sanatorium ;
- Incipient mental wards ;
- An old-people's home ;
- A maternity ward or hospital ;
- Secondary hospitals ;
- Cottage hospitals ; and
- District nurses and midwives.

The Act provides that boards may unite to establish institutions. This has been done more particularly in the case of sanatoria for patients suffering from tuberculosis, as few boards are large enough to maintain a sanatorium for their own district.

The district nurse is a most important adjunct to the New Zealand hospital system. For the most part, these nurses are sent to the more remote country districts, where their services as nurses and midwives are much sought. It is by means of the services of such officers that it is hoped to bring the backblocks more in touch with the hospital system, of which the district nurse is the outpost. Cottages are provided for these nurses, not only for them to live in, but with an extra room or so which can be used for maternity cases, or in which emergency cases can be treated until they can with safety be forwarded to the secondary or base hospital of the district.

There are also special nurses appointed for work among the Maoris. These nurses are paid by the Department, but otherwise are under the jurisdiction of the boards.

Revenue. — The revenue of boards is derived from : (a) payments by persons relieved (roughly one-fourth of the hospital expenditure); (b) voluntary contributions (roughly one twenty-fifth); the resulting deficit (roughly three-quarters of the expenditure) is raised by means of (c) a levy on the contributory local authorities and (d) Government subsidy thereon.

In addition to the above, there are a few hospitals which are possessed of small endowments.

Levies. — The hospitals board has no power to strike a rate, though the levy struck by the board constitutes a debt payable by the corporation of the authority to the board and may be recovered in court. If any local authority considers the levy excessive, it has the right to appeal to the Minister in charge of the Department, who may cause a commission to be set up to enquire into the circumstances and report to the Minister, whose decision is final. The local authorities may pay the levy out of their ordinary revenue or strike a special hospital rate. At the commencement of each financial year, a board makes its estimates of expenditure and, after deducting therefrom all its estimated revenue, *e.g.*, rents from endowments, patients' payments, voluntary contributions and subsidies thereon, raises the remaining balance by means of a levy on the contributory local authorities and Government subsidy thereon. The Minister's approval is required to the estimates.

Subsidies. — Government subsidies are now granted at the rate of :

£1 for every £1 of voluntary contributions, including devises and bequests ;

£1 for every £1 levied on the contributory local authorities to meet capital expenditure ;

On a scale averaging £1 for every £1 levied on the contributory local authorities to meet expenditure other than capital expenditure.

(This scale runs from 14s. to 26s. and is given according to the burden of the levy on the rates, the board whose burden is heaviest receiving 26s. subsidy, the board whose burden is lightest receiving 14s. The board whose rate of levy is the average for the Dominion receives 20s. This scheme tends in a slight degree to draw the extremes of local-body rating to an average hospital rate.)

It will be seen from the above that the Government pays half of the deficit in the hospital budget before voluntary contributions are taken into account, whilst the rates pay the other half, after voluntary contributions and subsidy thereon are taken into account. It is to the ratepayers' interest, therefore, that voluntary contributions should be as high as possible, but it makes no difference one way or another to the Consolidated Fund.

Every claim for subsidy must be accompanied by a statutory declaration made by the chairman of the board, verifying a statement of all material particulars, and the board's accounts are audited by the Government auditors.

The granting of subsidy is at the discretion of the Minister, and though this discretion has been freely used in regard to voluntary contributions, subsidy has never been curtailed on levies on local authorities for maintenance purposes.

Patients' Payments. — Most of the boards have now adopted a uniform fee of 9s. per diem for adults, with 4s. 6d. for children and for members of friendly societies where lodges guarantee their fees, reducing or writing off the charge in the case of those who are unable to pay it.

Voluntary Contributions. — There is little doubt but that the fact that hospital finance is assured by means of levy and subsidy results in the relatively small amount of voluntary contributions, and it is doubtful whether the greatest endeavours will succeed in making voluntary contributions a main source of revenue. However, a movement is on foot to institute a hospital day, which would be the occasion for all boards to make an effort to collect funds. Some boards do still collect a considerable amount by means of a Hospital Saturday, whilst others make no such effort, holding that, as hospital finance is assured, a clear field in this respect should be left to other organisations which are dependent on voluntary contributions.

Departmental Control. — Hospitals are administered by the Department of Health, under the direction of the Minister of Health, with the Director-General of Health as the chief executive officer. This officer is assisted as regards hospitals by the Director of the Division of Nursing, inspecting accountant, inspecting house manager, technical (*i.e.*, architectural) inspectors, etc.

The Department has considerable powers in respect to inspection, both of institutions and of books and offices. The Director-General can also direct boards to erect institutions where he considers them necessary, and to make all requisite provision for the sick and needy. No capital expenditure exceeding £250 in amount can be undertaken by a board without ministerial approval.

So far as possible, the Department acts in an advisory capacity, only exercising its prerogative where it is evident that grave abuses are intended or have taken place.

Mental Hospitals. — Mental hospitals are entirely under the control of the Mental Hospitals Department, and all expenditure on such hospitals is paid direct from the Consolidated Fund. The Department is under the

control of a Minister of the Crown, who at present is also Minister of Health. The chief executive officer is the Inspector-General of Mental Hospitals. There are eight mental hospitals in the Dominion — seven public and one private. The patients' friends are made to pay according to their means. The sums recovered from such fees amount to 32 per cent of the total expenditure on these State-managed institutions

V. THE DIVISION OF NURSING.

This division is under the control of a Director who is herself a registered nurse and midwife. Its functions are to exercise a general supervision over all measures relating to the training, examination and registration of nurses, midwives and maternity nurses, and to deal with such matters relating to the staffing of public institutions as may appropriately come under its jurisdiction.

The training and registration of nurses, midwives and maternity nurses is governed by the Nurses and Midwives Registration Act, 1925. This Act provides for a board consisting of the Director-General of Health, or his Deputy, the Director of the Division of Nursing (who is Registrar of the Board), a registered medical practitioner, a registered nurse and a registered midwife, the last two to be appointed by the New Zealand Trained Nurses' Association or a similar body.

Every person is entitled to registration as a nurse who, having attained the age of 22, is certified as having undergone not less than three years' training in a general hospital "approved" by the Board as a training school under the Act, and who has passed the prescribed hospital and State examinations.

There are at present thirty-five training schools for nurses. These are all public hospitals which undergo frequent and regular inspections by officers of the Department of Health. On March 31st, 1927, there were 4,698 nurses on the New Zealand register.

The Nurses and Midwives Registration Act makes provision for two classes of trained persons who may attend a woman in childbirth, viz., midwives and maternity nurses. A person seeking registration as a midwife must undergo a more extended course of training than a person desiring to be registered merely as a maternity nurse. The former is entitled to attend normal cases without a doctor being in attendance, to hold a teaching post in a training school for midwives and to become the licensee or manager of a private maternity hospital. The maternity nurse, on the other hand, is a woman who has been trained to assist at cases of labour only where a doctor is in attendance. She is debarred from the special privileges conferred upon the midwife.

The minimum period of training for a maternity nurse is in the case of the previously untrained woman twelve months, and in the case of the registered nurse six months. The minimum period of training which admits the maternity nurse to the further qualification of midwife is in the case of both classes, whether registered nurses or not, an additional period of four months. There is this difference, however—that the registered nurse may proceed directly to this further period of training, whereas the woman who is not a registered nurse may only do so after an interval of twelve months, during which period she has been engaged in practising her profession as a maternity nurse.

The length of the course for the certificate of midwife is shortened in the case of registered nurses who enter certain selected training schools to a minimum period of eight months, with only one examination at the end of this period.

In every case very definite requirements are laid down as to the course of training, both theoretical and practical, to be undergone by candidates for examination. The examinations are conducted by the State.

There are thirteen training schools for midwives and maternity nurses in New Zealand and an additional nineteen training schools in which maternity nurses only receive instruction. On March 31st, 1927, there were in New Zealand 2,544 registered midwives and 736 registered maternity nurses.

VI. THE DIVISION OF SCHOOL HYGIENE.

School medical work in New Zealand is carried out by the Division of School Hygiene, which is responsible for the supervision of all measures for safeguarding the health of schoolchildren and for ensuring a satisfactory environment at school.

The School Medical Service in New Zealand was placed on a definite basis in 1912, when three full-time school medical officers were appointed. Previous to that time, the only regular examinations that were made of schoolchildren in New Zealand were in respect of scholars attending some of the larger secondary schools and private schools. The school medical officers were, at first, officers of the Education Department, but in 1921 the Service was transferred to the Health Department. There is now a permanent staff consisting of a Director, twelve school medical officers and thirty-one school nurses.

The Health Act, 1920, Section 139, gives the necessary authority for the medical examination of children attending the primary schools, but the duties and powers of the school medical officers are defined in the Education Act, 1914, Section 134.

The School Medical Service aims at securing for each child three complete physical examinations during his school life, but special examinations are carried out when parents, teachers or the school medical officers consider them necessary. Children found to be suffering from defect are kept under observation until the necessary treatment is obtained. It is recognised that medical treatment must be available for every child in need of it, and that adequate provision must be made for the ill-nourished and neglected. Mentally backward and feeble-minded children are given special consideration, arrangements being made for their entrance to special classes, special schools or other institutions as circumstances indicate.

The School Medical Service works in close co-operation with the Child Welfare Branch of the Education Department, under the supervision of which are all measures for the protection of destitute and neglected children, also the regulations governing juvenile employment. It also co-operates with the officers of the Education Department in the supervision of school buildings and sanitation. Though all newer schools make excellent provision for ventilation, there has been in recent years a strong movement in favour of open-air schools, and many of the recently erected buildings are of that type.

School medical officers are responsible for the medical examination of all candidates for entrance to the teaching profession.

Until this year, the work of the division was confined to the State primary schools, comprising approximately some 250,000 pupils, but as the result of the medical examination of entrant teachers indicated the desirability of examining candidates and giving vocational guidance at an earlier stage of their educational career, arrangements have been made by which all applicants for entrance to the teaching profession are examined one or two years before the termination of their secondary-school life. By this means, unsuitable candidates are rejected at a time when they are able to devote themselves to preparing for another means of livelihood. The work of the service is also being extended to include the examination of the pre-school child.

The results of examinations have amply demonstrated the necessity for the work of inspection. Though it has been clearly shown that the average of defect found in New Zealand children is less than in countries of older civilisation, still there is a great deal to be achieved, and the work of the service is essentially preventive and educational. This latter aspect is particularly important, as the object is to instruct the pupil while at his most impressionable age as to the essential principles of correct living. Many thousands of pamphlets giving advice in simple language on health topics are distributed annually and many popular lectures on health matters

are given by the school medical officers in various districts to teachers, parents and children.

If defects are found, the practice of the school medical officer is to notify the parents of their existence, the choice of medical attendant being left entirely to the parents. If the parents are unable for financial reasons, or are too apathetic, to obtain the necessary advice and treatment, it is the duty of the School Medical Service to see that it is carried out. This is done through the medium of the school nurse, who acts as a link between the school and the home, the treatment being given at the nearest hospital. A great number of operations for minor defects are carried out at the public hospitals throughout New Zealand. Where the parent, either from home ties or physical disability, is unable to take the child to the hospital for necessary treatment, the school nurse is available for undertaking this duty. In cities, the percentage of treatment obtained is from 80 to 90 per cent of the number recommended for it, but in the country, where facilities are fewer, it is much less. It is the aim of the service to secure the interest and co-operation of the parents, as it is realised that only in this way can the work be made effective. In pursuit of this aim, parents are invited to be present at the examination of their children, an opportunity of which the majority avail themselves gladly.

Apart from the routine duties mentioned above, there are other important aspects of the work of the service.

Nutrition Classes and Health Camps. — For the benefit of children suffering from subnormal nutrition, special classes have been established in several schools. The daily regime for children in these classes is supervised, special attention being given to the character of the food, the amount of rest taken, the time spent out of doors, etc. Good results have been obtained.

A successful feature of the work for the benefit of delicate and under-nourished children has been the holding of annual Health Camps. The great improvement in physical and mental vitality of the children attending such camps affords evidence of their value.

Goitre Prevention. — It was realised some years ago that goitre was unduly prevalent in some parts of New Zealand, and to the school medical officers was entrusted the duty of carrying out a survey throughout New Zealand in order to ascertain the distribution of the disease, the Professor of Preventive Medicine, Otago Medical School, acting in co-operation. In the schools of those areas where goitre was found to be endemic, preventive and curative treatment was inaugurated. This consists in the administration of one grain of potassium iodide once weekly for three periods of ten weeks in the year. The results of treatment have been beneficial.

The Control of Infectious Disease. — The control of infectious disease in the schools is also a matter for which the school medical officer has to assume responsibility. This entails much routine work in close co-operation with the medical officer of health.

For the purpose of lessening the incidence of, if not eradicating, diphtheria, a considerable amount of work has been done, first by popular education as to the value of preventive treatment for the disease, and, secondly, by the inoculation of several thousands of children with toxin antitoxin mixture. Immunisation along these lines is being extended yearly.

The school medical officers in the course of their duties have made special studies of various aspects of child welfare. During the year 1926, the following special investigations were carried out: (1) an enquiry into the condition of rural schoolchildren; (2) an enquiry into the incidence of tuberculosis among children of New Zealand; (3) an investigation into the physical growth and mental attainment of New Zealand schoolchildren was carried out in co-operation with the Education Department. The findings resulting from these investigations will be found in the Annual Report of the Department of Health.

VII. THE DIVISION OF DENTAL HYGIENE.

This division undertakes the dental treatment of schoolchildren. It has as its Director a registered dentist, and is staffed by dental surgeons, mostly on the administrative and instructional side, and by dental nurses. The latter are specially trained by the Department to undertake the treatment of children's teeth. Their training covers a period of two years' intensive study specially adapted for the work they have to perform. After qualifying, they are appointed to take charge of the school dental clinics established by the Department of Health throughout the Dominion. Each dental clinic serves a certain group of schools, and the duty of the dental nurse is to render the younger children of these schools dentally fit and, as far as possible, to maintain them in that condition. The treatment is largely standardised, the work of the dental nurse being limited to the treatment and filling of deciduous teeth, the filling of permanent teeth where the pulp is not involved, extractions with local anæsthetics and prophylactic treatment. The work is organised on certain definite lines, and both the operative work and the organisation are subject to frequent inspections by the supervising dentists.

Dental nurses enter the service for a minimum period of five years, inclusive of the two years' training. To ensure that this term of service is carried out, each dental nurse is required to furnish a guarantor who will

enter into a substantial bond with the Crown. Great care is exercised in the selection of personnel for training as dental nurses. Education and physical fitness are prime considerations, but final selection is made only after personal interview. As there is a very large number of candidates offering each year for a limited number of appointments, a high standard can be maintained. The law restricts the operation of State dental nurses to service under the Department of Health.

In attacking the problem of dental caries, the policy of the Department is, as far as possible, a preventive one. It can best be discussed under two headings : (a) treatment, and (b) education.

(a) *Treatment.*

In order to prevent the development of extensive dental caries, all efforts are in the first place concentrated on the youngest children in the schools under treatment, that is to say, on the children in the infant classes, whose ages are from 5 to 8 years. These children are then kept under dental observation as they progress through the school, being re-examined as far as possible every six months. In this way the teeth of these growing children are kept in a sound and healthy state. When once the written consent of the parents has been given, the attendance of the children at the clinic is a matter of school routine.

The attendance of children under school age, that is, from 2½ to 5 years, is encouraged. It enables the operators to detect and remedy defects earlier, and it has the great advantage of bringing the dental nurses in contact with the parents.

(b) *Education.*

Side by side with the treating of dental disease the Department carries out a policy of dental health education. The State dental nurses are specially trained in this aspect of the work, and they take every opportunity of instructing parents and children in the care and preservation of the teeth. Leaflets, coloured posters, and children's stories are made use of in connection with this work.

The school-teachers co-operate wholeheartedly with the officers of the dental service, and their assistance is invaluable not only from the point of view of arranging and organising the work but more especially in the matter of stressing the preventive aspect during the course of their teaching.

Growth of the Service. — The dental service was inaugurated in 1921, and two years later the first dental nurses were appointed to school dental clinics. The number of dental nurses is augmented each year by a draft from the training school, while the number in training is maintained by the appointment of new probationers annually. New

clinics are established each year at the request of school committees or other representative bodies, such bodies undertaking to provide suitable clinic accommodation in accordance with the requirements of the Department and to bear the expenses of maintenance, except salaries and cost of dental supplies. The number of new clinics established each year is dependent on the number of trained dental nurses available. At the end of 1927, that is, after the system had been in operation for a period of four years, 40,000 children were being maintained in a dentally sound condition by the State School Dental Service.

VIII. THE DIVISION OF MATERNAL AND INFANT WELFARE.

Maternal and infant welfare work in New Zealand is founded on co-operation between the Department of Health, the hospital boards of the Dominion, the medical profession and a voluntary organisation known as the Royal New Zealand Society for the Health of Women and Children, or, to give it its more familiar name, the Plunket Society.

Organisation. — A consulting obstetrician acts in an advisory capacity in regard to the training of maternity nurses and midwives, the conduct of maternity hospitals and the various problems of maternity. An inspector of hospitals, who works in close co-operation with the consulting obstetrician, is concerned with the inspection of private hospitals, particularly in regard to methods of technique in maternity work and the prevention of puerperal sepsis. This same officer also undertakes the inspection of the seven State maternity hospitals known as the St. Helen's Hospitals and the many public maternity hospitals or maternity wards under the control of the hospital boards. A third specially qualified medical officer deals with antenatal care and advises in regard to the establishment by public hospitals, the Plunket Society and other associations of antenatal clinics, at which free antenatal and postnatal advice is given. The medical officers of health exercise a general supervision over the work of midwives, and with the assistance of the inspector of hospitals, keep a close control over the conduct of the many private hospitals in the Dominion.

Antenatal Clinics. — The clinics in connection with the State maternity hospital are conducted by the medical superintendents of these institutions and provide a special course of instruction in antenatal and postnatal work for women who propose to qualify as midwives. The clinics in connection with the Plunket, Red Cross and kindred societies are conducted entirely by nurses who, besides being qualified in medical and surgical nursing and in midwifery, have received special training in antenatal and postnatal work. The patient attending these clinics is examined by the nurse, her

history taken, and the results recorded on a chart, a copy of which is sent to the doctor whom the patient has engaged to attend her in her confinement. The doctor is requested to instruct the nurse on any points towards which he desires her to pay special attention. After the first visit, the patient attends the clinic once a month in the early months of pregnancy and fortnightly during the last eight weeks of the period. During the patient's whole attendance at the clinic, it is the nurse's duty to keep the doctor informed of the progress of the case and the occurrence of any symptoms of morbidity or abnormality that may develop. The object of the clinic is to relieve the medical practitioner of a great deal of routine work which a nurse can carry out efficiently and to provide the expectant mother with a sympathetic and well-trained confidante and adviser, who can be consulted on many small matters which are of importance in maintaining her health but which she regards as too simple to trouble the doctor with.

The aim of the work is : (a) to maintain the health of the expectant mother ; (b) to instruct her in her bodily hygiene and habits during pregnancy ; (c) to preserve pregnancy to full time ; (d) to secure normal labour, resulting in a healthy breast-fed baby and an undamaged mother.

St. Helen's Hospitals. — The State, as has already been mentioned, administers and maintains seven maternity hospitals in the larger towns of the Dominion. These are designed not only to ensure facilities for training midwives and maternity nurses but also to provide skilled assistance for wives of working-men at a moderate fee. The wives of working-men who have incomes of less than £350 per year may avail themselves of this service. Each institution is in charge of a matron experienced in midwifery and a part-time private practitioner is in attendance daily.

The Royal New Zealand Society for the Health of Women and Children. — The objects of this organisation are expressed by itself in the following words : “ to inculcate a lofty view of the responsibilities of maternity and the duty of every mother to fit herself for the perfect fulfilment of the natural calls of motherhood, both before and after childbirth, and especially to advocate and promote the breast-feeding of infants ; to acquire accurate information and knowledge on matters affecting the health of women and children and to disseminate such knowledge through the agency of its members, nurses and others by means of the natural handing on from one recipient or beneficiary to another, and the use of such agencies as periodical meetings at members' houses or elsewhere, demonstrations, lectures, correspondence, newspaper articles, pamphlets, books, etc. ; to train specially and to employ qualified nurses, to be called Plunket Nurses, whose duty it will be to give sound reliable instruction, advice and assistance gratis to any member of the community desiring

such services on matters affecting the health and well-being of women, especially during pregnancy and while nursing infants, and on matters affecting the health and well-being of their children; and also to endeavour to educate and help parents and others in a practical way in domestic hygiene in general—all these things being done with a view to conserving the health and strength of the rising generation, and rendering both mother and offspring hardy, healthy and resistive to disease; to co-operate with any present or future organisations which are working for any of the foregoing or cognate objects”.

The society, on March 31st, 1927, had some 64 centres in various parts of the Dominion and employed for district work alone, exclusive of relieving nurses, 111 nurses. The society administers six baby hospitals and mothercraft homes in different parts of the Dominion. It publishes and distributes booklets and pamphlets with regard to the care of infants. One of these pamphlets, published at the Government's expense, entitled *The Expectant Mother and Baby's First Month*, is distributed to every newly married couple through the agency of the Registrar of Marriages. The funds of the society are derived to a large extent from voluntary contributions, but it is also in receipt of a large and increasing subsidy from the Government.

Maternity Allowances. — The National Provident Fund was established by an Act passed in 1910. Its chief purpose was to provide facilities by which persons could accumulate funds for pensions in old age. In addition to the regular benefits, a payment of £6 is made to any member of the fund of at least twelve months standing upon the birth of a child to such member. This payment is made from a special Government grant for this purpose. No part of the cost of the maternity allowance is borne by the contributor himself. Maternity allowances are granted by the Government to members of any approved friendly societies on approximately the same conditions as to members of the Provident Fund. This Act is administered by the National Provident Fund and Friendly Societies Department.

IX. THE DIVISION OF MAORI HYGIENE.

This division, which has as its Director a registered medical practitioner of Maori blood, possesses expert knowledge of the language and customs of the Maori race. Its functions are to advise and assist medical officers of health in their work amongst the Maori people and generally to supervise all measures aimed at promoting the welfare of this section of the community. The Director of the division supervises and directs the work of the Maori health councils described in the next paragraph, confers freely

with medical officers of health at all times and acts as a link between these officers and the Maori health councils. He is available to undertake control of the measures for limiting and suppressing any dangerous outbreak of disease amongst Maoris in any part of New Zealand. The medical officers of health are responsible for the state of health of Maoris living in the health district over which they have charge. They keep in close touch with Maoris by means of their ordinary staff of health inspectors and by means also of subsidised part-time medical officers and full-time nurses who are stationed in districts where Maoris are numerous. In some districts, however, where special need exists, inspectors of Maori extraction have been appointed for their special knowledge of the requirements of the race.

Sanitation of Maori Settlements. — The Health Act, 1920, contains special provisions as to the sanitation of Maori settlements. These, briefly, are to the effect that Maori Councils, set up under the Maori Councils Act, 1900, shall be known as health councils ; that such health councils shall have general advisory functions with respect to matters relating to the health of the Maori inhabitants of the district and shall have such powers and duties in relation thereto as may be approved by the Director-General of Health, or prescribed by regulation ; that every health council may, with the approval of the Department of Health, direct that any village committee appointed pursuant to provisions contained in the Maori Councils Amendment Act, 1903, shall carry out such sanitary works and enforce such by-laws relating to health and sanitation as the health councils may specify. Any moneys provided by a health council or village committee for the purpose of carrying out any sanitary works may be subsidised, at a rate not exceeding £1 for £1, out of moneys provided for native purposes by the Civil List Act, 1920.

The North Island is divided into twenty Maori council districts and the South Island into four. Each district has a council, consisting of seven members of the Maori race. Each and every settlement within such district has its village committee, consisting of not more than five nor less than three members for each settlement. These committees have definite statutory powers and work under their respective by-laws under the jurisdiction of the Maori council. The by-laws, which give power to inflict fines, constitute a standard in health and sanitary matters. The members of the council and the various village committees constitute a most valuable organisation in the event of infectious disease or other difficulties arising.

Medical Care and Treatment of the Maoris. — The Government accepts full responsibility for the extra-institutional care and treatment of Maoris. Natives who require institutional treatment, however, are admitted to the public hospitals in the ordinary way.

Doctors practising in districts with a large Maori population are subsidised to give medical advice and treatment to indigent natives. There are at present thirty part-time medical officers acting in this capacity.

Nurses also have been appointed whose duties include the giving both of bedside care and of advice and instruction in health matters. There are twenty such nurses at present located in the more populous Maori districts. These officers are appointed and paid by the Government. They have proved one of the most powerful factors in the suppression of epidemic diseases amongst Maoris and have also played a most important part in the education of the Maoris in health matters.

The teachers of native schools, again, have done and still continue to do much for the health of the Maori. They are supplied by the Department of Health with stocks of drugs and dressings, which are available for the use of natives in districts remote from doctors.

Close touch with the native people is maintained through these various agencies by personal visits and by correspondence in their own language. Various pamphlets and leaflets dealing with such matters as the feeding of infants and the prevention and treatment of typhoid fever, tuberculosis, influenza, scabies, etc., have been printed in the Maori language and circulated so as to reach the homes of the people.

Typhoid Fever. — Typhoid fever has proved one of the worst scourges of the Maori race and serious epidemics of this disease have been experienced in the past. Improved sanitary conditions, the installation of public water supplies in Maori villages and the widespread adoption of inoculation with anti-typhoid vaccine have, however, worked a wonderful improvement. The disease is now less prevalent and the widespread outbreaks of the past are now almost unknown.

Research. — The Director of the division has undertaken numerous investigations of an ethnological and anthropometrical nature. Papers and articles have been issued dealing with the measurements of the physical characteristics of the race, evolution of Maori clothing, ancient food supplies, etc.

X. MISCELLANEOUS FUNCTIONS OF THE DEPARTMENT OF HEALTH.

The Department is concerned with the administration of the Medical Practitioners Act, the Dentists Act, the Masseurs Registration Act, the Pharmacy Act and the Plumbers Registration Act. A brief reference to the enactments relating to the education and registration of those following these various professions and callings in New Zealand is therefore necessary. The training of nurses, midwives and maternity nurses has already been fully dealt with in Chapter V of this report.

Medical Practitioners. — Under the Medical Practitioners Act, 1914, as amended by the Medical Practitioners Amendment Act, 1924, there is constituted the Medical Council of New Zealand, consisting of the Director-General of Health and six other registered medical practitioners appointed by the Governor-General for a term of three years.

The Council deals with all applications for registration. Every person is entitled to registration who satisfies the Council that he is a graduate in medicine and surgery of the University of New Zealand ; or registered on the register kept in accordance with the provisions of the Acts regulating the registration of medical practitioners in the United Kingdom, or eligible for registration on such last-mentioned register ; or the holder of a foreign diploma approved by the Council and granted by any university or institution other than the University of New Zealand, or a university or institution situated in Great Britain, after a course of not less than five years' study of the subjects pertaining to a medical and surgical degree or licence. The Council may refuse to approve any foreign diploma unless it appears that New Zealand graduates are, without further examination, entitled to registration in the country granting the diploma. It may also require the holder of a foreign diploma to pass an examination in medicine and surgery to be prescribed and conducted by the Senate of the New Zealand University.

No person is entitled to be registered if he has been at any time convicted of an offence punishable by imprisonment with hard labour for a term of two years or upwards, or is otherwise not of good fame or character. Applicants who are refused registration have the right of appeal to the Supreme Court.

The Medical Council is vested with limited disciplinary powers, including the imposition of a fine not exceeding £50 or the suspension of a medical practitioner from practice for a period not exceeding twelve months. Right of appeal to the Supreme Court is provided. The Council may refer more serious cases to the Supreme Court for an Order for the removal of the name from the register.

The only Medical School in New Zealand is that in Dunedin, established in connection with the Otago University. The complete course extends over six years. The clinical studies are taken at the Dunedin Public Hospital and other institutions under the control of the Otago Hospital Board. The beds available for teaching purposes include : 234 for ordinary medical and surgical cases ; 64 for children ; 94 for tuberculosis ; 52 for other infectious diseases ; 16 for maternity cases ; and 40 for chronic cases. Opportunities for clinical work are also available for students in the final year at the public hospitals at Christchurch, Wellington and Auckland. An increasing number of the practitioners registered in New Zealand are graduates of the Otago Medical school. In

1926, for instance, of 94 medical practitioners registered, 69 qualified in New Zealand.

The New Zealand University also grants a diploma in Public Health. The theoretical instruction for the diploma is given at the Medical School in Dunedin, while the practical public health experience may be acquired in any of the four main centres. The examination is held in two parts, which may be taken separately or at the same time. Since 1912, 16 diplomas have been conferred.

A new Zealand Branch of the British Medical Association exists, divisions being established in the chief centres. Conferences are held annually. The official organ of the Association is the *New Zealand Medical Journal*. A triennial congress, known as the Australasian Medical Congress, is held in co-operation with the Australian Branches of the British Medical Association.

New Zealand is relatively well served with medical practitioners, as on December 31st, 1926, there were 1,283 doctors on the medical register.

Dentists. — Every adult person is entitled to be registered as a dentist in New Zealand who is the holder of a degree in dental surgery of the University of New Zealand, or of a certificate of proficiency in dentistry obtained from the Senate of the University ; or is the holder of a degree or diploma in dental surgery approved by the Senate and conferred by a university or dental college in Great Britain ; or who is the holder of a degree in dentistry granted in a British possession or a foreign country and recognised by the Senate of New Zealand University. Evidence of good fame or character is required in every case.

The Dental School which is at Dunedin is associated with the Otago University. The course for the degree of Bachelor of Dental Surgery is of five years' duration, while the course for the Certificate of Proficiency in Dentistry is of four years' duration.

Masseurs. — Under the Masseurs Registration Act, 1920, and the Masseurs Registration Amendment Act, 1924, there is constituted the Masseurs Registration Board of New Zealand, consisting of the Director-General of Health, a registered medical practitioner and two persons engaged in the practice of massage in New Zealand, who are appointed to the Board by the Governor-General, the term of appointment being for three years.

The board deals with all applications for registration. The Act provides that every person is entitled to registration who holds the qualifications required by the Act and regulations thereunder and satisfies the board that he or she is a person of good reputation and character. It is necessary for applicants to be in possession of certificates for the three branches of massage :

1. Massage ;
2. Medical Electricity ;
3. Remedial Exercises and other branches of Physiotherapy.

The certificates accepted are set forth by regulation and are as follow :

- (a) Complete Certificate of the Chartered Society of Massage and Medical Gymnastics (England);
- (b) Complete Certificate of the Incorporated Society of Trained Masseurs (England);
- (c) Australian Massage Association Certificate ;
- (d) Swedish Government Certificate ;
- (e) New Zealand Defence Department Certificate in Massage and Medical Electricity (with further course at the Massage Training School and subsequent passing of examination in Remedial Exercises);
- (f) New Zealand State Certificate granted after training at the Otago Massage Training School and passing of subsequent State examination.

The fee for registration is £1, payable on advice of registration being granted. The board is vested with disciplinary powers, including the removal of a name from the register on the ground of the person concerned having been convicted of an offence punishable by imprisonment or having been guilty of such improper conduct as renders him, in the opinion of the board, unfit to be registered under the Act. Right of appeal is provided.

The only Training School for Masseurs in New Zealand is in Dunedin in connection with the Otago Hospital Board. The course is of eighteen months' duration, followed by a State examination.

Chemists. — The Pharmaceutical Society of New Zealand, constituted by the Pharmacy Act, 1908, consists of 67¼ members. These are known as registered chemists and no chemist shop may be opened in the Dominion except under the charge of a registered person.

The society is governed by the Pharmacy Board, which is also provided for in the Act, and consists of ten members elected by members of the society. The board meets monthly. Once annually a conference of all members meets for discussion of business, in different towns as may be decided upon. The main function of the Pharmacy Board is to administer the Pharmacy Act and its amendments in the interests of the public and of the members of the society ; also to watch such other legal provisions generally as may have a bearing upon pharmacy.

The society has reciprocity agreements with the societies of Great Britain and all the Australian States ; that is to say, a member registered after passing the full examination of a reciprocating country can be registered in any other on payment of the fees.

The New Zealand society is a member of the International Federation of Pharmacy, a worldwide organisation for dealing with matters of general interest, having its headquarters at The Hague, Netherlands. There are "divisions" of the society in all centres, consisting of groups of members having their own officers and holding regular meetings for the transaction of local affairs.

The Pharmacy Board holds examinations twice annually for those who wish to obtain the necessary qualifications entitling them to registration, who also have to serve four years' apprenticeship. Approximately 40 new members on the average are admitted to the register annually, about 6 of whom are admitted on the strength of British or Australian certificates.

The examinations consists of : (a) The Preliminary (being matriculation of the New Zealand University or any other university recognised by the board); (b) examinations set by university professors in botany and chemistry — three papers and practical work ; (c) examinations set by examiners appointed by the board in materia medica and pharmacy — two papers and practical work. An average number of 240 candidates sit for these examinations annually.

The board is in constant communication with the British and Australian societies and as far as possible keeps its standard of examination on a level with theirs.

The board has a benevolent fund, which is used for the relief of members who may be in needy circumstances, or of their relatives who may be unprovided for.

In addition to the statutory organisation set up by the Pharmacy Act, members of the Pharmaceutical Society have another organisation known as the Chemists' Defence Association (Limited), which provides insurance for its members, deals with matters of general interest of a business nature not covered by the Act, and governs ethical questions as between pharmacists and medical men and the public generally.

Plumbers. — The Plumbers Registration Act, passed during the session of 1912, provided for the setting up of a board to be called the Plumbers Board of New Zealand. This board consists of five members, viz., the Director-General of Health or his Deputy (Chairman); the Director of Education, a city or borough engineer nominated by the cities and boroughs which have a population of over 5,000 inhabitants and appointed by the Governor-General ; a master plumber and a journeyman plumber elected by their respective federations.

The functions of the board are to decide what persons may be registered under the Act, in what districts sanitary plumbing shall be performed only by registered plumbers, and what shall be the scope of the examinations to be held as a means of securing registration.

Annex.

I. ACTS ADMINISTERED BY THE DEPARTMENT OF HEALTH.

Health Act, 1920.
Hospitals and Charitable Institutions Act, 1926
Food and Drugs Act, 1908.
Dangerous Drugs Act, 1927.
Poisons Act, 1908.
Quackery Prevention Act, 1908.
Cemeteries Act, 1908.
Social Hygiene Act, 1917.
Medical Act, 1908.
Medical Practitioners Act, 1914.
Nurses and Midwives Registration Act, 1925.
Masseurs Registration Act, 1920.
Plumbers Registration Act, 1912.

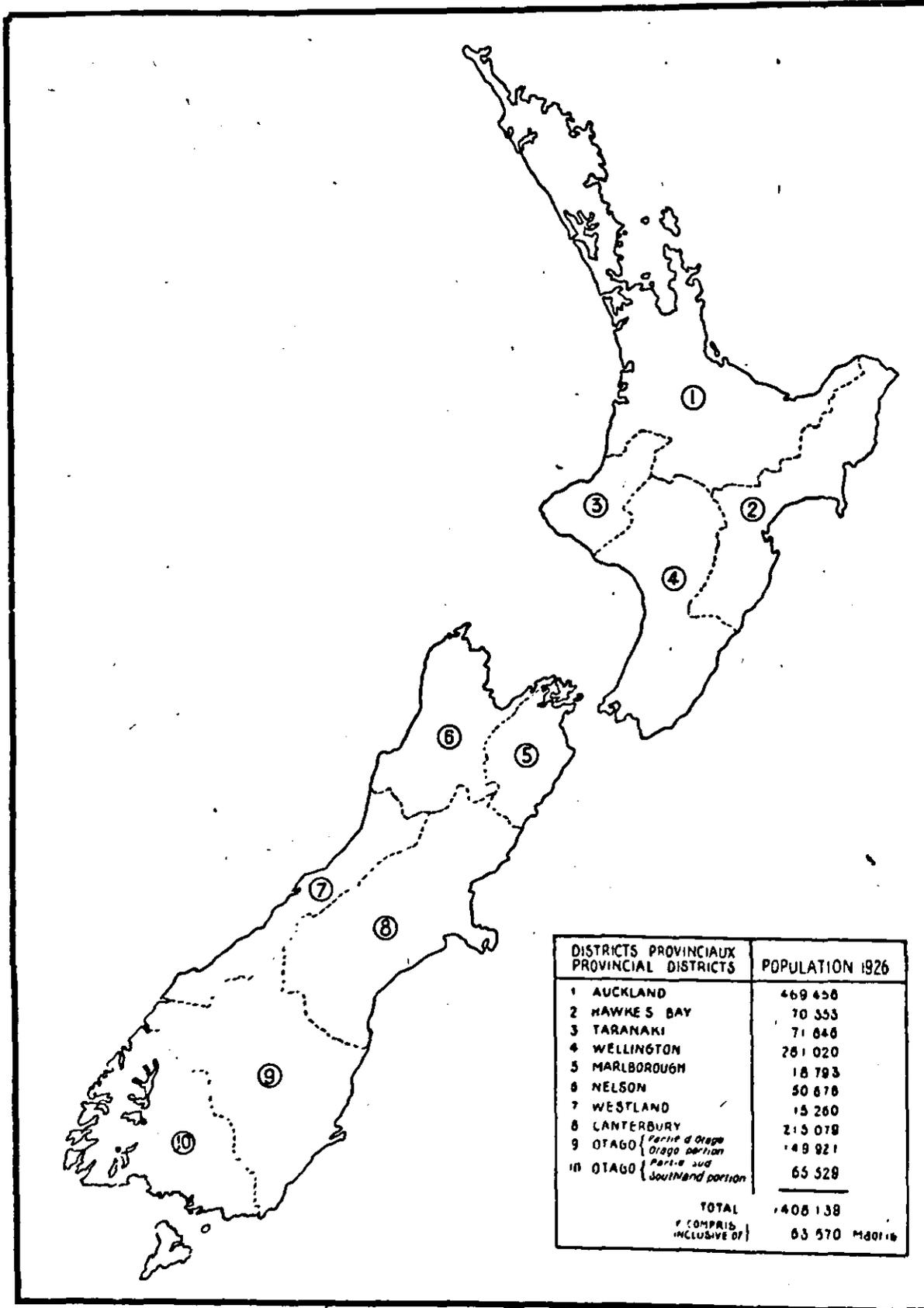
**2. PUBLICATIONS ISSUED ANNUALLY DEALING WITH PUBLIC HEALTH OF
NEW ZEALAND.**

New Zealand Official Year-Book.
Annual Report of the Director-General of Health.
Annual Report of Hospitals and Charitable Institutions (Appendix to
Report of Director-General of Health).
Annual Report, Inspector-General of Mental Hospitals.
Annual Report of the Royal New Zealand Society for the Health of
Women and Children.

PART II

**The Official Vital Statistics of the Dominion
of New Zealand.**

MAP OF NEW ZEALAND
 showing Provincial Districts and their Population



I. ESTABLISHMENT OF AND RESPONSIBILITY FOR STATISTICS.

Official statistical records of the country commenced in the year 1841, in the shape of reports compiled for the information of the British Colonial Office and called "Blue books". The primary design of these statistics was not their publication for general information and, as they were mostly limited to particular parts of the colony or to particular periods and occasions, they necessarily failed to present any complete view of New Zealand. In the year 1853, however, an attempt was made to place the fragmentary and inchoate statistical works on some authoritative and comparable basis, and five years later the Registrar-General, who had been entrusted with the task of compiling annually statistics of the whole colony, produced a volume dealing with the years 1853, 1854, 1855 and 1856. This volume was the first of a regular annual series which gradually developed and expanded to cover all branches of statistical enquiry.

The collection and compilation of statistics were formerly carried out under the direction of the Registrar-General, but in 1915 the Census and Statistics Office was formed. The permanent head of the statistical office is the Government Statistician, who is charged with the responsibility of all official statistical data.

Naturally, the earlier statistics were mainly relative to population and it was not until the passing of the Births and Deaths Registration Act in 1855 that fairly reliable statistics of births and deaths became available. These statistics have been rapidly developed in recent years and at the present time there is published an Annual Report on Vital Statistics, which, besides containing considerable introductory letterpress, includes much comprehensive tabular matter covering births, marriages, deaths and hospital statistics.

II. THE POPULATION OF NEW ZEALAND.

I. THE CENSUS.

The history of the census in New Zealand dates back to the days prior to the establishment of responsible government, some crude form of census-taking appearing to have been brought into operation in the early forties shortly after the proclamation of British sovereignty over the islands of New Zealand.

Statements of population in each settlement appear to have been compiled by the local resident magistrate, and it would seem that it was then the custom to count the population in the settlements, which were in those days few in number and circumscribed in area, but not to take into account the settlers, whalers, etc., at remote places.

What is regarded as the first general census of New Zealand took place in December 1851, under the provisions of the Census Ordinance, 1851, which also enacted that a census of the number and condition of the population was to be taken in the first, fourth, and seventh year of every decade of years. The neglect of certain provincial authorities to take the censuses of 1854 and 1857, combined with the departure from the set date in other cases and the consequent inability to arrive at a definite population total for any specific date, led to the passing of the Census Act, 1858. A census of the whole country was taken in 1858, the forerunner of a long series of censuses at intervals of three, four and five years. From 1881, the quinquennial sequence has been followed to the last census on April 17th, 1926.

The subjoined table exhibits an historical review of the scope of the census in the Dominion and at the same time furnishes an excellent index of the range of the available census data on any specific subject.

SCOPE OF THE CENSUS.

Q indicates that a question or questions on this subject formed part of the census enquiry.

Subject	1851	1858	1861	1864	1867	1871	1874	1878	1881	1886	1891	1896	1901	1906	1911	1916	1921	1926
Name	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Relationship	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Sex	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Age	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Conjugal condition	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Orphanhood	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Existing marriage :																		
Duration	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Children born	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Children alive	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Industry, etc.	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Occupation	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Grade of employment	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Unemployment :																		
Duration	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Cause	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Birthplace	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Father's birthplace	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Nationality	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
How acquired	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Race	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Length of residence	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Religion	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Literacy	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Receiving education	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Dependents	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Infirmities	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Insurance	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Incomes	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Dwellings :																		
Nature	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Materials	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Rooms	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Tenure	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Rent or rental value.	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q

The census in New Zealand is taken by means of household schedules, the responsibility for completing the entries on the schedules being placed upon the occupier of the dwelling or manager of the establishment, institution, etc.

For the purposes of distribution and collection of the schedules the Dominion is divided into enumeration districts, each in charge of an enumerator. The enumerator, from his own local knowledge, further

subdivides the district into sub-districts and sub-enumerators are appointed to take charge of those areas. The distribution of schedules to householders by sub-enumerators is commenced at varying dates according to the necessities of the districts, but in each case the schedules must be distributed before the night set for the census. The householder is required to :

(a) Complete the householder's dwelling schedule, giving particulars as to the dwelling, together with a list of persons, not members of the householder's family, who are enumerated with the household.

(b) Complete family schedule, giving particulars of members of his own family passing the census night in his dwelling (see Form [Census—7, page 49]).

(c) See that a personal schedule is attached to the dwelling and family schedules for each person, not a member of his own family, who passed the census night in his dwelling.

The collection of the schedules commences immediately on the morning following and proceeds as rapidly as possible. A first check is made by the sub-enumerator on calling for the schedule and a second by the enumerator. The whole of the schedules and other forms are then despatched by the enumerator to the Census and Statistics Office, where the final verification, tabulation and preparation for publishing are carried out. The basis adopted for the compilation of the census statistics is that of the " population de fait ".

2. INTERCENSAL ESTIMATES.

Intercensal estimates of the population are computed at the end of every quarter and are based on the customary equation :

Population (census) + births and immigration – deaths and emigration.

Registration of births and deaths is compulsory and, under the present system of recording, very few births and deaths escape registration, while the fact that all migration to and from the Dominion must be waterborne over lengthy distances, and that it centres in a few ports, facilitates the compilation of accurate statistics of external migration. Indeed, as regards the figures of total population, the system in use should give, and to a remarkable extent does give, the actual figures.

Population statistics of internal divisions and of towns are based upon a variety of data collected annually.

3. PUBLICATIONS CONTAINING INFORMATION REGARDING POPULATION.

Census Volumes.

The results of the census are published in a number of volumes each bearing on a particular subject. The volumes contain a mass of detailed statistics with statistical notes and are fully illustrated by maps and diagrams. A General Report is also published which presents an epitome of the results of the whole range of tabulation and enquiry ; enables a more comprehensive discussion of the great bulk of data ; and provides for the publication of numerous fresh items which could not have been incorporated in any of the particular volumes. The volumes to be published as a result of the 1926 census are :

- Geographical Distribution ;
- Dependencies ;
- Ages ;
- Conjugal Condition ;
- Orphan Children and Dependent Children ;
- Race Aliens ;
- Native-born and Foreign-born ;
- Religious Professions ;
- Industrial and Occupational Distribution ;
- Unemployment from Sickness and Other Causes ;
- Incomes ;
- Families and Households ;
- Dwellings ;
- Maori and Half-caste Population ;
- Public Libraries and Places of Worship ;
- Poultry ;
- General Report.

Annual Statistics.

The Annual Statistical Report on Population and Buildings contains complementary letterpress and statistical tables on the population statistics for the year. Statistics are given under numerous heads, the main subjects commented on being :

- Movement of population ;
- Natural increase of population ;
- Migration increase of population ;
- Seasonal movements of population ;
- Local movements of population ;
- Urban and rural population ;
- Density of population ;
- Sex and age distribution.

The tabular matter records :

- Percentage increase of population during the last ten years ;
- Total population at successive censuses ;
- Natural increase or excess of births over deaths for each sex ;
- Excess of arrivals over departures for each sex ;
- Estimated population at December 31st of each year from 1854, sexes separately ;
- Estimated population at March 31st of each year from 1873, sexes separately ;
- Estimated mean population of each year from 1855, sexes separately ;
- Estimated mean population for year ended March 31st from 1873, sexes separately ;
- Estimated population and mean population for June years from 1913 ;
- Estimated population and mean population for September years from 1913 ;
- Natural and migration increase during each quarter ;
- Population in each provincial district ;
- Population of urban areas ;
- Population of counties ;
- Population of cities and boroughs ;
- Population of town-districts ;
- Area and persons per square mile in each county, borough, and town-district ;
- Population in each hospital district ;
- Population in the smaller townships and rural localities ;
- Sex : proportions of the total population ;
- Age : distribution of the male and female population at April 1st — single years up to age 20 and in five-yearly groups of ages thereafter ;
- Age : distribution of the mean population for the year in five-yearly groups of ages — males and females separately ;
- Maori population at successive censuses ;
- Population of Cook Islands ;
- Population of Western Samoa.

Other publications of the Census and Statistics Office containing information on subjects of population are :

- New Zealand Official Year-Book* ;
- Annual Report on External Migration ;
- Annual Report on Vital Statistics ;
- Quarterly Estimation of the Population.

III. VITAL REGISTRATION IN NEW ZEALAND.

I. HISTORY.

A form of registration of births and deaths was established in New Zealand in 1847, in which year there was passed a Registration Ordinance which made provision for a record of births and deaths being kept by the State. As registration under this ordinance was not compulsory, the results obtained were not entirely satisfactory, so in 1855 the Births and Deaths Registration Act was passed and registration became compulsory. From this date there exists a complete and accurate record of the number of births and deaths in the Dominion.

The present system of registration is regarded as being exceptionally complete and very few, if any, births and deaths escape registration.

2. GENERAL REGISTRATION SYSTEM.

The registration of births and deaths in New Zealand is under the control of the Registrar-General's Office. For this purpose the Dominion has been divided into about 280 registration districts, each one of which is in charge of a registrar, who must reside in that particular district.

Every registrar is required to inform himself carefully of the particulars touching births and deaths required to be registered by him and to enter and register in duplicate all such particulars upon the special forms provided for the purpose. At the completion of every quarter, that is, during the months of January, April, July and October in each year, the duplicate copies of all entries recorded during the three months then passed are required to be transmitted to the Registrar-General, who keeps the Dominion Register. In the case of the loss of any of the duplicate registrations, the registrar must send certified copies of his register to the Registrar-General.

All births and deaths must be registered with the registrar of the district in which they occur. If, however, the registrar of a district other than the one in which the birth or death took place is satisfied that the responsible informant could not without great difficulty, delay or expense attend at the office of the required district, he may accept such birth or death for registration in his own district.

Searches of any register of births or deaths are made upon payment of the appropriate fee, which is 2s. 6d. for a search extending over a period of not more than one year, and one extra shilling for every additional year. The fee for a certified copy of an entry is 2s. 6d. or, if such certified copy is made under the seal of the registrar, then a fee of 5s. is charged.

For a certificate of the date of any birth or death the fee is 1s. Certificates as above may be obtained either from the local registrar of the district concerned or from the Registrar-General. The fee for a search of the records of the Registrar-General's Office is 5s.

Indexes are made and kept by the Registrar-General of all births and deaths registered on the certified duplicates received from the various registrars and these are used to facilitate searches.

3. REGISTRATION OF NATIVES.

The registration of births and deaths of natives is done on similar lines to the European system, although the standard of registration is not so high as that for Europeans. Separate Maori registration districts have been created under the control of specially appointed registrars. The form of the native register is similar to that of the European register, with, however, fewer requirements of detail.

For the purposes of registration, the term "native" means a person belonging to the aboriginal race of New Zealand, and includes a half-caste and a person intermediate in blood between half-castes and persons of pure descent from that race.

In the general tables of deaths and also of births and marriages, the figures are exclusive of Maoris. The hospital statistics, however, cover Maoris also.

IV. REGISTRATION OF BIRTHS.

I. GENERAL.

Registration of births in New Zealand dates as far back as 1847, in which year was passed a Registration Ordinance which made provision for a record of births and deaths being kept by the State. Under this ordinance many registrations were effected, some of births as far back as 1840. Compulsory registration did not, however, come into force until 1855. Owing to the scattered nature of the settlements in the earlier years, it is known that many births escaped registration at that time. Many of these, however, were registered later under the provisions of the various Extension Acts, so that in reality very few births in New Zealand have remained unregistered.

2. PROCEDURE.

The law prescribes that it shall be the duty of the occupier of any house in which a child is born to give notice of the fact of the birth, the

date on which it occurred and the name and address of mother or father of the child to the registrar of the district in which the birth took place (see Form R.G.—9, page 55). Such notice is to be given within forty-eight hours after the birth if in a city or borough and within twenty-one days in every other case.

In addition, the father or mother of the child and, in their absence or default, the occupier of the house or each person present at the birth of the child are required within sixty-two days of the birth to supply the particulars set out below to the local registrar.

3. PARTICULARS REQUIRED.

The earlier Registration Acts and their amendments provided for very little information being given in the case of births, the register merely containing date and place of birth, name and sex of child, names of father and mother and occupation of father. In 1875, however, information was required as to ages and birthplaces of parents, and in 1912 the sexes and ages of previous issue of the marriage were added to the items required to be shown in the birth entry

Under the present Registration Act, the following information is now contained in the birth registration entry ;

- Folio number of entry ;
- Date, month and year of birth ;
- Place of birth — town, etc. ;
- Christian names of child ;
- Sex ;
- Christian names and surname of father ;
- Occupation of father ;
- Age and birthplace of father ;
- Christian names and surname of mother
- Maiden surname of mother ;
- Age and birthplace of mother ;
- Date and place of marriage of parents ;
- Previous issue of existing marriage :
 - (a) Living : ages each sex ;
 - (b) Dead : number each sex ;
- Signature and description of informant ;
- Date of registration of the birth ;
- Signature of registrar.

A.G.—9.)

NOTIFICATION OF BIRTH.

[No. _____.]

(To be delivered or posted by registered letter to the Registrar of Births within forty-eight hours after the birth.)

To the REGISTRAR OF BIRTHS,

TAKE notice that a _____ male child was born at _____
(Place of birth to full.)

on _____, 192 . *(If still-born, please state so.)*

Name and address (usual place of abode) of father or mother (in full).

(Signed) _____
(Occupier of house)

Endorsed by (Signed) _____
(To be endorsed by some person, if any (other than the occupier) in attendance at the confinement. State whether nurse, midwife, or as the case may be.)

Dated at _____, 192

NOTE. - The birth, whether living or a still-birth, must also be registered. This Notice is in addition to and not in place of Registration. Such registration must be made within sixty-two days of the birth, by the father or mother; or, in case of the death, absence, or inability of the father or mother, the occupier of the house in which child was born; or person present at the birth. A fee of five shillings is payable if registration be not effected within sixty-two days. If the birth be not registered within six months, a prosecution will follow.

Notice to register sent _____ Birth-entry No. _____

4. REGISTRATION AFTER DUE DATE.

Registration after sixty-two days and within six months of birth can only be effected after solemn declaration made before the registrar by the parent or some person present at birth. A fee of five shillings is payable, which may, however, be remitted at the discretion of the Registrar-General.

When six months have elapsed, a birth may be registered, without fee, with a registrar of births within one month after conviction of one of the responsible parties for neglect, but an information for such neglect must be laid within two years of date of birth.

Power is given for the Registrar-General to register, in a separate register, an unregistered birth which occurred in New Zealand, irrespective of the time that may have elapsed, a fee of five shillings being payable and satisfactory evidence on oath and such other proof as the Registrar-General may deem necessary being required.

5. TRANSMISSION OF DATA.

From the entries of all births made by the registrars there is written a statistical card of the main particulars contained in each entry, care being taken to distinguish between legitimate births, illegitimate births, stillbirths, etc. (see Birth Card, below). In the case of the urban areas, these cards are written and forwarded at the end of every month by the registrars concerned to the Census and Statistics Office, where they are examined and tabulated and the results gazetted. In all other cases, officers of the Census and Statistics Office obtain the information from the duplicate sheets sent in by the local registrars at the end of every quarter to the Registrar-General. A statistical card is also written in these cases and advantage is taken to verify the particulars contained on the cards written by the registrars in the urban areas.

With the exception of the quarterly totals of living births and stillbirths published in the *Monthly Abstract of Statistics*, no statistics of births registered in the Dominion are compiled other than those prepared at the close of the year.

BIRTH CARD.—YEAR 192

Regn. Dist. _____		No. _____		Sex: <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 15px; height: 15px; text-align: center;">M.</td><td style="width: 15px; height: 15px; text-align: center;">F.</td></tr></table>		M.	F.																
M.	F.																						
Date of birth: _____/19__		Born.																					
Place where born: _____		At home or in a private house.	In a private institution	In a public institution																			
				Name: _____																			
If born away from home, state town of parents domicile.		Father's Occupation: _____			If illegitimate, mark this square.																		
Father's Age: _____ Years		Mother's Age: _____ Years																					
Father's Birthplace.		Mother's Birthplace.																					
N.Z.	Aus. Com.	Eng. and W.	Scot.	Irel.	Can.	S.A.	India	Den.	Fr.	Ger.	J.-S.	N.Z.	Aus. Com.	Eng. and W.	Scot.	Irel.	Can.	S.A.	India	Den.	Fr.	Ger.	J.-S.
Nor. Swe. den. U.S. A. China		Other:				Nor. Swe. den. U.S. A. China		Other:															
Date of Marriage: _____		Years married: _____		PREVIOUS ISSUE OF MARRIAGE.																			
				Living		Dead		Total															
				M.	F.	M.	F.	M.	F.	Both sexes:													
In case of Twins.		Ages of Living.																					
Elder.	Younger.	M.				F.																	

In printed squares, mark square applicable.

6. PROGRESS OF BIRTH STATISTICS.

Prior to 1913, very meagre information relating to births was available in New Zealand, the earlier statistics merely giving the bare numbers of

either sex registered in each provincial district, and (without distinction of sex) in each registration district. The number of illegitimate births was also given. Commencing with the year 1913, however, the statistics of births were placed on a better footing and more detailed information was contained in the tables published from that year onwards. The particulars may be tabulated as follows :

- Number of births in each provincial district ;
- Number of births and birth rate per thousand of mean population during last ten years ;
- Births in each registration district, with distinction as to legitimacy ;
- Births in each provincial district according to legitimacy, sex and quarter of registration ;
- Ages of parents — living legitimate births — single cases ;
- Ages of parents — living legitimate births — plural cases ;
- Age of mother and number of previous issue — legitimate births ;
- Duration of marriage and number of previous issue — legitimate births ;
- Legitimate first births within one year after marriage according to age of mother and duration of marriage (months) ;
- Ages of mothers — illegitimate births ;
- Relative ages of parents of still-born children ;
- Occupation of fathers with number of previous issue.

From 1919, an additional table showing the age of mother of firstborn infants according to single or plural cases and sex was included, and from 1921 a table showing the age of mother and duration of marriage in cases of legitimate births.

7. PUBLICATIONS CONTAINING BIRTH STATISTICS.

All the statistical matter in connection with the presentation of birth statistics is published either in the Annual Statistical Report on Vital Statistics or in the *New Zealand Official Year-book*.

Annual Statistical Report on Vital Statistics.

The introduction to this volume contains a comprehensive survey of the principal features of the birth statistics of the year, such as :

- Number and rate ;
- Sexes of children born ;
- Multiple births ;
- Illegitimate births ;

Average issue ;
Still-births ;
Occupations of fathers.

The tabular matter contains the information referred to previously.

New Zealand Official Year-Book.

A special section of the *Year-Book* is utilised for the presentation of birth statistics, which are primarily given as a review of births over a period of years and all matters generally relating thereto. It comprises a short commentary on various matters and is amply illustrated by numerous tables. The section covers :

Registration of births ;
Number of births and birth rates ;
Natural increase ;
Quarterly birth statistics ;
Birth statistics of urban areas ;
Sexes of children born ;
Multiple births ;
Ages of parents ;
Previous issue of parents ;
First-births ;
Illegitimacy ;
Adoptions ;
Still-births ;
Maori births.

V. STILL-BIRTHS IN NEW ZEALAND.

1. DEFINITION.

A still-born child in New Zealand is defined as one " which has issued from its mother after the expiration of the twenty-eighth week of pregnancy and which was not alive at the time of issue ".

2. PROCEDURE.

The actual procedure for the notification and registration is similar to that already described for live births, although the compulsory registration of still-births was not brought into force until 1913. It is not necessary to register the death of such child.

3. GENERAL.

Still-births are not included in the general statistics relating to births and deaths but a special record is taken of every still-birth entry. The corresponding statistical cards are kept separate, and at the end of the year, when tabulating the annual tables, tables relating to still-births only are prepared therefrom. Information is given showing :

- The relative ages of mother and father ;
- Age of mother and number of previous issue ;
- Percentage of still-births to living births according to nativity order ;
- Ages of mother in illegitimate cases ;
- Masculinity of still-born children.

VI. REGISTRATION OF DEATHS.

1. GENERAL.

Compulsory registration of deaths was instituted in New Zealand in 1855. As in the case of births, a system of non-compulsory registration has obtained since 1848. Every death must be registered within a specified period and no person may be buried without the necessary authority. The undertaker or any other person in charge of the funeral is solely responsible for registration, but, prior to 1913, the occupier of the house and every other person present at death were responsible parties.

2. PROCEDURE.

When any person dies, it is the duty of the undertaker or other person having charge of the funeral to register the death with the registrar of the district in which the death occurred, within three days after the day of death if in a city or borough or seven days in any other case.

Where the deceased person has been attended during his last illness by a registered medical practitioner, that practitioner is required to sign and deliver to the person responsible for registration a certificate stating, to the best of his knowledge and belief, the causes of death, both primary and secondary, the duration of the last illness of deceased and the date on which he last saw the deceased alive (see Form Reg.-Gen.—50, page 60). At the time of registration this certificate must be handed to the registrar, who enters the particulars in the register together with the name of the certifying medical practitioner. The registrar, immediately on registering a death, is required to furnish to the person having charge of the funeral a certificate of registration.

In the absence of any medical attention at the last illness of a deceased person, and in the case of the death of any person who is killed or drowned, or who dies suddenly, or in prison, or while detained in any mental hospital, it is the duty of the coroner to enquire into the manner of death and furnish to the registrar the particulars for the registration of the death.

[RECTO]

Not to be used by any other than a Registered Medical Practitioner.
Births and Deaths Registration Act

[Reg. Gen — 50
No. of entry in
Death Register

MEDICAL CERTIFICATE OF THE CAUSE OF DEATH.

To be given forthwith by the medical attendant to the undertaker, whose duty it is to give it with information of the death, to the Registrar of the district in which the death took place, and **TO NO OTHER PERSON.**

--

I HEREBY CERTIFY that I attended _____
during h _____ last illness; that such person's age was stated to be _____; that I last saw h _____
alive on the _____ day of _____, 19 _____; that he died* _____ on
the _____ day of _____, 19 _____ at _____
and that to the best of my knowledge and belief the cause of h _____ death was as hereunder written.

*Should the medical attendant not feel justified in taking upon himself the responsibility of certifying the fact of death he may have to use the words "as if deceased."
*The duration of each form of disease or group taken as recorded from its commencement until death occurs.

Cause of Death	DURATION OF DISEASE IN			
	Years	Calendar Months	Days	Hours
Primary _____ (i.e. first in point of time)				
Secondary _____ (i.e. second in point of time)				

(The undertaker should read the instructions on the back of this form.)

Witness my hand, this _____ day of _____, 19 _____

Signature: _____
Qualification: _____
Residence: _____

N.B.—THIS CERTIFICATE IS INTENDED SOLELY FOR THE USE OF THE REGISTRAR, to whom it should be delivered by the person giving information in lieu of the particulars required by law to be registered concerning the death. Penalty of £1 for neglect of informant to deliver this certificate. Registrar. The Registrar General cautions all persons against accepting or using this certificate for any purpose whatever except that of delivering it to the Registrar.

[VERSO]

N. B. — The undertaker having charge of the funeral is solely responsible for registration (except after inquest, when the Coroner is responsible), but may depute an agent, duly authorised in writing, to attend at the Registrar's office, inform the Registrar of the necessary particulars, and sign the Register-book.

Deaths should be registered before burial. Registration must be effected within three days of the death if in a borough, or seven days in any other case. Forms (R. G. — 28) showing particulars to be registered, may be obtained from the Registrar of Deaths for the district.

It is made a punishable offence for any person to bury, or permit to be buried, or to take part in the burial of, the body of any deceased person until there has been obtained in respect of the deceased person either :

- (a) A certificate of cause of death signed by a duly registered medical practitioner ;
- (b) A coroner's order to bury the body ;
- (c) A registrar's certificate of registration.

Every certificate by the registrar or order of the coroner must be delivered by the undertaker or other person having charge of the burial to the minister or person who is to perform any religious or funeral service.

The undertaker must also supply to the registrar a burial certificate duly signed and countersigned by the minister officiating at the burial, or by two respectable witnesses of the burial, being householders.

The law does not impose any limit of time after which a death may not be registered, as it does in the case of births.

3. PARTICULARS OBTAINABLE FROM DEATH ENTRY.

Until the year 1876, the only information provided for in the death-registration entry was as to date, place and cause of death and name, sex, age and occupation of deceased. In that year, information was required to be recorded as regards parentage, conjugal condition and issue of deceased. Particulars as to burial had also to be entered, as well as more detailed information as to the cause of death. Later, additional information concerning issue and, in the case of married men, the age of widow were added to the list. The following is a complete list of the information at present required at time of registration :

- Folio number of entry ;
- Date, month and year of death ;
- Place of death — town, etc. ;
- Name and surname of deceased ;
- Rank, profession or occupation ;
- Sex ;
- Age ;
- Cause of death ;
- Duration of last illness ;
- Medical attendant by whom certified ;
- When he last saw deceased alive ;
- Name and surname of father ;
- Name and surname of mother ;
- Maiden surname of mother ;
- Rank or profession of father ;
- When and where buried ;
- Name of minister or witnesses ;
- Religion of minister ;
- Where born ;
- How long in New Zealand ;
- If deceased was married :
 - At what age married,
 - Where married.
 - To whom married,

Age of widow if living,
Age and sex of living issue ;

Signature and description of informant ;
Signature of registrar ;
Date of registration.

4. TRANSMISSION OF DATA.

A duplicate entry of each death registered is forwarded every quarter to the Registrar-General, who maintains a Dominion Register, and it is principally from these duplicate entries that the statistics are obtained. For the purposes of compilation, the essential particulars are transferred to an individual death card by the registrars (see Form [D.—1, below) in the

C. & S.]

DEATH CARD.—MALES.

No. _____ Quarter : _____ Year 192

Regn. } _____ Prov. } _____
Dist. : } _____ Dist. : } _____

Died at _____

from _____
(Place or town of domicile.)

Date of death : ____/____/192

In case of illegitimate infants under one year mark this square.

Name : _____

Occupation _____

Age : ____ Yrs. Birthplace : _____

Length of Residence in N.Z. _____ Years.

Bachelor, Married Man, or Widower _____

Cause of Death . _____

Class No. _____ Order No. _____ Occupation Code No. _____

C and B.)

[D.—3.

Urban Area: _____ Registration District: _____

**RETURN of BIRTHS and DEATHS registered in the above District during the
Month of _____, 192**

Note.—Births and still-births must be allocated according to the place of domicile of parents, deaths, according to place of domicile, except in case of deaths by accident.

Item.	City or Principal Borough of Urban Area.	Remainder of Urban Area.	Total of Urban Area.	Outside Urban Area.
BIRTHS :—				
Males				
Females				
Total				
Illegitimate births (included in "Births")				
Still-births (not included in "Births")				
DEATHS :—				
Males:				
Under 1 year				
1 year and under 5 years				
5 years and over				
Females:				
Under 1 year				
1 year and under 5 years				
5 years and over ...				
Total				

Individual cards for each case included above are forwarded herewith.

Signature _____ Registrar.

Date _____, 192

urban areas and, in other cases, by officers of the Census and Statistics Office who visit the Registrar-General's Office quarterly for this purpose. The registrars in the urban areas forward at the end of each month a card for every death registered during that month, and from these particulars monthly statements of deaths in urban areas are prepared and published (see Form D.—3, page 63). Beyond publishing the number of deaths registered in each quarter, no statistics for monthly or quarterly periods are compiled for the Dominion as a whole.

5. TABULATION OF STATISTICS.

The whole of the tabulation work in connection with the compilation of death statistics is carried out by the Census and Statistics Office, the Registrar-General being merely concerned with the registration. In the compilation of the death statistics two separate cards are used, one for males and one for females (see Form D.—1, page 62). The particulars contained on each card are identical, but the female card is distinguishable by a heavy black margin on the left-hand side. For the tabulation of statistics of orphanhood a card is also written for every married man (see Form D.—5, page 65), the following particulars being entered :

Age, occupation and birthplace of deceased ;

Cause of death ;

Ages and sex of issue left ;

Whether widow living ;

Age of widow.

Very detailed statistics of deaths are available in New Zealand, the smallness of the number of cards handled making it possible to cover a very wide range of subjects. Numerous tables are published associating causes of death, ages, birthplaces, occupations and orphanage.

C. & S.]

ORPHANHOOD, 19

[D.-5

Quarter: _____ Regn. Dist.: _____ Entry No.: _____

RE DECEASED

AGE: _____ YEARS.	CAUSE OF DEATH: _____ _____ _____
OCCUPATION: _____	
BIRTH-PLACE: _____	

RE ISSUE.

SEX.	NUMBER OF ADULTS.	AGES OF MINORS.							NUMBER AGE NOT SPECIFIED	TOTAL ISSUE LEFT (NUMBER).
		0-4	5-9	10-14	15-19	20-24	25-29	30-34		
M.....										M. I. _____
F.....										F. I. _____
										T. I. _____

NUMBER LEFT.			YOUNGEST CHILD.	
UNDER 14.	UNDER 16.	UNDER 21.	SEX.	AGE.

RE WIDOW.

NONE.	NO INFORMATION.	AGE NOT STATED.	AGE.....	YEARS.
-------	-----------------	-----------------	----------	--------

CLASSIFICATION.

CLASS NO. _____ ORDER NO. _____ OCCUPATION CODE No: _____

6. CLASSIFICATION OF CAUSES OF DEATH.

The certification of causes of death in New Zealand by medical practitioners is considered to be very satisfactory and the proportion of undefined and undesirable terms quite reasonable. Nevertheless, every effort is made to bring about further improvements in this respect, so that the assigning of the cause of death can be accurately made. Although no direct machinery exists in the Census and Statistics Office for the querying of return in which the information given is inadequate to classify correctly the cause of death, arrangements have been made with the Registrar-General to assist in this matter by directing the local registrars to interview the medical men concerned with a request for further information. Special enquiries are made into cases of undefined septicæmia, nephritis,

etc., when the death is of women of child-bearing ages, to ascertain whether the condition was puerperal.

The tabulation of the causes of death is made according to the International List of Causes of Death. The International List was not used in New Zealand until 1908, and, as it differs very materially from that in use prior to 1908, the comparison of certain causes of death between years prior and subsequent to 1908 is impossible. Practically all the more important individual causes of death, however, remain unaffected and retain their comparative value.

As in other countries, considerable difficulty was found until recently in selecting the cause of death in cases where two or more diseases were given on the certificate. The American Bureau of the Census, however, published in 1925 a *Manual of Joint Causes of Death*, and this index has now been adopted in New Zealand.

7. PUBLICATIONS CONTAINING MORTALITY STATISTICS.

As stated previously, very complete statistics of deaths are compiled in New Zealand and published in the Annual Report on Vital Statistics and the *New Zealand Official Year-Book*.

Up to and including 1920, the mortality statistics were published in the annual volumes of statistics, but in 1921 a series of statistical reports was instituted which, besides containing the complete statistical tables, includes also a number of pages of explanatory letterpress dealing with the most important features of the year. Primarily the Annual Report is a review of the statistics for the year, while the *Year-Book* deals chiefly with the position over a period and indicates the relative trend of the statistics. More explanatory letterpress is contained in the latter publication, but the statistical tables given are necessarily of a more summarised nature. The following information is given in the Annual Report on Vital Statistics:

Text contains discussions on :

- Number of deaths and the death rate ;
- Standardisation of death rates ;
- Sexes of persons dying ;
- Ages at death ;
- Distribution of deaths ;
- Death statistics of urban areas ;
- Infantile mortality ;
- Causes of death ;
- Contributory causes ;
- Orphans and widows left ;
- Maori deaths.

Tables contain information regarding :

Male and female deaths in each provincial district by five-yearly groups of ages ;

Deaths during each month with distinction as to sex and age ;

Date of death ;

Deaths at each year of age ;

Male and female deaths during the last fifty years classified according to the following age-groups :

Under 1 month ;

1 and under	3 months
3 „ „	6 „
6 „ „	12 „

Total under 1 year ;

1 and under	2 years
2 „ „	3 „
3 „ „	4 „
4 „ „	5 „

Total under 5 years ;

5 and under	10 years
10 „ „	15 „
15 „ „	20 „
20 „ „	25 „
25 „ „	30 „
30 „ „	35 „
35 „ „	40 „
40 „ „	45 „
45 „ „	50 „
50 „ „	55 „
55 „ „	60 „
60 „ „	65 „
65 „ „	70 „
70 „ „	75 „
75 „ „	80 „
80 and over,	

Unspecified,

Total, all ages.

Number of deaths from certain principal causes and the proportion per ten thousand of population ;

Number of deaths of each sex from each individual cause of deaths ;
Deaths by sex and assigned cause in conjunction with contributory causes ;
Deaths by causes and age-groups with distinction as to sex ;
Male and female deaths by causes in each provincial district ;
Infantile mortality according to cause, age and sex. Eleven age-periods are given, viz. :

Under 1 day,
1 day and under 2 days,
2 days and under 1 week,
1 week and under 2 weeks,
2 weeks and under 3 weeks,
3 weeks and under 1 month,
1 month and under 2 months,
2 months and under 3 months,
3 months and under 6 months,
6 months and under 9 months,
9 months and under 12 months.

Deaths of males by occupation and ages ;
Birthplaces of male and female deaths by nine groups of ages ;
Deaths from tubercular diseases, distinguishing classes and sex ;
Occupations of male deaths from tubercular diseases, distributed into fifteen age-groups ;
Deaths from pulmonary tuberculosis according to age and length of residence in the Dominion ;
Deaths of males and females from cancer according to general location ;
Deaths of males and females from cancer by detailed groups of ages ;
Occupations of males deceased from cancer, by age-groups ;
Deaths from each type of cancer, location of disease and distinction as to sex and age ;
Mortality from certain causes in each hospital district ;
Mortality from certain causes in each registration district ;
Deaths — males and females separately — at various age-groups in each urban area ;
Deaths by month of registration in each of the urban areas ;
Equivalent annual death rates and infantile mortality rate in each month for urban areas ;

- Number of deaths and rate per thousand of population in each urban area ;
- Infantile mortality rate per thousand births for each of the urban areas ;
- Infantile mortality by causes in the urban areas ;
- Male and female issue left by married men and widowers, classified into each year of age of both issue and father ;
- Numbers and ages of the youngest of the issue left by married men or widowers, by ages of deceased ;
- Number of issue under 14 in each family left by married men or widowers ;
- Number of issue under 16 in each family left by married men or widowers ;
- Number of issue under 21 in each family left by married men or widowers ;
- Birthplaces and ages of fathers who died leaving issue, and number and ages of issue ;
- Causes of death and ages of fathers who died leaving issue, and number and ages of issue ;
- Occupations and ages of fathers who died leaving issue, and numbers and ages of issue left ;
- Information as to whether widows or issue (or both) were left, with numbers of issue according to age-groups ;
- Number of issue under age 16, classified according to age of widow ;
- Number and ages of widows left.

The *New Zealand Official Year-Book* contains a separate section on deaths and deals very fully with the position from a comparative viewpoint. The points discussed are :

- Numbers and rates ;
- Distribution of deaths over the year ;
- Ages at death ;
- Expectation of life ;
- Death rates of various countries ;
- Standardisation of death rates ;
- Death statistics of urban areas ;
- Orphanhood ;
- Widows left by married men ;
- Infantile mortality ;
- Causes of death ;

Tuberculosis,
Cancer,
Puerperal causes,
Deaths from violence,
Suicide ;

Contributory causes ;
Maori deaths ;
Deaths in Cook Islands ;
Deaths in Western Samoa.

The following statistics of deaths in urban areas are also published in the *Monthly Vital Statistics of Urban Areas* and the *Monthly Abstract of Statistics*:

Number of births and deaths in each urban area ;
The equivalent annual death rate per thousand of population and the infantile mortality rate per hundred births in each urban area every month ;
Monthly totals of the number of deaths from each cause in each urban area.

VII. NOTIFIABLE DISEASES.

I. GENERAL.

The Health Act, 1920, makes special provision for the control of all infectious diseases and the compulsory notification of certain specific diseases. The responsibility of notification is imposed on the medical practitioner attending the case, or, in the absence of any medical attention, it is the duty of the occupier of the premises to notify the local authority concerned. A fee of 3s. 6d. is payable for every notification sent in by medical practitioners, with the exception of those employed by the Government or any hospital board. In cases where the cause of death is any infectious disease, notice is required to be given by the undertaker or other person having charge of the funeral.

2. DISEASES COMPULSORILY NOTIFIABLE.

The system of notification of certain diseases has been in force many years and the list of notifiable diseases has undergone considerable alteration from time to time. The present list covers :

Notifiable Infectious Diseases :

Anthrax ;
Cerebro-spinal fever ;
Cholera ;
Dengue ;
Diphtheria ;
Erysipelas ;
Enteric fever ;
Leprosy ;
Plague (bubonic or pneumonic) ;
Puerperal fever ;
Scarlet fever ;
Smallpox ;
Typhus ;
Yellow fever ;
Encephalitis lethargica ;
Fulminant influenza ;
Pneumonic influenza ;
Septicæmic influenza ;
Ophthalmia neonatorum ;
Acute primary pneumonia ;
Acute poliomyelitis ;
Trachoma ;
Pulmonary tuberculosis ;
Septicæmia consequent upon abortion or miscarriage ;
Dysentery (amoebic and bacillary).

Notifiable Diseases other than Infectious :

Actinomycosis ;
Anchylostomiasis ;
Bilharziosis ;
Beriberi ;
Hydatids ;
Food poisoning ;
Chronic lead poisoning ;
Phosphorus poisoning ;
Tetanus ;
Eclampsia.

In certain circumstances, syphilis, gonorrhœa and soft chancre are declared to be infectious diseases and notifiable under the Health Act (see Form H.—I.D. 35, page 72).

[CONFIDENTIAL.]

NOTIFICATION OF VENEREAL DISEASE.

(Under the Social Hygiene Regulations, 1925.)

To the DIRECTOR-GENERAL OF HEALTH,
WELLINGTON.

PURSUANT to the provisions of the Social Hygiene Regulations, 1925, I hereby notify that _____

(Name.)

(Address.)

who has been under treatment by me for _____ SINCE _____
(Specify disease.) (insert date.)
has failed to attend for further treatment, as prescribed by me, and that such default has continued for not less than fourteen days. When last examined by me, on the _____ day of _____, 192____ the patient was still suffering from the said disease in a communicable form, and I have no reason to believe that he is receiving treatment from any other qualified person.

Dated at _____, this _____ day of _____, 192____

(Signature) _____

3. RESPONSIBILITY FOR NOTIFICATION.

The medical practitioner is primarily responsible for the notification of any of the diseases mentioned above. Every medical practitioner who becomes aware that any person professionally attended by him is suffering from a notifiable disease shall, in the case of a notifiable infectious disease, inform the occupier of the premises of the infectious nature of the disease and the precautions to be taken and shall furnish written notices on the forms provided to the local authority of the district (see Form H.—282, Part I, page 73) and to the medical officer of health (see Form H.—282, Part II, page 74). In the case of a notifiable disease which is not infectious, notice is to be given to the medical officer of health.

When any person is suffering from any notifiable infectious disease, the occupier of the premises, in the absence of any medical practitioner, is required to notify the local authority of the district of the existence of a disease suspected to be a notifiable infectious disease.

When any person on board a ship in any harbour is suffering from a notifiable infectious disease, it is the duty of the master of such ship to notify the port health officer of the disease.

In the case of syphilis, gonorrhoea, and soft chancre, it is incumbent upon a medical practitioner or a medical officer of a hospital who has been treating any person suffering from venereal disease in a communicable

[Recto]
[Yellow paper]

{H.--282

The Infectious and Notifiable Diseases Regulations.

FIRST SCHEDULE.—FORM 1.

PART I.

**Medical Attendant's Notice of Actual or Suspected Notifiable Infectious Disease,
under Section 79 of the Health Act, 1920.**

Pursuant to section 79 of the above-mentioned Act, I herewith give you
notice that* _____
exists (or is suspected to exist) as follows:—

Locality of house: † _____

Name of occupier of house _____

Name of patient _____

Age of patient: _____ Sex of patient: _____

Dated at _____ this _____ day of _____, 192

Medical Attendant.

To the Medical Officer of Health at _____

* Name of disease. † Town, street, and number of house (if any).

NOTES.

1. For information regarding notification see back page hereof.
2. If the medical attendant is of opinion that the case or cases should be removed to a hospital available for infectious diseases, he should communicate with the local Inspector or with the Medical Officer of Health.

FOLD HERE.

FOLD HERE.

[Recto]
[Blue paper]

(H.—222.)

The Infectious and Notifiable Diseases Regulations.

FIRST SCHEDULE.—FORM 1.

PART II

**Medical Attendant's Notice of Actual or Suspected Notifiable Infectious Disease,
under Section 79 of the Health Act, 1920.**

Pursuant to section 79 of the above-mentioned Act, I herewith give you
notice that* _____
exists (or is suspected to exist) as follows:—

Locality of house: † _____

Name of occupier of house: _____

Name of patient: _____

Age of patient: _____ Sex of patient: _____

Dated at _____ this _____ day of _____, 1920

Medical Attendant.

To the ‡ _____

* Name of disease. † Town, street, and number of house (if any) ‡ Here insert name of local authority in whose district disease occurs.

FOLD HERE.

FOLD HERE.

Notice under the Health Act.

**POSTAGE
FREE**

To the MEDICAL OFFICER OF HEALTH

at

Form. H. - 282. Part I. (verso).

Notice under the Health Act.

**POSTAGE
FREE**

To the

.....

.....

Form. H. - 282. Part. II (verso).

form to notify the Director-General of Health if such person fails for more than two weeks to attend for treatment unless he is known in the meantime to have placed himself under treatment by some other qualified person.

4. PROCEDURE.

Inspectors of health, appointed by the local authorities, are charged with the investigation and control of cases of infectious diseases. They shall, on becoming aware in any way of a case or suspected case of notifiable infectious disease, visit the infected premises and enquire into the causes and circumstances of the case and take such steps as are necessary or desirable for preventing the spread of infection and for removing conditions favourable to infection. The results of such investigations are to be reported to the medical officer of health (see Form H.—I.D. 7, page 77). If in their opinion the patient would be more effectively isolated in a hospital, they are required to make all arrangements for the removal of the patient to such institution. They are also responsible for the disinfection of any premises, bedding, clothing or other things which have been exposed to infection.

In the event of an outbreak of a serious epidemic of infectious disease, the medical officer of health may constitute local committees to operate within defined areas and to assist him and the local authorities in checking the epidemic and conserving public health. In such times of emergency very extensive powers are granted the medical officer of health. He may take possession of land and buildings for the purpose of providing accommodation for patients ; he may commandeer vehicles for their conveyance ; he may demand drugs, articles of food or drink, etc., for their treatment. Very wide powers are also given in the direction of controlling the movements of cases and contacts of any infectious disease, of prohibiting public gatherings, of prohibiting the admission to schools, theatres, etc., of children under the age of 16.

5. TRANSMISSION OF DATA.

All notifications received by the medical officer of health during each month are tabulated according to disease by age-groups and sex and the results forwarded to the Department of Health. A return is also sent showing the number of cases notified, a comparison with the previous month and a comparison with the corresponding month in the previous year (see Form H.—I.D. 11, page 78).

The Department of Health prepares from these returns a statement showing the incidence of notifiable diseases in the various health districts.



**DEPARTMENT OF HEALTH.
INFECTIOUS AND NOTIFIABLE DISEASES.**

INSPECTOR'S REPORT on _____ *Local Authority:* _____

Notifier: _____ *Date notified:* _____ *Date received:* _____ *Date Inspector's visit:* _____

Name and Address of Householder: _____

Name and Address of Owner or Agent: _____

Members of Household.	AGE.		Occupation, or, in the Case of Children, School attended, also Sunday School.	School-class.	DATE TEACHER NOTIFIED.		Date of First Symptoms.	Date of Last Attendance at School or Business.
	Male.	Female			Day.	Sunday.		
<i>Patient:</i>								
<i>Other members:</i>								

History and source of infection: _____

Date bacteriological examination (if any): _____ *Result:* _____

If removed, where to: _____ *Date removed:* _____ *How removed:* _____

Milk-vendor: _____ *Water-supply:* _____

Nightsoil system: _____

System and defects in drainage: _____

Defects in sanitary fittings: _____

Number of rooms: _____ *Living:* _____ *Sleeping:* _____

Condition of house and yard: _____ *Rubbish, how stored:* _____ *How removed:* _____

Precautions: _____

Disinfection of premises: If performed, when? _____ ; if not (a) forward to M.O.H. at due date duplicate of notice to school teacher, or (b) forward to M.O.H. at due date notice of disinfection performed.

Remarks and recommendations: _____

Inspector's Signature: _____

NOTIFIABLE DISEASES.

18-1. D 11.

Health District.

RETURN OF CASES notified during the Month of _____, 192

A.—Showing Notifications and Comparisons.

DISEASE	Number notified.	Comparison with previous Month		Comparison with corresponding Month in previous Year		Total Number of Cases since the Commencement of the Year.	Comparison with Number for corresponding Period in previous Year	
		Increase	Decrease	Increase	Decrease		Increase	Decrease
Scarlet fever								
Diphtheria								
Enteric fever								
Tuberculosis (pulmonary)								
Cerebro-spinal fever								
Acute poliomyelitis								
Influenza (pneumonic, &c.)								
Pneumonia								
Erysipelas								
Puerperal fever								
Septic abortion or miscarriage								
Eclampsia								
Tetanus								
Hydatids								
Lethargic encephalitis								
Trachoma								
TOTAL								

Remarks _____

Medical Officer of Health

6. PUBLICATIONS CONTAINING STATISTICS OF NOTIFIABLE DISEASES.

New Zealand Official Year-Book.

- List of notifiable diseases ;
- Regulations governing the control of syphilis, gonorrhœa, and soft chancre ;
- Total cases of each disease notified during each month ;
- Quinquennial comparison of the total cases notified for principal infectious diseases ;
- Total cases notified and deaths from diphtheria, scarlet fever and typhoid fever.

Annual Report of Department of Health.

- Total cases and deaths due to scarlet fever, diphtheria and typhoid fever, together with the rate per ten thousand of population annually for a series of years ;
- Total cases for each notifiable disease during each month ;
- Total cases and deaths for each notifiable disease in each health district ;
- Total cases of each notifiable disease, with distinction as to sex and age ;
- Total cases treated in venereal clinics.

VIII. MORBIDITY STATISTICS.

I. GENERAL.

In New Zealand certain diseases are notifiable, but beyond this the only record other than that of fatality is the information ascertainable from the returns of discharges from public hospitals. In the absence of full statistics of sickness, however, information from the two sources mentioned is of considerable value and gives a fair indication of the prevalence of the more important diseases. The hospital statistics, besides covering all public hospitals, include fever or infectious-diseases hospitals, sanatoria for consumptives and other institutions for special classes of cases.

2. COMPILATION OF STATISTICS.

From the notifications of diseases received during the year, returns are compiled by the Health Department showing the total number of cases

and the distribution throughout the year. Information is also available as to the case fatality of diphtheria, scarlet fever and typhoid fever.

The hospital statistics are compiled in the Census and Statistics Office from returns supplied quarterly by medical superintendents of public hospitals throughout the Dominion. An individual card (see Form H.—2, below) is supplied for each patient discharged or dying during the quarter, and a summary showing numbers and sex of admissions, discharges and deaths and patients remaining at end of quarter is also furnished.

The statistics are given in considerable detail, information being compiled for each class of disease according to sex, age and condition on discharge. A recent innovation is the collection of information as to the number and nature of operations performed.

[Recto]

[Verso]

C. & S. (H.—2)

Hospital Return—192

A card to be furnished for each patient discharged or dying during the quarter, whether admitted during the same quarter or during a previous quarter.

Name of Hospital: _____

Name of patient: _____

Serial No. on A. and D. book: _____ Sex: M F
(Mark square applicable.)

Age: _____ Birthplace (Country): _____

Occupation: _____ / /
(Leave blank for Classification Numbers.)

Date of admission: _____ 192

Date of discharge or death: _____ 192

Period in hospital: _____ days

OBSERVATIONS.

(To be filled in by Medical Superintendent.)

Diagnosis for which treated: _____
(Leave blank for Classification Numbers.)

Operation: _____
(State in definite terms wherever possible.)

Result of operation: _____

Complications (in order of occurrence): _____

Condition on leaving hospital: (Mark square applicable.)

Recovered.	Relieved.	Unrelieved.	Died.
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(See back.)

Additional Details re Cancer.

In cancer cases it is requested that the following additional details be filled in:—

State pathological type (e.g., sarcoma) or carcinoma, etc.: _____

Site of primary invasion: _____

Duration of disease prior to admission: _____

State whether—

(a) Completely removed: _____

(b) Partially removed: _____

(c) Inoperable: _____

(d) If inoperable state—

(i) Whether X rays or radium used: _____

(ii) The result of their use: _____

Laboratory report: _____

VENEREAL DISEASES.

(To be filled in for every discharge-card.)

1. Is the patient suffering from, or does he present any evidence of—

(a) Recent syphilitic infection? _____

(b) Recent gonorrhoeal infection? _____

2. Is the patient suffering from any affection due to, or does he present any evidence of—

(a) Distant syphilitic infection? _____

(b) Distant gonorrhoeal infection? _____

3. In the case of syphilis please state whether—

(a) Acquired: _____

(b) Congenital: _____

It is particularly requested that only the surgeon or physician in charge of the case fill in the above, and that the questions re venereal disease be answered merely "Yes" or "No."

3. PARTICULARS SUPPLIED.

The following particulars are contained on the individual patients' cards :

Name of hospital ;
Name of patient ;
Sex, age and occupation ;
Period in hospital ;
Disease for which treated ;
Operation ;
Result of operation ;
Condition on leaving hospital :
Recovered,
Relieved,
Unrelieved,
Died.

Two questionnaires are attached to the cards requesting additional details for cancer and venereal disease. The information required is as follows :

Cancer :

State pathological type ;
Site of primary invasion ;
Duration of disease prior to admission.
State whether :
 Completely removed,
 Partially removed,
 Inoperable.
If inoperable, state :
 Whether X-rays or radium used,
 The result of their use.
Laboratory report.

Venereal diseases.

To be completed in all cases where the patient was found to be suffering from or showing evidence of recent or distant syphilitic or gonorrhœal infection, irrespective of whether the disease for which the patient was treated was of venereal origin or not.

1. Is the patient suffering from or does he present any evidence of :

- (a) Recent syphilitic infection?
- (b) Recent gonorrhœal infection?

2. Is the patient suffering from any infection due to, or does he present any evidence of :
 - (a) Distant syphilitic infection?
 - (b) Distant gonorrhœal infection?
3. In the case of syphilis, please state whether :
 - (a) Acquired,
 - (b) Congenital.

It is particularly requested that only the surgeon or physician in charge of the case fill in the above, and that the questions be answered "Yes" or "No". This relates to both questionnaires.

4. PUBLICATIONS CONTAINING MORBIDITY STATISTICS.

New Zealand Official Year-Book.

A comprehensive summary of the salient features of the course of morbidity during the year, with comparisons with previous years, is contained in this publication. The subjects covered are :

Notifiable diseases ;
Social hygiene regulations ;
Public hospitals :

Admissions and discharges,
Sexes of patients,
Ages of patients,
Diseases treated,
Operations.

Annual Statistical Report on Vital Statistics.

The text contains informative and explanatory letterpress on the public hospital statistics for the year. A survey of the principal diseases is included, together with a list of the principal operations performed. The tabular information contained in this report is as follows :

Number of patients discharged from or dying in public hospitals, with disease for which treated and distinction as to sex, condition on discharge and operations performed.

Number of patients discharged from or dying in public hospitals according to sex, age and disease for which treated.

Cancer cases in public hospitals classified according to sex, location of disease, condition on discharge and the period the patient was in hospital.

Age and sex of patients in public hospitals shown to be suffering from or to present evidence of syphilitic or gonorrhoeal infection.

Cancer cases in public hospitals showing location of disease and condition on discharge according to sex and age.

Sex and age of patients discharged from or dying in the various hospitals.

Admissions and discharges in the various hospitals with distinction as to sex.

IX. BIBLIOGRAPHY.

The following list has been appended with the idea of giving an indication of the official publications in which information is contained on the subjects touched upon by the handbook.

PUBLICATIONS OF THE CENSUS AND STATISTICS OFFICE.

New Zealand Official Year-Book.

Local Authorities Handbook of New Zealand.

Annual Statistical Reports on :

Population and Buildings ;

Migration ;

Vital Statistics.

Monthly Abstract of Statistics.

Pocket Compendium of Statistics.

Volumes of Census Results :

Geographical Distribution ;

Dependencies ;

Ages ;

Conjugal Condition ;

Orphan Children and Dependent Children ;

Race Aliens ;

Native-born and Foreign-born ;

Religious Professions ;

Industrial and Occupational Distribution ;

Unemployment from Sickness and Other Causes ;

Incomes ;

Families and Households ;

Dwellings.

General Report.

Monthly Vital Statistics of Urban Areas.

Quarterly Estimation of the Population.

OTHER OFFICIAL PUBLICATIONS.

Annual Report of the Department of Health.

Annual Report on Mental Hospitals.
