NE

NEW ZEALAND—

A HEALTHY COUNTRY.

STRIKING FACTS AND RECORDS.

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NEW ZEALAND—A HEALTHY COUNTRY.

STRIKING FACTS AND RECORDS.

SURVEY OF ACTIVITIES OF
DEPARTMENT OF HEALTH.

HEALTHY NEW ZEALAND.

THE following articles, reprinted by courtesy of the *Evening Post*, Wellington, attracted considerable attention when published. As they deal with the state of the public health in New Zealand, and in particular with the evolution of the Department of Health and its work, it was decided to publish them in booklet form for the information of the general public and those interested in health matters.

Department of Health,
Wellington, September, 1925.

ARTICLES.

A RECORD YEAR:

NEW ZEALAND'S ENVIABLE POSITION.

Lowest Death-rate in any Country:

Some remarkable Figures.

SURVEY OF HEALTH WORK.

The year 1924 was a wonderful year in New Zealand so far as vital statistics are concerned. A crude (or actual) death-rate of 8·29 per 1,000 of mean population; an infant-mortality rate of 46·2 per 1,000 births; and a death-rate from tuberculosis of 5·67 per 10,000 of mean population, all constitute record figures.

IT is important in the public interest periodically to review the activities of a Department like the Health Department in an effort to determine if its progress has been satisfactory and if that progress is still tending in the right direction. In this way, if perchance it is straying from the straight and narrow path of sanitary righteousness, it may retrace its steps.

Certain standards which may be readily and conveniently applied are available for the purpose of determining the state of what is broadly termed the public health. These standards are the general death-rate, the infantile-mortality rate, the death-rate from tuberculosis and from other infectious diseases, &c.

STRIKING RECORDS.

The crude (or actual) death-rate for 1924 was 8·29 per 1,000 of mean population. This is the lowest rate so far recorded in New Zealand, and probably the lowest ever recorded in any country.

The infantile-mortality rate for New Zealand for the twelve months was 40·2 per 1,000 births, which is again a record for this or any other country.

The death-rate from tuberculosis has shown a downward trend for many years, and for 1924 was only 5·67 per 10,000 of mean population—the lowest rate so far recorded in the Dominion. The excellence of this figure is shown by the fact that in a comparative table in the Official Year-book, 1925, New Zealand, with a rate of 6·2 in 1923, was third best in a list of twenty-three countries, being excelled by South Africa with a rate of 4·6, and Australia with a rate of 6·1.

The death-rates from other infectious diseases for the year 1924 are, on the whole, lower than in the preceding year.

COMPARISON WITH OTHER COUNTRIES.

The following extract from the *Nation's Health*, 15th December, 1924, serves to show how New Zealand, in 1923, compared with other countries in respect of vital statistics, and the incidence of infectious diseases in particular :—

" *Encouraging Vital Statistics from New Zealand.*—The report of the Director-General of Health of New Zealand for 1923–24 is, as usual, a source of inspiration to the public-health workers of all countries. The general death-rate was 9·03 (crude) and 11·12 (standardized) ; and the infant-mortality rate was 43·8 per 1,000 living births—both figures excellent, but not quite so good as those recorded for previous years. Among the communicable diseases, however, rates of 1·0 per 100,000 population for scarlet fever, 5·3 for diphtheria, 1·8 for typhoid fever, and 62·1 for tuberculosis represent low points which are full of encouraging significance."

It will be seen that New Zealand is an exceptionally fortunate country, and that a standard of health has been achieved which is probably not to be met with in any other part of the world. Here, of course, we possess certain natural advantages which must be given due weight—a particularly healthy climate, sound stock, a relatively cheap and plentiful food-supply, and lack (to a certain extent) of those factory conditions which are so marked features of older countries. In almost every particular health standards in New Zealand compare more than favourably with those of other countries. There are certain aspects of public-health administration in which there is room for improvement. To these for some time past the Health Department has been giving serious consideration, and to these in subsequent articles attention will be drawn.

DEPARTMENT OF HEALTH.

The Department of Health comprises—(*a.*) A Division of Public Hygiene, which is concerned with the administration of the Health Act and the Sale of Food and Drugs Act ; (*b.*) a Division of Hospitals, which is concerned with the administration of the Hospitals and Charitable Institutions Act, and all this implies in the way of inspection of hospitals and supervision of agencies throughout the Dominion for providing treatment and relief ; (*c.*) a Division of Nursing, whose function is to supervise the training of nurses and midwives, and register them when trained ; (*d.*) a Division of School Hygiene, which deals with the physical examination of school-children and the sanitary conditions of schools ; (*e.*) a Division of Dental Hygiene, which attends to the teeth of the children both of school and pre-school age ; (*f.*) a Division of Child Welfare, which co-ordinates the great work of the Plunket Society with the departmental activities ; (*g.*) a Division of Maori Hygiene, whose direct concern is the welfare of the Maori race.

It will be seen from this that the Department enters closely into the lives of the public in their homes and in their places of employment. At all times much quiet unobtrusive work goes

on in the direction of improving the sanitary surroundings of dwellings, supervising food and water supplies, inspecting school-children and drawing the attention of their parents to defects requiring treatment, attending to the teeth of school-children, &c. In addition to this, if an individual is so unfortunate as to fall sick and requires hospital treatment, he enters an institution inspected by the Department, and is attended by nurses for whose training the Department has to assume ultimate responsibility. If the illness is of an infectious nature the Department is even more directly concerned, and exercises a very close supervision over all measures for safeguarding the public.

IDEAL OF PERFECT HEALTH.

The aim of the Department, in a few words, is to lengthen the period of life and to make it happier and more effective. For this purpose the Department endeavours to remove all influences which may exercise a harmful effect over the individual from birth (or, rather, since it has initiated a scheme for ante-natal work, from before birth) until the physiological limit of old age; and, if the individual fall ill, supervises or even provides the agencies which will make him better. This perhaps sounds ambitious, but the fault, if fault there be, is on the right side. Certainly at the moment it can be said that the New-Zealander is nearer attainment to this ideal of perfect health than the inhabitant of any other part of the world.

EXTENDING HUMAN LIFE.

In the *Nation's Health* of 15th April, 1923, there is an interesting article by the statistician for the Metropolitan Life Insurance Company, New York, under the title of "The Possibility of Extending Human Life." In this article appears a table showing the expectation of life at birth in various countries in recent years. The figures, which are most interesting, are as follows :—

Country.	Year.	Expectation.	
		Males.	Females.
New Zealand	1906–1910	59·17	61·76
Australia	1901–1910	55·20	58·84
Denmark	1906–1910	54·90	57·90
Norway	1901–1910	54·84	57·72
Sweden	1901–1910	54·53	56·98
Holland	1900–1909	51·00	53·40
United States	1901–1910	49·32	52·54
Switzerland	1901–1910	49·25	52·15
England	1901–1910	48·53	52·38
France	1898–1903	45·74	49·13
Germany	1901–1910	44·82	48·33
Italy	1901–1910	44·24	44·83
Japan	1898–1903	43·97	44·86
India	1901–1910	22·59	23·31

WORK OF THE YEAR.

During the year just concluded the usual steady routine work has been done by the Health Department. In addition, the Department has concentrated on certain activities, and even branched out in new directions where this seemed necessary.

As the public are already aware, New Zealand does not occupy a very enviable position in regard to its maternal-mortality record. A special campaign was embarked upon for removing this blot, and it is hoped in a further article to outline what has been done, and is now being done, with the view of trying to achieve as good a record in this Department as has been attained in other branches of the public health.

The school dental scheme has been extended by the location in out-stations of another twelve fully trained dental nurses. Twenty-three additional nurses were appointed to commence their course of instruction. At the moment there are thirty-three nurses in out-stations engaged in active work, and fifty-six at the dental clinic, Wellington, taking the course of training prescribed by the Department.

Further regulations have been issued relating to the standard of foods and drugs and the sanitary conditions of food premises. These have a very important part in safeguarding the wholesomeness of the food sold to the public.

An outline of the research work being carried out under the direction of the Department in connection with goitre, infantile paralysis, rheumatoid arthritis, and cancer was given in an article recently published in the *Post*.

Public-health education plays a part, and an important part, in the activities of any health organization. During the year the Department published and issued numerous pamphlets and leaflets dealing with different phases of public health. In addition, officers in Wellington delivered a course of lectures in sanitary science and hygiene to the Workers' Educational Association, while other lectures were delivered from time to time in various parts of the Dominion. Commissions and Boards of Inquiry also took up a considerable amount of time of departmental officers. Two of the larger inquiries in which the Department was interested were an inquiry into the Wellington milk-supply, and the Mental Defectives Commission.

HOSPITAL BOARDS AND CITY COUNCILS.

So far as is known, New Zealand was the first country in which a definite Minister of Health was established. New Zealand at the moment is the only country in which the health and hospital activities are all grouped in the one Department. In this way there has been effected a co-ordination in health matters which is unique, and which has enabled rapid progress to be made.

The present system of administration, however, has certain drawbacks. The New Zealand Department of Health employs and directly controls all Medical Officers of Health and a large

number of Sanitary Inspectors. Although this system has had the merit of producing rapid and uniform results, it is not without the risks which come from overcentralization. These risks are recognized, and the policy of the Departments is to decentralize as far as possible and to encourage and foster the appropriate authorities (Hospital Boards in hospital matters, and civic authorities in sanitary matters) to stand on their own feet and assume their full responsibilities.

CO-OPERATION OF CITIES WANTED.

Pursuant to this policy, the Department some time ago strengthened its district officers, and so relieved headquarters of some routine duties. It also handed over to the Boards in the four centres the clinics for the treatment of venereal diseases.

It now proposes, as opportunity offers, to hand over the control of such bacteriological laboratories as it still retains an interest in, and of the St. Helens Hospitals. It has also made overtures to the four main centres, suggesting that they should assume a large measure of responsibility in health matters, and for this purpose should take over and direct the work of the Medical Officer of Health. So far the Councils of these four cities have preferred to let matters remain in the present basis. It is felt, however, that some alteration as suggested would be in the best interests of both the Department and local authorities. The local authority would be able to exercise a stronger voice in health matters, and to ensure that its own special problems received appropriate attention. The Department, on the other hand, would be relieved of much routine work, and left some very necessary leisure for the major public-health problems that confront it, and for public-health education and propaganda, which is an important function of any public-health administration.

Notwithstanding New Zealand's fine climatic and other advantages, the activities of the Health Department, and the splendid achievements of this country in establishing records for the world in some important branches of public health, there are certain disquieting features to which in subsequent articles attention will be drawn.

PUBLIC HEALTH:

PREVENTIVE MEDICINE.

Some Interesting Facts.

"Sanitary Intelligence of a Community."

> "Typhoid fever . . is everywhere an index of the sanitary intelligence of a community." In these words the late Sir William Osler, probably the most outstanding figure in medicine of the present century, refers to the well-known fact that the prevalence of typhoid fever in any community depends upon the purity of the water and food supplies, the mode of disposal of drainage and refuse, and generally the standard of hygiene and sanitation in vogue in such community.

IT is of considerable interest to review very briefly the experience of New Zealand in regard to typhoid fever in an attempt to measure our progress in sanitary matters. For our purpose it is not necessary to go back further than twenty-five years to show the enormous improvements which have been effected in New Zealand in this respect.

The average annual death-rate from typhoid fever for the quinquennium 1896–1900 was 1·39 per 10,000 of mean population, whereas for the quinquennium 1920–24 it was only 0·28 per 10,000. Five-yearly periods have been chosen for the comparison, because typhoid fever is liable to epidemic fluctuations, and figures based upon the experience of one year only may prove wholly erroneous and misleading.

Diarrhœal disease, again, in their mode of origin and spread, resemble typhoid fever closely. It is therefore only to be expected that the death-rate from this cause will take roughly a parallel course. This is what we find, the actual position being as follows: For the quinquennium 1896–1900 the death-rate from diarrhœal diseases was 5·52, while in 1920–24 it had declined to 1·45.

These facts may be expressed in another way more easy of comprehension. If the same incidence and severity of these diseases as prevailed in the period 1896–1900 had been experienced in 1920–24 there would have been 859 deaths from typhoid fever instead of 173 as was the case, and 3,445 deaths from diarrhœal diseases instead of 905 which actually occurred. In other words, a mere quarter-century's progress in public health has resulted in a saving of 3,226 lives in the last five years.

HELPFUL HEALTH AGENCIES.

The facts and figures quoted show unmistakably that there has been in the last quarter of a century an awakening and strengthening of what Sir William Osler refers to as the sanitary intelligence of the community.

A great deal of credit for this happy state of affairs is due to the agencies, official and voluntary, which have been in operation during this period for the promotion of what may be broadly termed the public health. These agencies comprise the Department of Health, the sanitary departments of local authorities, and certain organizations—particularly the Plunket Society, which can justly claim the bulk of the credit for the prevention of deaths of infants from gastritis, which are included in the figures quoted above.

This reduction in deaths from the intestinal group of diseases (typhoid and diarrhœal diseases) is one of the most signal and striking triumphs of modern preventive medicine.

Reductions, but not to the same degree, can also be shown to have occurred in regard to certain other infectious diseases, notably tuberculosis and diphtheria. It is frequently claimed that infectious diseases are preventable, yet we are still far from possessing full knowledge in regard to their mode of origin and spread, and from exercising the same absolute measures of control as are available in the case of, say, typhoid fever and smallpox.

The group of respiratory infections—*e.g.*, measles, whooping-cough, influenza, pneumonia, &c., for instance—can to a certain extent be reduced in incidence and severity by strict application of the laws of hygiene, although with the present knowledge we are still far from eradicating them in their entirety. Still, we never know when a new discovery may throw a flood of light upon what has been wrapt in obscurity, and enable more definite progress to be made in combating a disease.

DIPHTHERIA IMMUNIZATION.

Taking diphtheria as a case in point, we find that the active immunization with toxin-anti-toxin mixtures which has come into vogue in the last few years constitutes a method of prophylaxis which has been adopted with marked success in many parts of the world. This method has been made available in New Zealand, but has not so far been adopted wholeheartedly by the public. There is here a lack of sanitary intelligence. In the last five years there have been an average of eighty deaths per annum from diphtheria. This constitutes an avoidable mortality. As a preliminary step, however, it is necessary to educate the public as to its merits and advantages. This is a duty which comes within the scope of the Department of Health, and is one indeed which that Department has already undertaken.

PROGRESSIVE LEGISLATION.

The advances made in public-health administration can be traced in some degree by the legislation placed on the statute-book. In 1900 an improved consolidated measure became law; and, following that legislation, there were passed the Sale of Food and Drugs Act, Acts for the registration of medical practitioners, dentists, chemists, nurses, midwives, the Quackery Prevention Act, Poisons Act, Social Hygiene Act, Plumbers' Registration Act, &c. In his presidential address to the New Zealand Branch of the British Medical Association in 1922, Dr. W. Young referred to these enactments as "a splendid record and striking evidence of progressive legislation." Following the passing of the Health Act, 1920, the Board of Health was instituted, and the Dental Hygiene and Child Welfare Departments were established.

Regulations have been made under the Act of 1920 designed to assist in combating infectious diseases. Under these regulations the duties of medical practitioners, inspectors, and undertakers are clearly defined in regard to notification, 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. For the protection of workers, specified occupational diseases are notifiable, and regulations are being gazetted for the prevention of lead-poisoning. The recently gazetted regulations in regard to venereal diseases should considerably strengthen the hands of the medical profession and Health Department in dealing with their control and treatment. To assist in lessening unsatisfactory housing conditions, a set of model building by-laws has been issued for the guidance of local authorities. The enforcement of the regulations in regard to drainage and plumbing is recognized as having been an important factor in creating the relatively high standard of sanitation which has no doubt been an element in bringing about the low incidence of diseases, such as enteric fever. It is gratifying to be able to add that most competent medical authorities from Great Britain, America, and Australia have borne testimony to the excellence of the New Zealand hospital and health administration, and have publicly expressed their views to this effect in the medical journals published in those countries.

MATERNAL WELFARE:

POSITION IN NEW ZEALAND.

Review of Twelve Months' Progress.

What Health Department is doing.

LAST year the Health Department entered upon a campaign for the promotion of maternal welfare. A system of ante-natal care has been established, and is being gradually extended. An effort is to be made to raise the standard of midwifery practice. There has been a slight decrease in the maternal-mortality rate during the past year compared with the previous year. As time advances, the measures instituted for maternal welfare will, it is confidently anticipated, steadily approach the ideal aimed at of safe maternity.

The relatively unfavourable position of New Zealand in regard to maternal mortality was set out in the report of the Department of Health laid before Parliament last year. Before reviewing the work done by the maternal-welfare branch of the Health Department it may be well to recall the position as stated a year ago. That report stated :—

"While the vital statistics of New Zealand generally compare more than favourably with those of other countries, in certain respects the Dominion does not occupy a particularly sound position, and, indeed, seems to be lagging behind. For some time it has been known, to our shame, that despite many advantages—climatic, social, and economic—the Dominion labours under the stigma of a comparatively high maternal-mortality rate. In proportion to its population, more women die as a result of childbirth in this country than in many other countries which have not the advantages that we possess." Then followed a table giving the maternal-mortality rates per 1,000 in various countries, namely: Denmark, 2·0; Netherlands, 2·3; Sweden, 2·5; Italy, 3·0; Norway, 3·0; Japan, 3·6; England and Wales, 3·8; Union of South Africa, 3·9; Australia, 4·7; Germany, 4·9; New Zealand (1923), 5·1; France, 5·7; Scotland, 6·2; United States, birth registration area, 6·8; Belgium, 7·2; Chile, 7·5.

SUPERVISION OF PRIVATE HOSPITALS.

Early in last year the Department of Health realized that there was not sufficient supervision in regard to private hospitals and maternity welfare generally throughout the Dominion, and entered upon a campaign for the promotion of maternal welfare.

As a first step in this, it added to its staff of Medical Officers and Nurse Inspectors. It was particularly fortunate in being able to obtain the services of Dr. H. Jellett, now of Christchurch, but formerly Master of the Rotunda Hospital, Dublin, and author of what are perhaps the best-known text-books in obstetrics for medical students and nurses. Dr. Jellett was appointed Consulting Obstetrician to the Department, and as such has been called upon to assist in the revision of the methods of training of maternity nurses and midwives in the Dominion, and to suggest improvements in the actual practice of midwifery in the maternity hospitals and various training-schools. The Department also appointed, as Inspector of Private Hospitals, Dr. Paget, a practitioner of many years' experience of midwifery and private-hospital management; and as ante-natal clinic officer, Dr. Elaine Gurr, who had just returned to the Dominion after a course of instruction in this branch of medicine in various British hospitals specializing in this work.

Private-hospital inspection has been extensively carried out, and in these inspections the Department has aimed at advising and assisting the licensees of these institutions in their at times difficult and responsible task.

REGULATIONS DRASTICALLY REVISED.

Next the Private Hospitals and Midwives Regulations were drastically reviewed and revised, with the view particularly of eliminating the risks of puerperal sepsis in childbirth. For the purpose of ensuring prompt notification and isolation of even suspected cases, it was provided in these that the licensee or manager of any private maternity hospital must forthwith notify the Medical Officer of Health, in a prescribed form, of any case with a temperature of 100° Fahr. or over during any three days of the puerperium. The form of the register was also amended so as to ensure that the fullest information in regard to patients under treatment in the institution will at all times be available to the inspecting officers of the Department. Other matters which were dealt with in these regulations were the requirements in regard to the number of nurses and other staff to be employed; the aseptic technique to be observed by those in attendance upon the patient during childbirth and lying-in period, to prevent as far as possible the infection of the patient, and the methods of disinfection of room, equipment, and person to be carried out if perchance infection should occur.

RAISING STANDARD OF MIDWIFERY PRACTICE.

The Department is striving to raise the standard of midwifery practice in New Zealand. Its views are embodied in a Bill—the Nurses and Midwives Registration Bill—which is at present before Parliament. This is regarded as a very necessary and essential step in the campaign for the promotion of maternal welfare.

ANTE-NATAL CARE.

A recent careful inquiry into maternal mortality in England and Wales made for the British Ministry of Health is of interest. The maternal-mortality rate in England and Wales is lower than that in New Zealand, but their situation, nevertheless, parallels our own. Although there has been a remarkable decline in infant and child mortality in England and Wales during the last twenty years, the death-rate among women in childbirth has remained practically stationary. In an introduction to the report, Sir George Newman, the Chief Medical Officer, points out that "the one pressing and all-important requirement" without which "no sound progress can be made in the reduction of maternal mortality" is ante-natal care.

Ante-natal care has not been neglected in New Zealand, and it is now interesting to refer briefly to what has been done in this direction.

Ante-natal clinics, which are conducted on similar lines to those in Great Britain, have been established at the State maternity hospitals, at other maternity hospitals, and at the Plunket Society rooms in the Wellington and Christchurch districts. The nurses have been specially trained to conduct these clinics, where women can get advice on ante-natal care free of cost. The information gained from these clinics is transferred to the medical man in charge of the case; and with the co-operation of the individual members of the profession in this work there is no doubt that a great improvement will be made in the condition of women prior to and at the time of labour.

The organization established by the Department for ante-natal care has apparently met a long-felt want. Clinics have been established in the Wellington district at the Plunket Society rooms in Wellington, Petone, and Lower Hutt, the Salvation Army Maternity Hospital, the Alexandra Home, and the St. Helens Hospital. During the last three months five clinics have been organized in Christchurch in connection with the Plunket Society rooms, Christchurch South, New Brighton, the Essex Home, Salvation Army Maternity Hospital, and St. Helens Hospital. During the last three months no fewer than 1,081 visits were recorded at the clinics in these two centres.

The Department hopes to push on with the organization of clinics in Auckland and Dunedin in the immediate future. The aim is to equip all midwives and maternity nurses with a sound knowledge of ante-natal conditions, so as to be able to act as an efficient assistant to the medical practitioner in the advice of the expectant mother as to how she may best safeguard the welfare of herself and her unborn child; and with the increased number of nurses in the country to give this advice there will be less inducement to the expectant mother to seek the advice of well-meaning but possibly ill-informed people. Pregnancy and labour are, after all, natural physiological processes, and it

is the aim of the ante-natal welfare officers to make it so, and to avoid the many risks to which the expectant mother has been exposed through her want of knowledge.

The medical profession has for many years recognized the necessity of systematic ante-natal supervision of the expectant mother throughout pregnancy, but so far has had great difficulty in impressing her with this necessity. It was confidently expected that the establishment of these free ante-natal clinics, conducted by maternity nurses specially trained in this work, would be a most valuable assistance to the medical practitioner; and in those places where the Health Department has already established ante-natal clinics the anticipation has been abundantly fulfilled, which is proved by the appreciation shown by the branches of the British Medical Association, both in Wellington and Christchurch, and by the growing popularity of the clinics. "Above all, there is need for an enlightened public opinion which shall afford the necessary support to action," states Sir George Newman, Chief British Medical Officer of Health. It appears that already the free ante-natal clinics established by the Health Department has made a good start in creating this enlightened public opinion, inasmuch as there is a demand from many women societies for the assistance of the Medical Officer of the Department in charge of this work to start fresh clinics. In fact, so much enthusiasm has been displayed by various women's welfare societies that not only is it difficult to meet the demands, but it will require sound organization to prevent waste of energy due to overlapping of the activities of these different societies who are so earnestly taking up this work.

MATERNITY WARDS.

The Department has encouraged Hospital Boards to provide maternity wards in connection with the public-hospital system of this country, particularly in outlying districts where private enterprise does not find it profitable to embark upon this venture. At the present moment, out of forty-seven Hospital Boards, no fewer than twenty-four have maternity hospitals or wards in conjunction with their main hospitals. Of these Boards, two have two maternity hospitals, two have three maternity hospitals, one has four, and one has six. This makes a total of thirty-eight wards or hospitals under the control of Hospital Boards, with a total capacity of 232 beds. In addition, there are seven State (St. Helens) Maternity Hospitals, with a capacity of 124 beds; while five additional institutions are in course of erection by Hospital Boards. The public maternity hospitals are really a marked feature of New Zealand maternal welfare, are becoming more so, and the Department is encouraging the erection of these institutions.

SLIGHT REDUCTION IN MATERNAL MORTALITY.

The maternal-mortality rate for the past year was 5 per 1,000 births. That is a comparatively negligible reduction

in the rate of the preceding year. This was not unexpected, as the measures described above have not yet had time to exert any appreciable influence ; and such far-reaching changes as have been necessary will take some little time to effect marked results.

A point of considerable interest in connection with last year's vital statistics is that the first-month mortality of infants shows for the first time a marked drop. For many years it has stood round about 29 per 1,000 births, but for 1924 it had dropped to 24 per 1,000 births. This suggestive and gratifying decline may perhaps fairly be attributed to the measures outlined above, for it is generally acknowledged that the interests of the mother and the new-born babe are inseparable.

The whole community was deeply stirred by the publicity given to this matter last year, and the Health Department, the medical profession, and the midwives of the Dominion have been working with the utmost harmony and with a spirit of co-operation to remove a reproach against what is otherwise generally recognized to be a unique record of public health.

THE SCHOOL CHILD.

HELP OF PREVENTIVE MEDICINE.

Aim of Health Department.

What is being done in New Zealand.

It cannot, I think, be doubted that the irreducible minimum which will yield the results that the nation requires is as follows :—

(1.) That every school child shall periodically come under direct medical and dental supervision, and if found defective shall be " followed up " :
(2.) That every school child found ill-nourished shall be properly nourished, and every child found verminous shall be cleansed :
(3.) That for every sick, diseased, or defective child, skilled medical treatment shall be made available :
(4.) That every child shall be educated in a well-ventilated schoolroom or classroom, or in some form of open-air schoolroom or classroom :
(5.) That every child shall have, daily, organized physical exercise of appropriate character :
(6.) That no child of school age shall be employed for profit except under approved conditions :
(7.) That the school environment and the means of education shall be such as can in no case exert unfavourable or injurious influences upon the health, growth, and development of the child.

These are simple propositions, but together they constitute a minimum standard of the physical claim of the individual child—of the child of the poor equally with the child of the rich—towards which the more enlightened authorities are year by year making substantial progress.

THE above is the irreducible minimum of medical inspection of schools as set out by Sir George Newman, formerly Chief Medical Officer of the Board of Education, Great Britain, and now Chief Medical Officer of the British Ministry of Health ; and therefore probably able to speak with most authority with regard to this most important branch of preventive medicine. With

this in mind it is well to turn to New Zealand and see what actually has been done here, what is now being done, and what it is hoped to achieve. It may first be stated that the medical inspection of school-children in England was put upon a firm basis by the adoption of the Education Act, 1907, which, as has been said, marked the beginning of a new era in regard to the health of the nation.

START OF THE WORK.

One of the earliest references to this subject so far as the Dominion is concerned is found in a book with the title "Medical Examination of Schools and Scholars," edited by T. N. Kelynack, M.D., published in England in 1910. This book presents the experience and views in a concise and convenient form of no less than thirty-six different contributors. Included in these is the name of the late Dr. J. Malcolm Mason, M.D., Consulting Medical Officer of the Dominion of New Zealand. Dr. Mason refers to certain proposals which had been made for a systematic inspection of State-school scholars, but which at the time of writing had not been put into effect.

The only regular examinations that were at that time made of school-children in New Zealand were in respect of scholars attending such colleges as Wanganui and Wellington, and the Girls' High School, Dunedin.

HEALTHY NEW ZEALAND CHILDREN.

The data supplied, although small, offered some interesting points. It showed that New-Zealanders after fourteen years of age were taller, heavier, and had a greater chest-measurement than English pupils at the same ages. It was also stated that in height and weight the New Zealand girl was considerably above the standard laid down by the Anthropometric Society.

The writer went on to point out the benefits that would accrue from a medical inspection of school-children with respect to their health and physical condition, and also referred to the fact that these observations would be of value in assessing the influence of the better economic conditions as obtained in such new countries as New Zealand and Australia.

PROGRESS OF THE SYSTEM.

A year subsequent to the publication of this book, Dr. Valintine opened a discussion on school medical inspection at a Hospital Conference in New Zealand. He outlined the details of a very complete scheme for medical inspection of school-children. Thereafter matters moved rapidly, and in 1912 three Medical Inspectors of Schools were appointed. From this as a commencement the staff has been augmented, until to-day there are undertaking this very important branch of work a Director, twelve School Medical Officers, and thirty-one nurses. During the year 1913, 333 primary schools were visited, and

12,357 children medically examined. Of these, 7,661 were pupils in Standard II, taken at the routine examination, and 4,696 were special cases thought by the teachers to be suffering from some defects.

Let us now contrast this with the figures for last year. In 1924 we find that 1,156 schools were inspected, and complete medical examination of 55,021 children was carried out, while an additional 60,620 children were examined for the more important defects.

The aim of the service is to examine each child three times during school life. The first routine examination is held when the child enters school, the second when he is in Standard II, and the third when in Standard VI, prior to leaving.

NECESSITY FOR INSPECTION.

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 civilization, 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 is 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. It is the aim of the service to secure the interest and co-operation of the parents, as it is realized that only in this way can the work be made effective. In pursuit of this aim, parents are invited to be present, and are welcomed at the examination of the child.

HEALTH CAMPS.

Apart from the routine duties mentioned above, the School Medical Service, there are other important aspects to which some passing reference may be made.

For several years health camps have been held at Turakina for children in the Wanganui district, and last year a camp was held at Hayward's, near Upper Hutt. It has been demonstrated in these camps that very much good has been done to the health of the children by the following of simple health rules. Somewhat allied to the health camps is the arrangement throughout New Zealand for delicate children or children convalescent from disease to go to the various convalescent homes, such as the Macarthy Home at Belmont.

Another special function of the Department is to work in co-operation with the Welfare Branch of the Education Department in the supervision of neglected or ill-treated children. The School Medical Service is also co-operating with the Education Department in the examination of mentally backward and feeble-minded children, with a view to arrange for their suitable education, whether at a special class in the town or at an institution. The blind and the deaf also come under the special purview of these officers of the Department.

GOITRE PREVENTION.

The goitre-prevention work is a feature of the activities of the School Medical Branch, for which they deserve considerable credit. It was realized some years ago that goitre was unduly prevalent in certain parts of New Zealand, and to the School Medical Officers was entrusted the duty of carrying out a survey throughout New Zealand to show the distribution of the disease and of initiating the proper measures to prevent it. Goitre, as is probably well known, is due to a lack of iodine in water or food, and the School Medical Service has undertaken the administration of iodine in suitable small dosage in districts where this course of action seems advisable. The results so far are most encouraging, and it is hoped that in this manner marked benefit will accrue to the present and future citizens of New Zealand.

INOCULATION FOR DIPHTHERIA PREVENTION.

The control of infectious diseases in schools is also a matter for which the School Medical Officer has to assume responsibility. This entails much routine work.

A special campaign has also been embarked upon during the last two or three years with the view of eradicating diphtheria, or at least of very much lessening the incidence of this disease. The inoculation of toxin-anti-toxin mixtures has been shown to confer practically complete immunity against diphtheria. The School Medical Service is spreading information in regard to this method of prophylaxis, and is carrying out the actual duties of immunization where a local demand for it has been expressed.

SCHOOL-BUILDINGS.

It is also a duty of School Medical Officers to report upon the hygienic conditions of school-buildings to ensure that the environment of the child in regard to sunshine, fresh air, cleanliness, &c., is satisfactory. Closely allied to the work of the School Medical Branch is the work of the Dental Division of the Department, and it is hoped to give a brief account of this in a subsequent article. It is necessary for an efficient School Medical Service that there be a close liaison between the School Medical Officer, the Dental Officer, the Education Department, and the teacher, as is actually the case.

PURE FOOD AND PUBLIC WELFARE.

Forms of Adulteration.

AIM OF HEALTH DEPARTMENT.

> Adulteration of food consists of a large number of practices, some of which are fraudulent, others technical in nature. Some forms of adulteration are injurious to health, but for the most part they have an economic rather than a sanitary significance. Foods may be adulterated in a variety of ways: by the removal of nutritive substances; by the addition of injurious substances; by the fraudulent substitution of cheaper articles; by misbranding; or by the sale of food that is filthy, decomposed, or putrid.—*M. J. Rosenau, Professor of Preventive Medicine and Hygiene, Harvard Medical School.*

In this article an endeavour will be made to show that New Zealand compares very favourably with any other country in so far as the inspection and the prevention of adulteration of foodstuffs is concerned, and in general activities towards safeguarding the wholesomeness and freedom from contamination of foods in everyday use.

As far as European countries, including Britain, are concerned, the first move towards definite control was made in Austria in 1907, an official commission being appointed, consisting of representatives of the Ministers concerned, the chief health officials, professional men, and experts chosen from manufacturers and traders. The "Codex Alimentarius" was formed, by which standards and processes of investigation were laid down, although, unfortunately, the Courts were not bound to accept them.

A STAGE FURTHER.

In New Zealand, as well as in the Australian States, Canada, and the United States of America, a stage further than in Austria has been reached in that the standards are legal. This obviates cumbersome procedure in the Courts, as still obtains in England, where usually numerous expert witnesses have to be called both by the defence and the prosecution to discuss facts which in New Zealand are not decided by the Magistrate upon the conflicting evidence of the parties, but upon compliance or non-compliance with the standard defined by regulation for the quality of the

foodstuff in question. A good example of the difference between England and New Zealand is this: A few months ago a local authority Inspector in England proceeded against a seller of sausages containing only 43 per cent. of meat, on the ground that a sausage was generally regarded as an article which should contain at least 50 per cent. of meat. The Court had not before it a legal standard specifying what amount of meat a sausage should contain, and after lengthy argument the case was dismissed. New Zealand consumers are protected in their purchases and alimentation by a regulation which requires that the lowly sausage shall contain not less than 75 per cent. of meat.

THE ACT OF 1907.

At the time the Austrian Commission was sitting, New Zealand passed the Sale of Food and Drugs Act in 1907, the Act being redated in 1908 upon the consolidation of statutes. The first regulations were issued in February, 1908, being based upon the findings of Dr. Wiley, a prominent authority in America on the composition and sophistication of foodstuffs. A standard was laid down for bread, prohibiting the use of alum or other foreign substance in the dough. It may be here remarked that Canada still permits the use of chemically bleached flour, while in England, America, and, it is believed, Australia, the use of chemical bread "improvers" is permitted. There have been some attempts recently to break down New Zealand's prohibition of these things—the countries mentioned being quoted as examples. In preserved fruits no preservative other than sugar-syrup was permitted by these first regulations; coffee and cocoa preparations were standardized; and spirits, jam and marmalade, jelly, baking-powder, pepper, mustard, sauces, and pickles were similarly dealt with.

In January, 1910, steps were taken to prevent the more commonly used or popular jams being adulterated with cheaper fruits or vegetables. Accordingly the use of apple-pulp, as one instance, was restricted in jams and more truthful labelling specified. In September, 1910, standards were added for butter and cheese, including whole-milk cheese, skim-milk cheese, and cream cheese.

BUILDINGS AND PLANT.

In 1913 was published the report of the Royal Commission on Uniform Standards for Food and Drugs in the States of the Commonwealth of Australia, with full evidence and appendices. Although New Zealand was not represented on the Commission, she drew very largely upon the valuable matter presented in the report, and as a result the Department of Health issued in 1913 complete regulations for foods, and also dealt preliminarily with drugs. These regulations remained, with minor amendments from time to time, until reissued last year in up-to-date form. At the same time relative regulations were issued under the Health Act

to deal with persons, premises, and processes connected with the manufacture, storage, and sale of foods. The full effect of these regulations, especially as regards buildings and plant, will become more noticeable as time goes on, because new premises must comply with certain important specifications according to the kind of food dealt with. At the same time existing premises are subject to requirements intended to bring them as near as possible to the ideal conditions in view.

All regulations are being enforced as far as is reasonably possible, and the actual position reached in these years of continuing effort is that there is practically no adulteration of moment of foodstuffs in New Zealand. Seasonal conditions appear to bring about a tendency to water milk or extract cream when there is a shortage, but the serious views generally adopted by Magistrates is having an effect that is very noticeable, and any offenders are not long undiscovered.

PRESERVATIVES AND COLOURING.

The markets are still supplied with two or more variations of the same kind of foodstuff—*i.e.*, the genuine and the artificial —and so long as the public are satisfied to accept a substitute for the real thing, so long will the market be supplied. Regulations cannot do more than require that the article shall be plainly labelled and provide that no misleading features shall appear, such as pictures of raspberries on an artificial raspberry beverage which never at any time had any possible relationship to the fruit raspberry. There is an occasional outcry against the use of so-called dangerous preservatives and aniline dyes for colouring foods. Here again the regulations require that the presence of such things in the food must be announced on the labels of the containers. In most cases, of course, no substitute for the genuine article is permitted, for it is only where public demand or trade usage of many years has established a practice that it is allowed to continue—but with restrictions. At the same time, regulations are being introduced gradually with a view to better educating the public to a realization of what these substances are. For instance, the class of beverage generally known as the " soft drink " has been sold for years under various fruit names, assisted by the presence of a bright artificial colouring substance to heighten the effect. These beverages are now defined by regulations so as to be saleable in three distinct classes—(*a*) those made direct from the fruit-juice alone ; (*b*) those made from fruit extractives alone or assisted by some of the original juice and added colouring ; (*c*) those made entirely or partly from artificial or imitation fruit flavours with artificial colouring. The (*a*) class is the only kind that may have the word " Pure " on the label ; the (*b*) class must always use the word " Flavoured " alongside or preceding the fruit-name ; and the (*c*) class must always bear the word " Artificial " similarly.

"PURE" AND "FLAVOURED."

The same classification is carried out for cordials and syrups sold for use in the homes. By these provisions, therefore, it is hoped that the public will learn that the best foods in the way of cordials, syrups, and summer non-alcoholic or temperance drinks with fruit names are those which have the word "Pure" thereon; the next-best quality has the word "Flavoured" before the name of the fruit; and the lowest quality—and it is regretted there is still a demand for it by the unthinking public—is that which displays its nature, to any one who can read and think, in having the word "Artificial" written on the label with the fruit-name. Even in the "Pure" beverages, however, there will be a limited amount of harmless preservative present to prevent fermentation. We look forward to the day when manufacturers will be able to adopt a method of pasteurization that will obviate the necessity of using any chemical preservative.

NEW ZEALAND'S EXAMPLE.

In referring to the need of food standards in England, C. W. Hutt, M.A., M.D., D.P.H., Medical Officer of Holborn, in the *Hospital and Health Review*, writes: "The example of New Zealand: Contrast the definite position established by the issue of standards"; and, after quoting examples, goes on to say, "Similar instances could readily be given of the value of standards in respect of articles of food, notably cocoa and allied substances, pure fruit cordials and syrups, baking-powder, self-raising flour, custard-powders, infants' foods, vinegar, honey, and jam." In referring to the present controversies on bread and flour, Dr. Hutt writes: "Various problems which in England are only in the stage of expressions of opinion in reports by officials of the Ministry of Health are boldly and clearly legislated upon in New Zealand."

CONTROL OF ADVERTISING.

Another marked advance in legislation to control the advertising both of foods and drugs (including patent or proprietary medicines) is contained in section 9 of the Sale of Food and Drugs Amendment Act, 1924, which reads: "9. (1.) Every person commits an offence who, being the seller of any food or drug, or the agent or servant of the seller, publishes or causes to be published any statement, design, or device relating to such food or drug, or to any ingredient thereof, which directly or by implication qualifies or is contrary to any particulars required by regulations under the principal Act to be marked on or attached to packages containing any such food or drug, or which is calculated or is likely to deceive a purchaser in regard to the properties of such food or drug. (2.) For the purpose of this section a statement shall be deemed to be published if it is inserted in any newspaper printed and published in New Zealand, or is publicly exhibited in view of persons on any road, street, or other public place, or is

contained in any document which is sent to any person through the Post Office or otherwise, or which is delivered to any person or left upon premises in the occupation of any person."

PROPRIETARY FOODS AND MEDICINES.

In bringing this legislation under the notice of advertising agents, newspapers, and others interested, the Department of Health made the following comments: "The Department has found the necessity of such legislation to deal with the propaganda used in certain cases to further the sales of proprietary foods as well as proprietary medicines. Not infrequently the advertisement conveys a more favourable impression as to the quality of an article than does the wording permitted (or required) by the regulations to appear on the label. It has been felt, therefore, that the efforts of the Department to insure correct labelling, whereby purchasers may have some guide as to the grade or composition of an article, have been discounted to a very great extent by the reputation given to, or assumed for, the article by publicity methods before the purchaser has had an opportunity of seeing the label."

There is, therefore, every reason to hope, with the efficient legal machinery provided, working in conjunction with educational propaganda disseminated by the Press, that ideal conditions for preparing substances for consumption by the people, honest methods of labelling and marketing, and increasing demand by the people for natural, unsophisticated foodstuffs is a goal in sight.

DENTAL HYGIENE.

TREATMENT OF SCHOOL-CHILDREN.

Work of State Department.

Policy commended by High Authorities.

> We wish to state very strongly that the State cannot afford to allow the health of the workers of the nation to be continually undermined by dental neglect. Steps should be taken without delay to recognize dentistry as one of the chief, if not the chief, means for preventing ill health, and every possible means should be employed for enlightening the public as to the need for conservative treatment of diseased teeth. The dental profession should be recognized as one of the outposts of preventive medicine.

THESE are the concluding words of the findings of a Parliamentary Committee set up in England to consider certain provisions of the Dentists Act, and may be taken to express the view that is generally held by the leading medical and dental authorities to-day.

A consideration of the circumstances leading up to the establishment of the School Dental Service in the Dominion indicates that this step was not taken by the Government without a good deal of serious consideration of the contentions, supported by irrefutable evidence, which were advanced by the New Zealand Dental Association, who desired to bring about the inauguration of some national system of dental treatment of school-children.

NEED FOR ACTION.

The enormous amount of dental disease prevalent, and its increasingly rapid incidence, was a matter which had been exercising the minds of members of the dental profession generally for some years, but it was only during the Great War that the actual extent to which the disease was present and the seriousness of the position was fully realized. Examination of recruits of the first division showed an average of sixteen teeth which were or had been diseased per head; and, though the condition of the men of the second division was better, of nearly 15,000 examined each man had on the average six defective teeth requiring treatment, and 37 per cent. of them required artificial dentures. That matters were fast going from bad to worse was conclusively proved later by

the examination of Cadets undergoing training, when it was found that the average defective teeth per head increased to twelve, or, alternatively, about half the teeth in the mouth were either diseased or missing. Further, an examination of school-children showed that at least 95 per cent. of these required urgent dental treatment. In the face of these figures it was no longer possible to ignore the position, and the case for those advocating the establishment of a system of dental treatment for children was established beyond doubt. It was then that the Government took action, and in 1920 the scheme at present in operation was inaugurated, and in this respect the New Zealand Government is unique in being the only Government which has, in spite of the magnitude of the task and the obvious difficulties presented, formulated and put into operation the scheme which will in time, it is anticipated, effectively deal with the problem.

UNIQUE STATE SCHEME.

Owing to its magnitude, it was found absolutely necessary that the policy should be a preventive one as far as possible; consequently it was decided to concentrate on the primer children, re-examining and treating them at stated intervals as far as possible during their school career, so that in time the whole school should be under treatment.

The numbers receiving dental care are augmented yearly by a new group of primers.

TRAINED WOMEN NURSES.

As a very large staff would be required to cope with the treatment necessary (examination having proved that at least 95 per cent. require treatment), it was decided to utilize the services of young women for this work, as from a psychological point of view it is considered they are better fitted to deal with young children. They are being specially trained by the Department solely for Government school dental work. The training of these dental nurses does not include any of the other branches of dentistry, and does not entitle them to registration or at any time to do private practice. The training, which includes an intensive science course, is specially arranged by the Department's officers, and ensures a thorough knowledge of the work they are called upon to perform. As has been stated previously, the policy is, as far as possible, a preventive one, and part of the training of the nurses is a thorough grounding in diet as a means of prevention, which it is safe to say is being recognized by all the best authorities as the only sure method of preventing dental disease. Great stress is placed upon this aspect of the work, and nurses are instructed to take every opportunity of advising parents and children in these matters. This will assist very materially the Department's propaganda work.

CO-OPERATION NECESSARY.

Modern science has brought the realization that the physical condition and habits of life of the mother before and during pregnancy play an important part in the future dental as well as physical welfare of the child, and the Health Department if now endeavouring to effect the closest co-ordination between the different divisions, including the Child Welfare, School Medical, Ante-natal, and the Dental. Co-operation between the Plunket nurse and the dental nurse is being fostered; parents are urged to bring their children to the clinic at a very early age for examination, and preventive treatment, when advice is given as regards diet as a means of prevention, and by this means the Department expects to be able to keep the children under dental observation from an early age until such time as they enter school as primers. Short as the Department's experience in this direction has been, it has shown that the lines being followed are sound, and with the intelligent co-operation of the parents the dental treatment and advice given must play an important part in establishing a high standard of physical welfare among the children of New Zealand. That the service given is appreciated and is filling a long-felt need is evidenced by the fact that requests for dental clinics have been received from practically every district throughout the Dominion; and while, of course, it will be years before the whole of New Zealand can be provided for, the Department can proceed in this direction as speedily as possible with the assurance that the scheme will not fail for want of proper appreciation and support.

STAFF AND WORK.

There are at present forty-two Dental Officers stationed in various parts of the Dominion. Some of the dental nurses have been in charge of clinics for over two years, and results have proved highly satisfactory. In addition to these there are forty-eight probationers now undergoing training. The amount of treatment performed to date by the division is: Fillings, 166,443; extractions, 134,202; minor operations, 97,474; total operations, 398,119. The number of children now under treatment is approximately 26,000.

VALUABLE TESTIMONY.

Recognition of the value of the work being done by the Dental Division of the Health Department has been given by many visitors competent to speak on this subject. The famous American surgeon, Dr. W. J. Mayo, after visiting the clinic in Wellington last year, stated publicly that the method of training the nurses to do the work in the schools was far ahead of anything of the kind in America. He noticed with pleasure, he said, that the nurses not only preached prevention but were also doing actual restorative work to the teeth, which in this

respect was also much in advance of America. He stressed the importance of this feature, as it was while they were young that things entered the children's systems which would produce the illnesses of the thirties. He commended very highly the practical service being rendered by the Dental Department. Dr. Mayo repeated these appreciative remarks of the New Zealand system when a few weeks later he visited Victoria—one result being that the Victorian Government sent the Principal Dental Officer of the Education Department to this country to investigate and report on the system in operation here. Prior to leaving New Zealand that officer, Mr. E. S. Callanan, said that on his return he would strongly urge on the Minister of Health that Victoria should adopt the system. The New Zealand Dental Association a its annual conference in May, 1923, unanimously passed a resolution supporting the scheme, and advocating that the Government should extend it as rapidly as possible. Numerous communications have been received by the Department from authorities in England and America acknowledging the superiority of the New Zealand scheme.

THE NEW ZEALAND NURSE.

GREAT SOCIAL SERVICE.

State System of Training and Registration.

HIGH STANDARD OF EFFICIENCY.

> Of all the offices which illustrate good citizenship, that of the night sister touches imagination most. For all sufferers there is about her a charm of mystery, coming to her from the shadowy spaces which are her province, and the solemn hours in which she reigns. To the exalted fancy of the sleepless, as they watch her moving to and fro amid their pains, she becomes the most tutelary of mortal beings. She breathes communicable strength when in the dead of night life pauses in the veins, and men fear. In the hour when hope ebbs far she comes among them for a sign of rallying and new resistance. The eyes of the fearful turn to her ; she seems the column upon which their unsure fates are stayed. Night after night she looks on mournful things and is still strong ; she has seen the worst than man endures and yet has comfort ; therefore, men trust her. It is she who puts to flight surrendering thoughts, fans courage to its last flicker, and rejoices with the indomitable soul.—
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> —*W. Compton Leigh, in "Domus Doloris."*

FLORENCE NIGHTINGALE may be said to have bequeathed a definite spirit to the profession of nursing. Her lofty ideals and sound judgment did much to found the high traditions at present distinguishing this great sphere of social service, and the present standard of nursing in New Zealand reflects the impulse of her work. The fine record of our nurses during the war will not be soon forgotten, nor their present ministrations in the many hospitals and homes of this land. It is therefore considered to be of interest to review some aspects of the problems affecting their profession and the work of the Department of Health in this direction.

Rightly we are proud of our present nurses, but it is profitable at the same time to pay tribute to those who in the past helped to lay the foundation of nursing in this country. The history of the care of the sick in early days is fragmentary, and few records are reliable until the times when, population becoming more concentrated, in some centres it was found necessary to provide hospital accommodation for the people. In those days

the Lady Superintendents appointed in the hospitals in the chief centres did excellent pioneer work, but probably the greatest step forward was the appointment by the Government of Mrs. Grace Neill as Assistant Inspector of Hospitals in 1895. The late Dr. MacGregor, the then Inspector of Hospitals, in his annual report of 1895 stated: "Owing to recent political and social developments it was felt that the time had come when the numerous and delicate questions affecting women which have to be dealt with in connection with our system of charitable aid and our hospitals and asylums ought to be handled in the first instance by a woman. Mrs. Neill, who has been appointed Assistant Inspector, combines in a very high degree the ability, knowledge, and sympathy required for this position."

Two very distinct advances in New Zealand for which Mrs. Grace Neill was largely responsible were: (1) The enactment of the provision for the registration of nurses and midwives; (2) the establishment of our St. Helens Hospitals. Reports submitted by her to the Government show her breadth of vision and her clear appreciation of the difficulties to be overcome in safeguarding the lives of mothers and new-born infants.

REGISTRATION OF NURSES.

The Nurses Registration Act was passed in 1901, and has since been subject only to minor amendments. Since this Act came into force no fewer than 4,262 nurses have been registered in New Zealand; and on an average 300 locally-trained nurses and 30 overseas nurses have been registered every year.

The Hospitals Department, which is now merged in the Health Department, had in 1895 only one nurse on its staff—Mrs. Grace Neill. To-day the Department of Health employs 138 trained nurses, 89 probationers, and 14 masseuses in various departments of its work.

MIDWIVES REGISTRATION.

The Midwives Registration Act was placed on the statute-book in 1904. At the present moment there are on the register 2,018 midwives, who have qualified by examination, and 448 who have become eligible in virtue of long practice. Last year 172 New Zealand trained midwives were registered and 7 overseas midwives were admitted.

PROPOSED CHANGES.

At present the Director-General of Health is the Registrar of Nurses and Midwives, and the Department of Health is responsible for the course of training and the standard of examination. In the amending Bill at present before Parliament it is proposed that these powers shall be taken away from the Director-General of Health and conferred upon a Board comprising representatives of the Department, the medical profession, and nurses and midwives. Another provision is the raising of

the age at which candidates for the nursing profession may be accepted for training. Of late years entrants have been taken at the age of eighteen, but in future it is proposed that no one shall be accepted for training until she has attained the age of twenty years. [This Bill has since been passed by Parliament.]

ST. HELENS HOSPITALS.

Under the Midwives Act of 1904 the establishment of one or more State Maternity Hospitals was authorized. They were designed not only to provide facilities for training midwives and maternity nurses, but also to provide skilled assistance at confinement for wives of working-men, at a moderate fee. These hospitals have been established at Auckland, Wellington, Christchurch, Dunedin, Invercargill, Gisborne, and Wanganui. The Department of Health has twenty-five registered nurses rendering most valuable service in these institutions. These hospitals not only provide for the confinement period, but also give a large amount of pre-natal supervision and advice on the care of infants. Their Medical Officers are in attendance at special hours on certain days, when any women desiring medical advice during pregnancy may secure it free of charge, whether she is registered to have her confinement at the St. Helens Hospital or not. In these hospitals last year there were 1,837 births (living children) in comparison with 1,666 for previous year, 623 outdoor cases were attended, and 90 pupil midwives qualified, showing an increase respectively of 29 and 11 over the year 1923.

SUPERANNUATION OF NURSES.

The Department has striven long to bring about a scheme for the superannuation of nurses, and its aim in this direction no doubt in the near future will be accomplished. Under the Hospitals and Charitable Institutions Amendment Act, 1920, Hospital Boards are empowered to provide pensions for Matrons of ten years' service, and several Boards have already taken advantage of this provision.

RECOGNITION OF EFFICIENCY.

It will be remembered that Dr. Valintine, Director-General of Health, who is at present abroad, recently indicated in a cable message that "The European and American nurses are not equal to the smart British type, which is maintaining throughout the Empire the Nightingale traditions in the highest degree. He would like to see Australia encourage that superiority by introducing a system of State registration like that in New Zealand."

A considerable amount of evidence can be adduced to show that the standard of nursing in New Zealand compares very favourably with that of other countries. The General Nursing Council for England and Wales has agreed to accept a certificate

of registration in New Zealand as sufficient evidence of fitness for admission to the register of the Council. The Council further states that it makes no conditions as to the number of beds in the hospitals recognized as training-schools, and is content to accept the New Zealand certificate without further restriction. The Council has thus opened the door very wide, apparently recognizing that New Zealand training may be implicitly accepted. So far as can be ascertained, New Zealand is the only country to which England and Wales have extended the privilege of full reciprocity in regard to registration. References made by various authorities also show the high esteem in which the New Zealand nurse is held.

DURING THE GREAT WAR.

In connection with their war work, it is recorded that in Egypt the sisters who first arrived from New Zealand were sent to Imperial hospitals and made their mark, and were so valued that they were retained. The British Matron-in-Chief, Miss Oram, R.R.C., greatly appreciated the New Zealand sisters: "They were," she said, "always ready for anything, and were so adaptable and resourceful." The surgeons found them well trained and careful. The nurses were sought after by the Matrons of the various Imperial hospitals. When directed to open a new hospital, one British Matron said, "I will not mind doing it if I may have some New Zealand sisters." They were given responsible positions, and justified the trust thus placed in them. One Matron said, when so promoting them, "You girls deserve it, for you have helped me through a most trying time, and I always feel I can depend on my New Zealand sisters in any emergency. In fact, I consider them the backbone of my hospital."

One cannot conclude this article without referring to the invaluable services rendered by the nurses during the Great War. That the nursing profession did its share is shown by the fact that 550 nurses were on military service in that stupendous struggle, and fifteen made the supreme sacrifice.

It is impossible to express adequately the great burden of debt the sick and wounded were under to this band of devoted women, but the following tribute paid to them by a New Zealand soldier at the New Zealand General Hospital in Egypt may well be quoted as showing the sentiment they inspired:—

Not even Florence, in the dark Crimea,
Tending her stricken heroes, lamp in hand,
Surpasses those who came from our dear land
To do this work of love and mercy here.

Tongue cannot utter, pen may not express
Their sympathy, their kind and gentle care.
How oft ascended an unspoken prayer to Heaven
For blessing on such gentleness.

HIGH-GRADE HOSPITALS.

NEW ZEALAND SYSTEM.

Problems for the Future.

Health Department's Aim and Work.

> The appendix to the Report on Hospitals and Charitable Aid issued by the Department of Health of the Government of New Zealand is full of matter of great interest to those in this country who are concerned with hospital reform, for it gives some clear statements about the working of a hospital system on lines to some extent comparable with what some of us wish to see established in the Mother-country. The reputation of the Health Department of New Zealand stands high; it has been extraordinarily successful, and is admitted universally to be excellent. We therefore are inclined to listen with a favourable ear to all that the Dominion has to tell us, and eagerly grasp such a pamphlet as that which we have before us to enlighten us in the most pressing matter before our own Health Department—hospital accommodation.—*The Medical Officer*, London, 4th July, 1925.

In view of the fact that the New Zealand hospital system is spoken of so highly in this well-known journal, it will not be out of place to review briefly that system.

Generally speaking, the hospital system in New Zealand is a unique one. Through the length and breadth of the Dominion hospitals are available for all who seek admission, and the necessary money for their upkeep is fully assured. These institutions are owned by the people, administered by the people, and paid for by the people. One of the main principles of the system is that of local autonomy, the administration being vested in the people themselves by means of Boards elected by the people of the district in which the hospital is situated. There is, indeed, a measure rather of supervision than of control vested in the Department, but the Department is not represented on the Hospital Boards and does not desire to be represented. The Department says in effect to a Hospital Board, "This is your hospital; we hand over to you its administration, superintending the same and giving you the benefit of our advice and experience, but actively interfering only where you fail. You, in this particular locality, pay half the cost, the people of the Dominion as a whole pay the other half. We trust

you not only to administer your half wisely and well, but you have responsibilities towards the remainder of the Dominion, and every district itself in turn contributes towards the success or otherwise of the hospital system of the Dominion as a whole."

EARLY HISTORY.

The early history of our institutions is obscure, and the searching of *Hansard* reports of the discussion of the Hospitals Bill in 1885, in which apparently hospital districts were for the first time constituted, throws little light upon the system prevailing prior to that Act, or in what manner the institutions were supported. It is known, though, that some institutions were maintained entirely by the Government, whilst others were given subsidies, some of pound for pound on their voluntary contributions, and others of a higher amount. There appears, however, to have been no underlying principles followed, but the whole proceeding, no doubt, had grown up as the result of reiterated grants or other forms of local assistance, possibly that of the old Provincial Government.

In the Act of 1885, however, the system of local-body control was established, under which, in many instances, there was the anomaly of several Boards dealing with hospital and charitable matters in the same district: *e.g.*, in Wellington we found the Wellington Hospital Board, whose province was to find the money by way of levy on contributory local authorities for the Wellington Hospital; there was also the Wellington Hospital Trustees, a separate institution controlling the hospital, who, however, had the power to requisition upon the Hospital Board for grants; then there was the Wellington–Wairarapa United Charitable Aid Board, which in turn drew upon the contributory local authorities for charitable-aid purposes in the Wellington and Wairarapa districts, and they in turn were requisitioned upon by the Wellington Benevolent Institution, who had the administration of the Ohiro Home and of outdoor relief in Wellington. Under this Act all money raised by levy by the district Boards, whether for capital or for maintenance purposes, carried a Government subsidy of pound for pound; in other words, after deducting the voluntary contributions and the subsidy thereon, the patients' payments, the Government paid half the net estimated deficit in the amount required for the administration of hospitals and charitable institutions and the provision of outdoor relief, the remaining half being raised by rates.

THE ACT OF 1909.

The Act of 1909, a much-needed reform, was passed after a natural but parochial opposition on the part of those bodies who were superseded. This Act set up one Hospital and Charitable Aid Board for each district, and practically wiped out

the system of separate institutions. A few separate institutions were included in the schedule to the Act, but only those were included who were not requisitioning upon the local Hospital Boards, but carried on independent of the rates, depending upon voluntary contributions and Government subsidy thereon to meet their deficit. Only two hospitals were left in this schedule—viz., Oamaru and Mercury Bay—together with a few charitable institutions; but no charitable institution now exists which is undertaking entirely the functions of a Charitable Aid Board.

Under the New Zealand Hospitals and Charitable Institutions Act, 1909, and its amendments, the Dominion is divided into forty-five hospital districts.

HOSPITAL BOARDS.

Each hospital district is controlled by a Board of not more than twenty nor less than eight members, the representatives being 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 districts. There is frequently agitation for an alteration in the method of apportionment, the farming class and, generally speaking, the county ratepayers 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 (which the Department cannot admit); whilst on the other hand the town dwellers—particularly labour—argue that representation should be entirely on the parliamentary franchise. The Department sees no 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 BOARDS.

Subject to inspection and a modicum of Government control, a Board is responsible (*a*) for the management of hospitals and outdoor medical and nursing services, and (*b*) for the administration of charitable relief.

For the most part, the Boards have adhered to the policy outlined by the Department with regard to the establishment and management of their institutions.

In the larger districts a Board is provided with a base hospital, an infectious-diseases hospital, annexes or wards for consumptive

patients in curable and incurable stages, a consumptive sanitorium, 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 applying more particularly to consumptive sanatoria, few Boards being large enough to maintain a consumptive sanatorium for their own district. Though the two consumptive sanatoria in the North Island are maintained by the Government, and one in the South Island by the North Canterbury Hospital Board and another by the Otago Board, the Hospital Boards in the southern portion of the South Island have combined for the purposes of maintaining a sanatorium for consumptives for their districts.

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); and the resulting deficit (roughly three-quarters of the expenditure) is raised by means of a levy on the contributory local authorities and Government subsidy thereon. In addition to the above there are a few hospitals which are possessed of small endowments.

LEVIES.

The Hospital 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 inquire 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.

Under the amendment of 1923, Government subsidies are now granted at the rate of £1 for every £1 of voluntary contributions, including devices and bequests, or the value of the same; £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 £1 6s., and is given according to the burden of the levy on the rates, the Board whose burden is heaviest receiving £1 6s. subsidy, the Board whose burden is lightest receives 14s., the Board whose rate of levy is the average for the Dominion receives £1. This scheme tends to 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.

It will be noted further that the system of subsidies under the 1909 Act has been abandoned. That system was founded on the principles suggested by Lord Balfour of Burleigh and Lord Blair Balfour in a minority report of the Royal Commission on Local Taxation (*vide* Imperial Reports, 1902, Vol. 39), which outlined certain principles for poor-law proposed for Scotland. The apparent assumption that high capital value combined with high expenditure meant unwarranted extravagance, and low capital value combined with low expenditure meant praiseworthy economy, was by no means a perfectly logical conclusion, and at any rate it was the Department's province rather to ensure efficient administration by active inspection and education than by the working of an arbitrary scale of figures. Further, the fact that the figures were arbitrary and took no cognizance of the general rise or fall in the cost of living resulted in the subsidy dropping from an average of £1 os. 5d. in 1910 to 14s. 3d. in 1923.

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's 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.

A good deal could be written concerning the use and abuse of subsidy on voluntary contributions, subsidy often being claimed on what are practically patients' payments, or payments for services received. Another drawback is that voluntary contributions cannot be readily estimated, and, being received often after a Board's estimates have been made up and the levy struck, provide, with the subsidy, an unexpected and (for that year at least) unrequired source of revenue. For this reason a National Hospital Day would require to be held shortly before the end of the financial year, and not some time after, so as to allow of the receipts therefrom being taken into a Board's estimates and the net requirements to be met by levy and subsidy correspondingly reduced.

REVENUE GENERALLY.

It seems hardly possible that the greatest endeavours in the direction of obtaining more patients' fees or voluntary contributions would reduce by anything like one-half the present burden on the rates and Consolidated Fund, and therefore, apart from such at present untried schemes as hospital insurance, the Department cannot hope to lighten such burden by additional revenue. It therefore has to review the expenditure with a view to ascertaining whether its increase is not disproportionate to the population increase, and to determine whether a decrease in the rapid extension of an institution could not be brought about by greater attention to the factors which govern the days' stay in hospital, which averages about twenty-eight days, or by a reduction in the number of in-patients by a greater stimulation of the activities of the out-patients' departments. The fact that local rates bear one-half of the deficit has the advantage of imposing some check on any tendency to extravagant administration by Boards, and the Department does not consider that any change in the manner of meeting such deficit is required.

DEPARTMENTAL CONTROL.

Hospitals are administered by the Department of Health and 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 Hospitals and Nursing, Inspecting Accountant, Inspecting House Manager, technical (*i.e.*, architectural) Inspectors, &c.

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 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. In this connection it may be pointed out that the Department is totally opposed to a policy of lengthy loans for capital works, and declines to approve loans for requirements by levy and subsidy or loans (generally by way of overdraft) over a period of one or two years.

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 the Minister of Public Health, the chief executive officer being the Inspector-General of Mental Hospitals. There are seven mental hospitals in the Dominion—six public and one private. A small charge is made to the friends of patients detained in these mental hospitals. The patients' friends are made to pay according to their means. The sums recovered from such fees only amount to 32·61 per cent. of the total expenditure on these State-managed institutions.

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.

Speaking generally, the Boards are desirous of working with the Department, but are extremely jealous with regard to what they consider an invasion of their rights.

CARE OF THE SICK.

HOSPITAL POLICY.

Some Problems still to be solved.

Importance of Greater Public Interest.

To show the extent of the accommodation for patients, it may be mentioned that for the year 1923–24 there were 6,853 beds in our public hospitals—representing a proportion of 5·35 beds per 1,000 of the population. Of these beds, the average number occupied was 4,564, or 3·56 per 1,000 of the population. The unoccupied beds are largely accounted for by the provision of accommodation for infectious diseases. Generally speaking, the beds for medical and surgical cases are used to full capacity.

The number of persons receiving treatment for the year 1923–24 was 59,256, or a proportion of 46·3 per 1,000 of the population.

The growing popularity of our public hospitals is shown by the fact that the corresponding figures for the year 1914–15 were 33,375, or a proportion of only 30·5 per 1,000.

COST OF HOSPITALS.

The cost of hospitals to the public funds—that is to say, the amount that is found by way of levies from local authorities, by Government subsidy on such levies, and upon voluntary contributions, and the loss on the Government institutions that the Department itself has to provide—amounted in the year 1923–24 to £828,954, or 12s. 11½d. per head of the population.

In addition to the money from the public funds, the patients under treatment in hospitals contribute towards the cost of such treatment. The amount collected in this way for the year mentioned was £296,940. In addition, a sum was derived from voluntary contributions, bequests, &c. Hospital Boards also derive a small amount of revenue from rents of endowments, &c. For the year 1924 this amounted to approximately £28,000.

The Health Department itself undertakes the management of seven maternity hospitals (St. Helens Hospitals) ; two sanatoria for tuberculosis—one at Otaki and the other at Pukeora ; the King George V Hospital at Rotorua, for orthopædic cases ; and the Queen Mary Hospital at Hanmer for neuropathic cases.

These facts and figures will serve to show the magnitude of the hospital system in New Zealand.

During the last two years plans were approved by the Department for the erection, addition, or alterations to hospital buildings at an estimated cost of £744,173, made up as follows: New General Hospital, £256,402; additions to same, £156,865; Maternity Hospitals, £54,549; Infectious Disease Hospitals, £1,600; Tuberculosis Sanatoria, £35,841; Old People's Homes, £35,367; Nurses' Homes, £150,514; Engineering Services, £44,035. The technical officers of the Department, by careful checking of plans before approval is given, have effected many improvements which not only add to the efficiency of the hospital, but in many cases have considerably reduced the cost, to the extent of as much as £10,000 each in two cases. The work of this branch is rapidly increasing as a greater number of Hospital Boards are now availing themselves of the assistance afforded by the Technical Inspectors.

PATIENTS' PAYMENTS.

A point which cannot fail to impress one is the relatively small proportion of funds derived from patients' payments and from voluntary contributions.

The average fee charged by Hospital Boards is £3 3s. per week. This by no means represents the full cost of treatment, which would rather be in the vicinity of £1 per day. It is obvious, therefore, that the patients under treatment in the institution, even though he pays the full hospital fee, is yet getting a very substantial concession, which is met out of the public funds.

VOLUNTARY CONTRIBUTIONS.

There is little doubt that the fact that hospital finance is assured by means of levy and subsidy results in the 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 National 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 organizations who are dependent on voluntary contributions.

HOSPITAL DAY.

This tendency on the part of the public not to support their own institution has been a matter for regret by many of those who take a special interest in our hospitals. In certain hospital districts it is at present the practice, as already stated, to hold Hospital Days in order to raise funds for special hospital purposes, such as the provision of a new ward or of special equipment,—*e.g.*, X rays, &c. However, there is all too little of this, and it has been suggested that a National Hospital Day be instituted.

The public should not depend entirely upon public funds for their hospitals. After all, in each district the people themselves

own the hospital, and should look on it, in a sense, as their own institution, and should aim at making it in every way a model institution.

For the past several years, the 12th May, the birthday of Florence Nightingale, has been observed by a number of hospitals of the United States and Canada as a day on which to present the mission of the hospital to the public, thereby helping to cement the true relationships of the hospital and the community. It is hoped that in time the day will be celebrated by the entire hospital world. Each Hospital Board is encouraged to choose its own medium of self-expression. The 12th May is, of course, summer in the Northern Hemisphere. It might be well in New Zealand to change the date of Hospital Day to Christmas Eve (or just prior to that day), our midsummer, and an occasion on which it is usual for the public to specially remember the sick and to send presents of flowers, &c. to our hospitals, to beautify the wards at a religious and a festive season. The suggestion has also been made that the certificates awarded to nurses on their graduation might be presented on the same day by the Chairman of the local Hospital Board. Not only would such a ceremony be a fitting recognition of the importance of the nursing profession, a tribute to the success of those who had won the awards, but would also be a dignified and worthy addition to the celebration of Hospital Day.

HOSPITAL PROBLEMS—PRIVATE WARDS.

The question has recently arisen as to whether all classes of the community are entitled to enter the public hospitals, and there is an agitation for the erection of private wards for those willing to pay the high fee to be charged therefor. In the past the Department has recognized the policy that the hospitals are maintained only for those people unable to pay for private medical and nursing treatment, leaving it to a very great extent to the various Boards themselves to apply such policy according to the particular neeeds and circumstances of each district. (An outlying district with no adequate means for private medical or nursing service would, of course, admit any one to its hospital.) The basic principle, however, has been that the beds are primarily for the needy. If after the needs of the destitute are met there are vacant beds, then those in better circumstances are generally granted admission.

The Department has adopted the policy that private wards would be authorized so long as their establishment does not impose a burden on either the rates or the Consolidated Fund—*i.e.*, that they should be built out of loan-money, and that the charge made for treatment therein shall be collected in advance, and shall be sufficient to pay both maintenance cost of the wards and also the principal and interest upon the cost of construction. This policy is being strongly opposed in some quarters on the grounds that it will promote class distinctions.

The whole matter, however, is still more or less nebulous, and it is realized that it must be left largely to the discretion

of the individual Board. After all, the local needs and circumstances vary so much that it is almost impossible to formulate other than a very general policy for the whole needs of the Dominion.

Another debatable question is that of the medical staffing of the hospitals. The Department has enunciated the policy that, as hospitals are free to all, members of the medical profession can no longer be expected to give their services gratis. The whole question of the relationship of the medical staff and Hospital Boards is at present under consideration by both the New Zealand branch of the British Medical Association and the Hospital Boards' Association, and it is anticipated some satisfactory arrangement will be determined in the near future.

CREATION OF SMALL DISTRICTS.

There is the tendency of hospital districts to be divided into areas too small for successful and economical administration. A modern hospital must of necessity be a highly complex institution, and if it is to discharge its functions adequately requires numerous highly technical and expensive departments, such as X rays. To convert into a thoroughly equipped modern hospital at least one institution in each of the forty-five districts would cost more than the Dominion could afford, more indeed than would be warranted. The tendency now should be to an amalgamation rather than the splitting-up of districts. The existing framework of our hospital organization is too massive for the needs of the Dominion; and even with a great increase in population it is more than questionable whether some of the existing hospital districts could show any logical reason for an independent existence from the neighbouring districts. An amalgamation, however, is very difficult to bring about, and attempts in the past have resulted in failure. Local sentiment runs high, and the Department is expected to provide tangible facts and figures to support its proposals for amalgamation, argument of a general nature not being sufficient to bring about the desired result.

POLICY OF THE DEPARTMENT.

The policy of the Department is to concentrate upon a relatively small number of well-equipped institutions, to provide means of rapid transit of patients to such institutions, and to discourage so far as lies in its power the multiplicity of small institutions which cannot give a reasonable standard of medical service to the patient entering their doors. For these reasons the Department would favour rather an amalgamation of districts, or the merging of some smaller districts in their larger neighbours, than the creation, as at present seems to be the tendency, of a number of small areas.

MAORI HYGIENE.

WHAT THE STATE HAS DONE.

Combating Typhoid.

PRESERVING A FINE RACE.

It was with a heart full of fear and trembling that my mission was undertaken. Fear and trembling, did I say? Yes, for the deeply-rooted superstition of ages — the strongholds of tohungaism, the binding laws of tapu, the habits and practices of centuries, the mistrust of the pakeha—these were the Goliaths in the way of sanitary progress amongst the Maoris. For what did all this mean? It meant the dissolution of time-honoured customs, the tearing-down of ancestral habits and teachings, the alteration of Maori thought and idea; in fact, a complete change in their socialistic, communistic, and private life. It meant more: it meant the gentle persuasion, the authority not of force, but of clear convictions of the evils of the present system of half-European and half-Maori ways of living, and the benefits of a better, more sanitary, higher, and nobler way of life. Yes, it meant the introduction of things entirely new and foreign to the Maori mind and life. Who can change the customs of a nation in a day? No—not in a month, nor a year, nor a generation could they be changed, for progress is a plant growing. But the change must come. It will come; it has come. The Maori will yet bloom with the fairest of the Anglo-Saxon; and why not?—*Dr. Pomare, Health Officer to the Maoris, in his first report to the Chief Health Officer, 1902.*

FOR many years the responsibility of the health of the Maori was borne by the Native Department, which still exercises a financial interest in the subject. Though medical practitioners in the country districts and towns serving a Maori centre had been subsidized for some time, the first step in instituting a permanent control took place in 1901. This period was marked by fortunate circumstances. In the previous year the Maori Councils Act had been passed by Parliament. This divided both Islands into Council districts in which a certain amount of local self-government could be exercised by Councils consisting of twelve Maori members. Regulations and by-laws regarding sanitation and means of promoting the health of the Maori race were gazetted. Village committees appointed by the Councils assisted in the work.

Public attention at the time had been drawn to the necessity of a general clean-up and the extermination of rats to prevent the spread of bubonic plague. The Maori is very apt at naming, and not entirely devoid of humour. The chiefs and their attendants who frequented the precincts of Parliament to advise the Government and embarrass their own parliamentary representatives, saw an analogy between the two movements. Every Bill has a short title, so the Maori Councils Act was promptly called " Te Pire Kiore " (the Rat Bill).

HEALTH REFORMS.

In 1901, to the nucleus of the newly evolved Department of Public Health, there was added Dr. Pomare. Dr. Pomare, as the first Maori graduate in medicine, returned to his native land full of zeal and anxious to help his people. He was an old Te Aute College boy. It will be to the lasting credit of that institution that she has always instilled in her students the love and pride of race and a deep sense of responsibility. It became the duty of the new Medical Officer of Health to visit the various Maori villages, to institute the health reforms required, and lecture at all times and places on health matters, that Maori public opinion might be educated. Many quaint observations are embalmed in the pages of the old Maori Health Reports.

The Medical Officer of Health to the Maoris could on occasion break into verse, as the following quotation shows :—

Our Maori blood will still flow on
In a new coming race,
That when the old is dead and gone
We still will find its trace
In nobler forms of humankind,
With traits wherein there blend
The white man's more poetic mind,
The poet Maori trend.

Pessimists and mournful friends had been predicting the early extinction of the race, and the faith of the younger generation found expression in such sentiments as the above.

A further forward step was the policy of inducing a number of influential chiefs to devote all their time to health work in the more thickly populated Maori areas. This was done by appointing them Maori Sanitary Inspectors. About nine men were appointed. They were given practical instruction in their duties, and did an incalculable amount of good. Their value to the Government was considerably enhanced by their influence and prestige with their own tribes. The people listened and obeyed where the orthodox Civil servant who had passed his examinations would not have been received with the same confidence. As time rolled by and qualified Health Inspectors of European origin were available for the districts, the men of the old regime retired. They had bridged a gap nobly, and taken no mean part in the advance of their people.

In 1905 another Health Officer for Maori work was appointed in the person of Dr. Te Rangi Hiroa. The North Island was divided into two districts between the two Health Officers. It is

curious that both, probably obeying the pressure of Maori public opinion, left the Department of Health to enter Parliament, where they represented the Western and Northern Maori constituencies.

With the Hon. A. T. Ngata, M.A., LL.B., representing the Eastern Maori, Parliament presented the rather unique circumstances of three out of the four representatives of the Maori race being University graduates, the fourth member being a first-class licensed interpreter. For some years the Department of Health was without a Medical Officer of Health to the Maoris, though both ex-officers assisted on occasions when epidemics occurred in their constituencies. After two Parliaments (six years), Te Rangi Hiroa refused to recontest his seat. Having no ties, political or paternal, he went to the war, and on its fortunate ending he, after an absence from the Department for over ten years, returned to his old position of Medical Officer to the Natives, where he is now Director of the Division of Maori Hygiene.

NATIVE-SCHOOL TEACHERS.

The teachers of Native schools have done much for the health of the Maori and materially assisted the Department of Health. They were supplied with stock remedies in districts remote from doctors, and they administered them to the best advantage. As a matter of history, the medical examination of school-children was tried in some of the Native schools as far back as 1908. Printed cards were then available. A comparison between the weight of Maori and European revealed the fact that, age for age, the Maori children were much heavier. At the age of fifteen they were a stone heavier. The children at the Native schools examined were living on two meals a day, whilst the European children were from King's College. The extra weight was thus not due to extra nourishment, but to a racial characteristic.

NATIVE HEALTH NURSES.

The nursing staff has been steadily increased, until now there are over twenty District Health Nurses to the Maoris. They have been located in the more populous Maori districts, and have been one of the greatest factors in the prevention of the spread of epidemics. The work they have done in coping with typhoid fever alone has more than justified the existence of this branch of the service. They have saved innumerable lives to the Maori race and much expense to the Hospital Boards. Where it has been impossible in some districts to remove patients to hospital, local field hospitals under canvas or in meeting-houses have been set up. With all the disadvantages that exist outside a regularly-constituted hospital, they have displayed initiative and a cheerful courage under the most adverse circumstances, and no praise can be too great for their work. The nurses are also an educative factor in the Maori community. They lecture to the womenfolk on the feeding of infants, the care of the sick, and other subjects of high practical importance.

DIVISION OF MAORI HYGIENE.

The division possesses expert knowledge of the language, customs, and manner of the Maori race. It organizes matters in connection with Maori hygiene, advises Head Office, and co-ordinates the work between the Maori people and the various officers of the Department of Health. The Maori Councils are supervised and directed in their work from this office. As an example, the Medical Officers of Health, Native Health Nurses, and Inspectors have been supplied with lists of Maori Council members and village committees in their health districts so that they may act direct with responsible Maoris in the event of emergency. The European Inspectors of Health are in touch with Maori work, and attend to it as a routine matter. In some districts, however, with special needs, Inspectors of Maori extraction have been appointed for their special knowledge of their race. The Maori Councils also look to the Inspectors and nurses as a matter of routine. Close touch with the various Maori districts is maintained by correspondence in their own language, the only method to bring about success.

Various pamphlets and leaflets in the Native language on the feeding of infants, typhoid fever, consumption, influenza, scabies, infantile paralysis, &c., are continuously being forwarded through our Maori Councils, nurses, and Inspectors for distribution to the Native people.

A certain amount of research work in anthropology has been done, such as the measurements of the physical characteristics of the race, pre-European diet, evolution of clothing, ancient food-supplies, the amount of miscegenation, &c.

SUMMARY.

In the social and physical improvement that has taken place since 1900 there are many factors that have contributed. Education, individualization of land, and the natural adaption of an intelligent people to a changed environment have all played their part. The efforts of able representatives in Parliament with the sympathetic assistance of the State have had their effect. In this connection it is significant that the first Medical Officer to the Maoris is now Minister of Health in the Cabinet of the Dominion. The role of the Department of Health has been, and still is, an important one. With their widespread organizations of Medical Officers of Health, subsidized Medical Officers, Inspectors, and nurses, the Department has mobilized field hospitals, inoculated endemic areas against the curse of typhoid fever, and by preventive measures saved innumerable lives. In this work Hospital Boards have nobly assisted.

The State, with its Department of Health, has fully realized that it has had the immense responsibility of not only saving one of the finest native races from extinction, but of putting them on the high road that leads to increase, health, and prosperity. The New-Zealander of the future will be able to assess these efforts at their true value.

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