

**Report of the Commission of Public Health to the Minister of Public Health /
Department of Public Health, Victoria.**

Contributors

Victoria. Commission of Public Health.

Publication/Creation

Melbourne : Govt. Printer, [1949]

Persistent URL

<https://wellcomecollection.org/works/natwne2y>

License and attribution

This work has been identified as being free of known restrictions under copyright law, including all related and neighbouring rights and is being made available under the Creative Commons, Public Domain Mark.

You can copy, modify, distribute and perform the work, even for commercial purposes, without asking permission.



Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
<https://wellcomecollection.org>

1949.

VICTORIA.



DEPARTMENT OF HEALTH.

TWENTY-SEVENTH REPORT

OF THE

COMMISSION OF PUBLIC HEALTH

AND

DIVISIONAL REPORTS

TO THE

MINISTER OF HEALTH.

By Authority

J. J. GOURLEY, GOVERNMENT PRINTER, MELBOURNE.

COMMISSION OF PUBLIC HEALTH.

GEORGE EDWARD COLE, D.S.O., M.B., B.S., D.P.H., Chief Health Officer (Chairman).

WALTER ERNEST SUMMONS, O.B.E., M.D., D.P.H.

FRANK VICTOR GORDON SCHOLES, C.M.G., M.D., F.R.A.C.P., D.P.H.

Cr. EDWARD CHARLES RIGBY, C.B.E., LL.B.—Representing Metropolitan Municipalities.

Cr. JOHN ANDREW MICHELSEN, O.B.E., J.P.—Representing Cities, Towns and Boroughs
other than Metropolitan Municipalities.

Cr. A. M. KING, O.B.E. (Ballarat City).

Cr. R. G. HOBAN, LL.B. (Kilmore Shire)—Representing Shires other than Metropolitan
Municipalities.

WELLCOME INSTITUTE LIBRARY	
Coll.	wellcome
Call.	+
No.	Amey
	WA28
	.KAS
	V64
	1949



22501299029

TWENTY-SEVENTH REPORT OF THE COMMISSION OF PUBLIC HEALTH, 1948-1949

CONTENTS.

	PAGE.
REPORT OF THE COMMISSION.	5
 DIVISIONAL REPORTS—	
1. Report of the Director of Tuberculosis	17
2. Report of the Mass Radiography Division	24
3. Report of the Maternal and Child Hygiene Branch—	
(a) Maternal, Infant, and Pre-school Service	34
(b) School Medical and Dental Service	45
4. Report of the Industrial Hygiene Division	52
5. Report of the Engineer	60
6. Report of the Venereal Diseases Division	62
7. Work of the Analytical Laboratory	64
8. Reports of District Health Officers	65
9. Report of the Poliomyelitis Officer	74
 APPENDICES—	
A. Legislation, Regulations, Proclamations	81
B. Private Hospitals	82
C. Vital Statistics	83
D. Graphs showing Death Rates in Victoria from:—	
(a) Diphtheria	90
(b) Tuberculosis.	92
(c) Typhoid Fever.	93
(d) Whooping Cough.	95

Digitized by the Internet Archive
in 2019 with funding from
Wellcome Library

TWENTY-SEVENTH REPORT OF THE COMMISSION OF PUBLIC HEALTH, 1948-1949.

To the Honorable C. P. Gartside, M.L.C., Minister of Health.

SIR,

We have the honour to submit, in accordance with the provisions of section 13 (3) of the *Health Act* 1928, our Report for the year ending 30th June, 1949.

The sustained reduction in morbidity and mortality rates from preventable disease indicates that effective measures for the promotion of health and reduction of disease are being carried out in this community. The continued improvement in health standards must be ascribed largely to individual action, in regard to better housing, nutrition, and personal hygiene.

Much disease, however, arises from conditions beyond the control of the individual, and its prevention requires collective action.

The collective action which the law imposes on municipal councils and State instrumentalities has been the main concern of the Commission since its inception. The type of supervision and co-ordination necessary has gradually changed from insistence on the minimal acceptable standard to advice on the best standard available.

Public insistence on high standards of environmental sanitation, such as waste disposal, water supply, &c., has made the provision of these amenities largely a routine procedure and has permitted health administrators to concentrate on improvement of the health of the individual by such services as pre-natal clinics, infant welfare centres, immunization against disease, and industrial hygiene. Thus, the function of the Health Commission has gradually changed from a mandatory to an advisory one. The Commission and its officers are now largely concerned with advice to local authorities on how the principles and discoveries of preventive medicine can be translated into local practice most appropriately and economically. Municipal representation on the Commission enables all types of local government problems to be approached realistically.

Increasing demand for health services for the individual indicates that they meet with popular approval. But the efficiency of such services can only be judged by statistical comparison with other states and countries, and in this State with periods prior to the commencement of services.

The infant mortality rate (deaths of infants under 1 year per 1,000 births) for 1948 was 23·93. This is the lowest figure ever recorded in this State and must be regarded as amongst the lowest recorded in the world. New Zealand figures for 1948 were:—European population only 21·93, total population (including Maoris) 27·43.

The tuberculosis mortality—320 per million in 1948—is less than half the rate in 1928 (663 per million). The present figure compares favorably with the most advanced countries.

Again the number of cases of diphtheria has steadily declined from 4,254 cases in 1928, to 364 cases in 1948. A substantial portion of this improvement must be attributed to immunization.

These figures are not a cause for complacency; they can, and doubtless will be further improved. They do indicate, however, that public health procedure is on sound lines and they give encouragement to workers in all branches to pursue their work with confidence and enthusiasm.

CHAIRMAN.

In February, 1949, Dr. C. R. Merrillees, after many years of distinguished service in the Department, retired from the Public Service and chairmanship of the Commission.

Dr. G. E. Cole was appointed Chief Health Officer and Chairman of the Commission in his stead.

INFECTIOUS DISEASES.

No cases of small pox, plague, or cholera have been reported in Victoria in the period under review.

In May, a case of small pox occurred in New South Wales in a traveller who had recently arrived by air from overseas. Prompt and efficient action by the Commonwealth Health Authorities succeeded in tracing all contacts, and vaccination prevented the occurrence of any secondary cases. The incident nevertheless emphasized the danger of introduction of quarantinable disease by air travel, and the Commission considers that the unsatisfactory state of vaccination in this community constitutes a great risk. Plans to make vaccination more readily available to the community have been formulated by the Commission.

The Commission was informed on the 24th May, 1949, that the Exotic Diseases Hospital, Fairfield, could be ready for use at five hours' notice. This hospital could accommodate twelve cases of exotic diseases for isolation and treatment.

TUBERCULOSIS.

Despite its decline to less than one-half of its mortality compared with that of twenty years ago, 641 persons died of this disease in Victoria in 1948. Hence tuberculosis still occupies a very special place among infectious diseases.

In addition to the work of the Tuberculosis Branch and Mass X-ray Surveys, presented as separate reports, a considerable proportion of the time of all officers in the General Health Branch has been devoted to anti-tuberculosis work.

A departmental committee set up by the Minister includes outside consultants and advisers on special problems which arise.

The production of B.C.G. vaccine by the Commonwealth Serum Laboratories is a notable advance in anti-tuberculosis measures. This has obviated the importation of the vaccine by air from Canada and terminated the exacting organization which was required to use the vaccine immediately it arrived. Local production has also made the treatment more widely available. To ensure uniformity of technique and to permit comparison of results the National Health and Medical Research Council requested the State Department of Health to undertake the distribution of the vaccine in Victoria. For the present the vaccine is being issued only to medical officers experienced in its use. Dr. E. North, the Medical Officer in Charge of B.C.G. production, has given lectures and demonstrations to departmental medical officers and to medical officers in charge of hospitals and institutions, and a clinic has been opened at the Central Tuberculosis Bureau for vaccination of contacts of tuberculosis patients referred to the clinic for treatment. The Commission has authorized Dr. North to exercise the powers of its own officers in connexion with B.C.G.

Tuberculous Meningitis.—This form of the disease is frequently used as an indicator of the amount of open tuberculosis in a community generally, and of the effectiveness of the preventive procedures practised. In 1928 there were 70 deaths from this form of the disease. Last year they numbered only ten. This indicates a considerable improvement which can be largely ascribed to the work of visiting nurses on the staffs of metropolitan and country tuberculosis bureaux, and also to the educational effect of sanatorium treatment on the individual patient.

Decline in Death Rate.—The annual death rates per million have shown a decrease from 663 per million in 1928 to 307 in 1948, this being an all-time low record for this State. With the increase in Mass Radiography and the introduction of B.C.G. vaccination, both of which will rapidly expand, further reduction of the mortality rates is to be expected.

Education.—Last year has shown a marked increase in interest in anti-tuberculosis work on the part of the general public, and they are in a mood to take full advantage of all the facilities provided by the Department. Meetings were held in Melbourne and Ballarat early in 1949 to form branches of the Anti-Tuberculosis Association in Victoria. The meetings were well attended and provisional committees were elected. This voluntary organization has been invaluable in various parts of the world to educate the public and to ensure that maximum use is made of the facilities available to combat tuberculosis.

Accommodation.—The provision of increased accommodation has been delayed by shortage of building material, man power, &c., but it is expected that a large proportion of the 288 new beds being provided will be available before the end of the year. The actual number which can be utilized will depend on the availability of staff, both nursing and medical, and also on the completion of enlarged staff quarters to accommodate the extra staff required under the 40-hour week.

The provision of a sanatorium (or hospital for diseases of the chest) at Watsonia is at present receiving consideration by the departmental committee. It is proposed to accommodate approximately 400 patients in this institution.

Present Accommodation.—There are 927 State beds provided for the treatment of pulmonary tuberculosis in Victoria, excluding the new building (144 beds) in progress at Greenvale Sanatorium, and not yet occupied. Approximately 228 beds are vacant owing to staff shortages. There are 282 male and 388 female patients in civilian institutions, and the Repatriation Department provides for 435 cases, making a total of 1,105 beds occupied at the present time.

Surgical Treatment, which is being carried out at the Austin Hospital, has increased over the past ten years, and there are now three thoracic surgical teams at work each week.

Financial Assistance.—Monetary allowances, approximately the equivalent of the basic wage, are now made to tuberculosis sufferers whilst awaiting admission to and after discharge from sanatoria. This measure was introduced by the Commonwealth Government, and in collaboration with the State Government a further allowance for rent is available to necessitous cases.

Chest X-ray Surveys.—The year ending 30th June, 1949, has been largely one of consolidation in matters of staff, equipment and follow-up of previous surveys. From the appended tables in the Divisional Report certain salient facts emerge—

1. 150,205 people were X-rayed during the year.
2. The number of people X-rayed in the metropolitan and country areas was approximately equal.
3. The numbers of males and females X-rayed are approximately equal.
4. The percentage of "active" and "possibly active" tuberculosis is 0.45 per cent. (677) and the percentage of "healed or quiescent" tuberculosis 1.48 per cent. (2,269).
5. The percentage of "non-tuberculosis" abnormalities was 2.46 per cent. (3,676).
6. The number of "large films" taken as part of follow-up work and work amongst children for the twelve months is 15,849.
7. The Division has undertaken the X-ray work arising out of the Mantoux testing of 89,744 children in all health areas, 3,966 of these were "tuberculin positive".

With the expansion of the work of the Division and the insistent public demand for X-ray facilities, provision of new premises and additional medical staff are matters of urgency.

POLIOMYELITIS.

During the past year, the activities in connexion with poliomyelitis work have increased considerably, and are still increasing. This is partly due to the present epidemic of poliomyelitis, but all activities have been along lines carefully planned before the present epidemic commenced, and they will continue after the epidemic subsides.

Poliomyelitis is different in many respects from the other common infectious diseases, and the problems peculiar to this disease necessitate a different approach to that adopted in other diseases.

Poliomyelitis is an acute infectious disease caused by a filtrable virus which in a proportion of cases results in paralysis of a varying number of the muscles of the body. This paralysis in most cases responds well to skilled and careful treatment, but the treatment required is frequently prolonged, and its expense is beyond the financial resources of the great majority of the sufferers.

Prior to 1947, the Commission was mainly concerned with measures to prevent spread of the disease through the community. Since 1947, the problem has been considered in its entirety, and measures have been taken to ensure that prompt and adequate treatment is available to sufferers from poliomyelitis without financial hardship to themselves.

This change in policy occurred when the Consultative Council on Poliomyelitis requested the Department of Health to take over its executive function under the powers conferred by the Ministry of Health Act. The Consultative Council on Poliomyelitis has remained to advise the Minister on the most appropriate measures to be taken in the control and treatment of poliomyelitis in this State "to reduce the amount of crippling in Victoria from the paralysis of poliomyelitis".

The measures which the Department of Health has taken to achieve this aim include :—

1. Administration of the Infectious Diseases Regulations in regard to poliomyelitis.
2. Enquiries into the epidemiology of the disease.
3. Appointment of a Poliomyelitis Medical Officer.
4. Employment of physiotherapists to treat adult cases in the metropolitan area, and all cases in certain country areas.
5. Provision of post-graduate scholarships for physiotherapists to give them special training in poliomyelitis treatment.
6. Appointment of consultant orthopaedists to visit country centres regularly, and to treat cases of poliomyelitis at these centres.
7. Provision of splints free of cost in necessitous cases, and at cost price for those able to pay.
8. Appointment of a panel of diagnostic consultants to assist medical practitioners in the diagnosis of doubtful cases.

The details of the above services are included in the Divisional Report on Poliomyelitis; by their application and extension the present epidemic is being met with efficiency and confidence.

DIPHTHERIA.

A new low level of incidence was recorded for Victoria in 1948, the number of cases reported being 364, corresponding to an incidence rate of 17·4 per 100,000 of population. The next lowest rate recorded was 19·3 in 1947.

During the year 1948, an offer was made by the Commonwealth Government to supply immunizing materials free of cost for public campaigns. This offer was adopted by the Premier on behalf of the State, and by the Commission on behalf of municipalities. 111 municipalities have already accepted this offer.

The total number immunized from 1st July, 1948, to 30th June, 1949, was 25,203 school children and 19,009 pre-school children.

As a result of research, the Commonwealth Serum Laboratories have produced a new prophylactic material, Aluminium Phosphate Adsorbed Toxoid, against diphtheria. This material is a modification of Alum Precipitated Toxoid. Its use will considerably simplify the technique of administration, and the results so far show that it confers a high degree of protection on the individual.

TYPHOID AND PARATYPHOID FEVERS.

33 cases of typhoid fever—representing a case rate of 1·5 per 100,000 of population—were reported.

No case of paratyphoid fever was reported.

DYSENTERY.

Six case of bacillary dysentery and 8 amoebic were reported.

SCARLET FEVER.

1,546 cases were notified in 1948. This represents an incidence rate of 73·5 per 100,000, compared with 88·6 for the previous year.

CEREBROSPINAL MENINGITIS.

54 cases of this disease were reported, compared with 53 for the previous year. This represents an incidence rate of 2·6 per 100,000 of population.

MALARIA.

79 cases of malaria were reported in 1948, compared with 1,608 and 3,413 for the two previous years. All cases reported in 1948 had acquired the disease outside the State, and the decline in notifications is due to fewer relapses in personnel discharged from the Services.

ANCHYLOSTOMIASIS (HOOKWORM).

247 cases were reported, compared with 510 for the previous year. Like malaria, these are confined to ex-service personnel.

HYDATIDS.

11 cases were reported in 1948, compared with 10 for the previous year.

CYSTICERCUS BOVIS (BEEF MEASLES).

No case of tape worm infestation has been reported since 1943.

On 30th November, 1948, a report by the Minister of Agriculture was submitted for the Commission's consideration by the Honorable the Minister. The Commission supported the opinion expressed by the Minister of Agriculture, namely: "Any action to prevent the 1,800 tons of choicest beef coming on to the local market, because there is a slight possibility of a few people becoming infected with tape worm, is not warranted, more particularly at a time like the present when every effort is being made to ship as much beef as possible to the United Kingdom." The Commission added the following rider: "That the same shall apply to any pasture under a sewage authority in Victoria, provided that—(1) the authority is in a meat area; and (2) the meat is inspected and branded."

RUBELLA.

Research is being continued into the effects of Rubella (German Measles) on the unborn child. The processed serum (gamma globulin) of patients convalescent from rubella is made available for the protection of women who contact german measles during the first three months of pregnancy. The effectiveness of this passive protection is unproved, but no case to whom the serum has been administered has developed the disease.

The plans for active immunization by infecting adolescent and adult females with rubella at the Walter and Eliza Hall Institute and isolating them during their attack at Fairfield Hospital, have been suspended.

The City of Williamstown conducted a publicity campaign to encourage young females to volunteer for this treatment. Although the response to this campaign was somewhat disappointing, the work and the organization were invaluable and, it is hoped, will form the basis of successful campaigns in the future. It has been decided to leave the matter in abeyance until Fairfield Hospital is free to undertake hospitalization of volunteers. At present the hospital is too busy to allocate the staff necessary to supervise the treatment of rubella cases.

A list of the volunteers who have enrolled at Williamstown, and those who have forwarded a request for treatment to the Department has been compiled, and all have been informed that they will be further advised when the campaign is to be initiated.

VENEREAL DISEASES.

The total number of cases of venereal disease reported in Victoria for the year ended 30th June, 1949, was 1,981. This is the lowest figure as far back as the published table goes (20 years).

An analysis of the figures, compared with the previous year, shows a drop in all disease and sex groups, except gonorrhoea in females (increase 2) and acquired syphilis in the male (increase 4). The increasing attendance at the Prophylactic Centre maintained at the Government Clinic has undoubtedly contributed to this fall, as by far the larger part of the State's venereal infections occur in Melbourne.

At the Government Clinic for the year ended 30th June, 1949, 2,406 males and 335 females reported for attention. Of these 829 males and 70 females were found to be suffering from venereal disease. After making allowance for the fact that some of the males are seamen from other States or overseas it appears that about 40 per cent. of the reported venereal disease in Victoria is treated at the Government Clinic.

It is expected that a second full-time medical officer will shortly be appointed to the staff of the Government Clinic, and that in the near future a branch of the Bacteriological Laboratory will be established there. These measures will greatly increase the usefulness of the clinic by :—

- (a) reducing the time wasted by patients in awaiting their turn to see a medical officer ;
- (b) providing enough time to enable medical officers to discuss thoroughly with a patient the question of infected or possibly infected contacts, and enlisting the patient's aid in getting such contacts to seek medical advice ;
- (c) enabling research work into certain indefinite types of urethral discharges to be undertaken ;
- (d) giving the Medical Officer in charge of the Division the time needed to initiate and develop propaganda aimed at the reduction of venereal disease.

DISTRIBUTION OF IODINE IN GOITRE AREAS.

Some eighteen months ago the Commonwealth Department of Health carried out survey in the Federal Capital Territory and discovered that Canberra was an endemic goitre area. The Commonwealth Department of Health inaugurated a scheme for the distribution of Potassium Iodide in tablet form once a week to all children in Canberra between the age of twelve months and fourteen years, and to expectant and nursing mothers living in the area.

In August, 1948, the Prime Minister wrote to the Premier of Victoria offering to make a supply of iodine tablets available for free distribution throughout the goitrous districts of Victoria. The Premier accepted the Commonwealth Government's offer.

School medical inspections over the past 30 years have shown many areas in Victoria to be goitrous, particularly portions of Gippsland. The following nineteen municipalities in the Gippsland area :—

Alberton	Mirboo	Sale
Avon	Morwell	South Gippsland
Bairnsdale	Narracan	Tambo
Buln Buln	Omeo	Traralgon
Dandenong	Orbost	Warragul
Korumburra	Rosedale	Woorayl
Maffra		

were informed of the Commonwealth offer and were asked to obtain the advice of their Medical Officer of Health as to whether this offer should be accepted by the municipality. So far, eight councils have accepted the offer, and supplies are made available to mothers and pre-school children through the infant welfare centres. The tablets have been supplied as follows :—

Orbost	21,000	Narracan	23,000
Dandenong	69,200	Omeo	4,800
Warragul	40,000	Mirboo	24,000

The Education Department has arranged for teachers to co-operate in the distribution to school pupils in municipalities where the offer has been accepted. The schools concerned are approached directly by the Medical Officer of Health, and teachers have been informed that the distribution has the co-operation of the Education Department.

INDUSTRIAL HYGIENE.

The demands on the services of this Division continue to increase. At present the staff consists of two medical officers, two chemists, four industrial health inspectors, and one typist. The appointment of an additional chemist is provided for in the establishment, but difficulty has been found in securing a suitable person.

A very important function of this Division is the bringing to the notice of management and employees any hazards to health in the occupation with which they are concerned. A great deal could be done by means of suitable pamphlets, but the compiling and issuing of these is not possible with the present staff. The appointment of a publicity officer for the Department, in whose services this Division could share, would be a welcome advance.

The drafting of regulations requiring the exhibition of warning posters in regard to certain hazards is being considered.

A submission from the Chief Health Officer at the request of the Minister in August, 1945, recommended "the establishment of an Industrial Clinic for diagnosis and treatment in certain cases of industrial disease; this clinic should be provided with a few beds for in-patients". A clinic on these lines has been established but without facilities for hospital accommodation. Provision of a few beds for patients suffering from occupational diseases would be a valuable addition. It would provide opportunity for investigation of the effects of industrial poisons and for the treatment of patients, so affected, by medical officers familiar with the actual conditions which produced the illness.

ADVISORY COMMITTEE ON RATS.

This committee met nine times during the period under review and planned municipal campaigns.

Circulars were issued to all Metropolitan Councils, to the Shires of Braybrook and Broadmeadows, and to the following provincial cities and coastal towns:—

Bendigo	Mildura
Ballarat	Warrnambool
Geelong, Newtown and Chilwell	Port Fairy
Geelong West	Portland

Letters were received from the following councils expressing their willingness to co-operate and requesting supply of the literature prepared for the Commission:—

Metropolitan.

Box Hill
Brighton
Brunswick
Collingwood
Camberwell
Chelsea
Hawthorn
Kew
Melbourne
Mordialloc
Northcote
Nunawading
Oakleigh
Port Melbourne
Ringwood
Richmond
South Melbourne
St. Kilda
Williamstown

Country.

Geelong
Geelong West
Newtown and Chilwell
Portland
Port Fairy
Warrnambool

COUNTRY SEWERAGE.

Preliminary plans for eight proposed sewerage systems have been examined during the year.

Only slow progress has been made in completion of the systems commenced before the war, and no work has been started by any more recently constituted Sewerage Authority.

With the appointment of one Assistant Engineer, the system of quarterly inspection of all sewage treatment plants and analysis of samples of sewage and effluents is about to be recommenced. Brief visits which have been paid to various plants have shown some evidence of overloading of plants, of undue admission of ground-and storm-water to sewers, and of lack of adequate attention to effluent disposal areas. These faults are not widespread. Plans are in hand for enlargement of some treatment plants.

STREAM POLLUTION.

Until legislation has been passed to give effect to Expert Committee on Stream Pollution recommendations, the Commission will be unable to prevent the setting up of new industries producing liquid wastes in positions where stream pollution is inevitable. Some aspects of this problem are at present receiving consideration.

Two series of investigations of the Latrobe River between Moe and Rosedale have been carried out, and action is being taken to abate pollution from some sources. Meanwhile a body of data is being built up which will show any progressive changes in the character of the river water.

No progress has been made in the matter of abating the pollution of the Yarrowee Creek owing to the inability of the staff of the Ballarat Sewerage Authority to give the time needed to investigate the probable effects of the polluting wastes on its sewers and treatment works, and the degrees of treatment needed before admission of these wastes to the sewerage system.

PUBLIC BUILDINGS.

The total number of plans dealt with was slightly less than for 1947-48, and again most of these plans were for small buildings and additions. The appointment of another building inspector late in the year has brought the staff nearly to the number considered necessary. Many more night inspections have been made, chiefly of cinematograph halls, to enforce regulations relating to public safety, and extra ones are being made in country and outer metropolitan areas. These have shown widespread disregard of regulations in the smaller shows, and prosecutions have been launched in some cases. Magistrates have tended to treat breaches of regulations regarding public safety more seriously.

Several minor fires in public buildings during the year were dealt with promptly and in no case got out of control. This indicates that the materials used in the buildings were sufficiently fire-resistant and that the measures for public safety were satisfactory.

The Commission considers that the absence of any major disaster from fire in public buildings in this State is evidence of the effectiveness of the regulations and their satisfactory observance.

HOSPITALS.

A contract has been let for the combined tuberculosis and infectious diseases unit at Ballarat Hospital, and sketch plans for a similar unit for Bendigo are under consideration. Schemes for incorporation of new infectious wards in main hospital blocks are likely to be delayed for some time.

The number of plans examined for new hospitals and additions was 70 per cent. greater than in 1947-48, many of the additions being for extra staff accommodation.

CHEMICAL EXAMINATION OF SAMPLES.

The chemical work of the Department is carried out in the Health Section of State Laboratories and covers two main fields. Analytical work is mainly concerned with testing food samples for compliance with prescribed standards, with samples of waters for purity, with effluents to check the working of sewage works, and with a range of miscellaneous samples. The other field is concerned with medical legal work in which chemistry is used in connexion with murder, suicide, rape, arson, burglary, &c.

The nature and scope of the work of the chemical laboratory is given in some detail in the report of the Government Chemist.

BACTERIOLOGICAL EXAMINATION OF SPECIMENS.

The activities of the Public Health Laboratory at the University, Melbourne, have been considerably widened over the past five years. The functions of the laboratory may be classified under four main headings:—

1. To provide an efficient diagnostic and epidemiological service.
2. To carry out research.
3. To train personnel in diagnostic bacteriology.
4. To provide an information service for medical practitioners and hospital bacteriologists.

These objectives are for practical purposes inseparable and have a direct bearing not only in assisting in the accurate diagnosis and treatment of infectious disease, but also in the prevention of the spread of such disease.

The grant to the University was—

£	£
4,000 in 1944-45	11,000 in 1947-48
7,000 in 1945-46	15,000 in 1948-49
11,000 in 1946-47	

£15,000 is again provided on the estimates for the current year.

The increase in Government subsidy in 1946-47 from £7,000 to £11,000 per annum was made to enable the University Laboratory to perform its diagnostic functions free of charge to all hospitals and all medical practitioners. This free service was commenced on 1st November, 1947, and the quarterly returns from the University show that doctors are depending more and more on the laboratory for the accurate diagnosis of communicable disease.

Much of the recent expansion has been due to the intensified drive against tuberculosis, and such techniques as gastric cultures have increased the laboratory's work considerably, and have necessitated the opening of a subsidiary laboratory in the former Queen Victoria Hospital.

The opening of a second subsidiary laboratory to deal with the diagnosis of venereal disease in conjunction with the Government Clinic has been approved and, it is hoped, will commence its activities in the near future.

OBITUARY.

The death of Sir Sidney Sewell early this year was a serious loss to this State. His ceaseless and untiring efforts to organize the medical profession, health agencies, and the general public to eradicate tuberculosis were an inspiration to all engaged in public health work. The Commission places on record its appreciation of Sir Sidney Sewell's work as a distinguished citizen and physician.

With deep regret the Commission records the loss by death of William Mooney, for many years District Health Inspector of the North-Eastern District.

AMENDMENT OF THE HEALTH ACT 1928.

The Commission reiterates the recommendations made in earlier reports that the *Health Act* 1928 be amended in the following matters which are set out in numerical order of the sections to which they relate:—

Definition of Boardinghouse in section 3.—The word "five" to read "three".

Amend *Definition of Piggery* in section 3 of the *Health Act* 1928 to read "'piggery' means any building enclosure yard or field in which five or more pigs (exclusive of sucklings) are kept." Some modification of section 81 (1) (a) and the Second Schedule may be necessary to include "piggery whether conducted for the purposes of trade or not."

Pollution of Water.—Division 5, Part IV. The Commission desires power under this Division to require the submission of plans and other particulars of any proposed trade premises which will produce liquid wastes; and power to refuse approval of such plans unless they include satisfactory provision for the prevention of the pollution of any stream.

Section 79.—The only reference in the Act to camps is contained in paragraph (i) of this section, giving power to make regulations for the regulation and control of the sanitation of camps and securing cleanliness thereof.

Recommended that a new section be introduced, requiring approval of the Council to the establishment of a camping area, requiring *every such camping area to be registered, and prescribing a fee for registration*. Suggested also that provision is desirable to enable inclusion in the regulations of requirements prohibiting camping in certain areas, e.g., urban areas such as parts of Frankston, where the erection of numbers of tents in back yards or on small vacant blocks causes unhygienic conditions and annoyance to neighbours.

Section 82, and Second Schedule (Offensive Trades)—Poultry Killing or Cleaning or Dressing.

Recommended add new paragraph to section 82—

(3) Nothing in this Division shall be deemed to prohibit any person from killing cleaning or dressing any poultry (or causing to be killed &c.), on any premises in a shire for retail sale on such premises (? or on the road adjoining) provided—

(i) The Council has given in that calendar year its consent in writing; and

(ii) such poultry has been reared on the premises of that person.

Power to make Regulations Prescribing Fees for Reporting Industrial Diseases to be provided by amendment of Section 95 (c).

The Commission considers also that the Minister of Health should have power to recommend to the Governor in Council the addition of Occupational Diseases to the Schedule of Compensable Diseases under the Workers Compensation Act.

Section 173.—There is no power to specify, in approval of the opening of a public building, the type of use to which it is to be put. An owner having received approval of a building erected as a dance hall may convert it into a cinema; or one erected as a church may be converted to a day school. The Commission can then get the building made suitable for its new use only by serving an order and allowing time for fulfilment.

Recommended that a further clause be added to section 173.—*Approval of opening of a Public Building may be limited to any one or more of the uses specified in the definition of Public Building in section 3; and may specify the maximum number of persons that may be accommodated in the building and in any compartment thereof.*

Section 178 (2) (b), and 381 (2) (b).—“*Daily Penalty*”. It is understood that an offence becomes a “continuing offence” after the offender has been convicted for the first offence.

Recommended that provision be made that when an offender defies the law by, e.g., *continuing to use a public building without approval*, evidence may be given of the continuance of the offence and the daily penalty imposed in addition to the fine for the original offence.

An amendment to enable the making of Regulations to provide for *Adequate Air-space, Lighting, Ventilation, and Sanitation of Office Buildings*.

An amendment to bring “apartment houses” under supervision similar to that exercised over boarding and lodging houses.

Prohibition of the Use of any Substance containing harmful Bacteria or Spores.—The addition of a sub-clause (h) to section 216—“it contains harmful bacteria or spores”.

Injurious Utensils or Appliances.—The addition of a sub-clause (f) to section 217 to read—“composed of or containing more than a specified quantity or proportion of any specified substance” and in relation thereto an amendment of section 257 giving power to prescribe substances, quantities and proportions allowable in relation to matters contained in section 217 as amended.

Publication of False Statements relating to Food Drugs or Substances.—In section 226 (1) (a)—After the word “sale” add the words “of any food drug or substance or”; and in section 226 (1) (b) omit all words after “material particular”. In section 222 (2) (a) omit the words “printed and published” and insert instead the word “circulating”.

Add a new paragraph to section 226 (2) calling it (d) containing the words “contained in any wrapper or packet or label delivered with any goods”.

Power to prohibit Sale of Deleterious Food Drug or Substance.—Addition to Part XII. of the *Health Act 1928* to give the Commission power to prohibit the sale of any food drug or substance which in the opinion of the Food Standards Committee is deleterious to health and making the sale or advertising of such food drug or substance an offence against this Part.

Analyses to be made by approved Analysts under Part XII. of the Health Act 1928.—In section 242 (1) the word "Act" to be deleted and the word "Part" inserted instead.

Provision for Dealing with Samples when Purchased.—Section 249 (a)—Insert a proviso in this sub-clause indicating that the requirements of this paragraph shall be deemed to have been complied with in respect to a seller other than the "last vendor" referred to in section 241 as re-enacted by the *Health Act 1935* if there is forwarded to such seller by registered post not later than the day next following the purchasing of the food drug or substance for analysis a notice of the purchaser's intention to have the food drug or substance analysed.

Section 259 (1) (a).—"Reasonable Precautions" as a Defence.—Suggested that a sub-clause be added (similar to 268 *re* warranty) compelling the defendant to notify the informant that he intends to rely on this defence, and setting out in full, details of the precautions he has taken.

Warranty.—Addition to section 267 as re-enacted by section 19 of the *Health Act 1941*. After the words "he shall be discharged from the prosecution" add the words "in which case the person who gave the warranty shall be deemed to have sold the said food drug or substance and proceedings may be instituted against him notwithstanding the provisions of section 263 provided that proceedings be instituted within four weeks of the first hearing."

Sections 280 and 281 (a).—Slaughtering of Animals elsewhere than at Abattoirs.—At present a man may not kill animals for sale except at abattoirs.

Killing for use in his boardinghouse is not "for sale"; and a man may therefore claim that he can kill for the use of his boarders without interference by the council.

Suggested that section 281 (a) be amended by adding after the words "not for sale" the words "nor for the purpose of being used in the preparation of any food for sale."

Section 281 (b).—Slaughtering Animals by Farmer.—The sub-section allows the council to give permission for such slaughtering. The interpretation of this varies from

- (i) Council must permit each slaughtering; to
- (ii) Permission may be given for all time.

The first is too restrictive, and the second too vague. Suggested—Add to sub-section (b) "Provided that such consent shall be valid for a period not longer than one year"; or alternatively—

.....shall not be valid after the expiry of that calendar year."

The Commission also draws attention to a recommendation made during the year under review, that section 10 should be amended to provide for payment to appointed members of an attendance fee of Three guineas per meeting.

Respectfully submitted—

GEORGE COLE

WALTER SUMMONS

F. V. SCHOLES

E. C. RIGBY

J. A. MICHELSEN

A. M. KING

R. G. HOBAN

} Members of the
Commission

J. WHITLOCK, Secretary.

Melbourne, 27th September, 1949.

DIVISIONAL REPORTS.

REPORT OF DIRECTOR OF TUBERCULOSIS, VICTORIA.

SUMMARY OF WORK—YEAR ENDED JUNE, 1949.

Area of Victoria 87,884 sq. miles.
Population 2,106,315

ANNUAL DEATH RATE PER 1,000,000.

Anti-tuberculosis work in Victoria has continued to be difficult owing to staff problems, and this condition of affairs is world wide.

Taking tuberculous meningitis as an indicator for the amount of tuberculosis in the population generally, it is gratifying to note that whereas in 1928 there were 70 deaths from this cause, last year they numbered only 10. This indicates a considerable improvement which is to be largely attributed to the work of the Visiting Nurses on the staffs of the Metropolitan and Country Tuberculosis Bureaux and the educational effect of Sanatorium treatment on the individual patient.

The annual death rates per million have gradually shown a gratifying decrease from 663 per million in 1928 to 307 in 1948, being an all time low record.

With the increase of Mass Radiography, activities under the supervision of Mass X-ray Surveys, and the introduction of B.C.G. Vaccination, both of which will rapidly expand, further reduction of the mortality rates is to be confidently expected.

Last year has shown a satisfactory increase in interest in anti-tuberculosis work on the part of the general public, and they are in a mood to take full advantage of any facilities provided by the Department.

The expected total number of new beds (288) half of which are completed, have been delayed by shortage of building material, man-power, &c., but it is expected that a large proportion of these beds should be available before the end of the year. The actual number to be utilized again depends on the availability of staff, both nursing and medical, and also on the completion of increased staff accommodation required under the 40-hour week. A new sanatorium for males, 400 beds, has been planned and will commence shortly.

Surgical treatment, which is carried out at the Austin Hospital, has increased over the past ten years, there being now two Thoracic Surgical teams at work each week, and a third to be appointed.

The payment of monetary allowances, approximately the equivalent of the basic wage, made to tuberculosis sufferers, is given to those whilst awaiting admission to and after discharge from Sanatoria. This was introduced by the Commonwealth Government in collaboration with the State Government.

Year.	Notifi- cations.	Deaths.						
	Pul- monary Tuber- culosis.	Pulmonary Tuberculosis.			Non-Pulmonary Tuberculosis.			All Forms.
		Male.	Fe- male.	Total.	Male.	Fe- male.	Total.	
1945	613	382	267	649	41	40	81	730
1946	685	404	246	650	32	29	61	711
1947	820	391	221	612	31	34	65	677
1948	802	367	214	581	36	24	60	641

Year.	Respiratory Tuberculosis.	Non-respiratory Tuberculosis.	Tuberculosis (All Forms).
1928	581	82	663
1929	496	92	588
1930	498	97	595
1931	481	68	549
1932	450	76	526
1933	405	66	471
1934	411	74	485
1935	414	64	478
1936	412	59	471
1937	384	51	435
1938	363	47	409
1939	402	48	450
1940	383	44	427
1941	397	55	452
1942	402	45	447
1943	323	52	375
1944	340	37	377
1945	323	40	363
1946	330	34	364
1947	306	32	338
1948	278	29	307

INSTITUTIONAL TREATMENT.

The following table shows the number of beds available, number of beds under construction, and number of beds envisaged in the near future. A minimum target should be based on three beds per death. It must be remembered in this regard that the Repatriation Commission provides about 435 beds for tuberculosis in its various institutions in Victoria.

BEDS PROVIDED FOR RECEPTION OF PULMONARY TUBERCULOSIS CASES IN VICTORIA.

	Male.	Female.	Total.
Gresswell Sanatorium, Mont Park ..	192	..	192
Heatherton Sanatorium, Cheltenham ..	..	268	268
Greenvale Sanatorium, Broadmeadows ..	..	96	96
Mint Place Annexe ..	12	48	60
Austin Hospital, Heidelberg ..	84	44	128
Austin Hospital, Heidelberg (Children's Ward) ..	6	6	12
Dunstan Chalet, Royal Park ..	19	..	19
Eleonor Shaw Chalet, Royal Park ..	..	12	12
Bendigo Chalet, Bendigo ..	14	10	24
Ballarat Chalet, Ballarat ..	10	10	20
Mildura Chalet, Mildura ..	7	7	14
Hamilton Chalet, Hamilton ..	7	7	14
Horsham Chalet, Horsham ..	7	7	14
Wangaratta Chalet, Wangaratta ..	7	7	14
Sale (Ex-R.A.A.F. Hospital) ..	20	20	40
	385	542	927

BEDS UNDER CONSTRUCTION.

Greenvale Sanatorium, Broadmeadows	..	144	144
------------------------------------	----	-----	-----

INSTITUTIONAL TREATMENT—continued.

BEDS PROVIDED.				Male	Female	Total
Watsonia	..	..	..	400	..	400
*Colac	..	..	..	3	3	6
Mooroopna	..	..	..	11	10	21
Warrnambool	..	..	..	7	8	15
*Geelong	..	..	..	15	15	30
†Ballarat	..	..	..	7	7	14
†Bendigo	..	..	..	5	5	10
				448	48	496
Total of beds—Provided and Prospective (which with the Repatriation beds 435 will give 2,002 for Victoria)				833	734	1,567

* To be provided in Infectious Diseases Block.

† Additional beds to be provided in new Infectious Diseases Block.

Figures set out below indicate increase of beds since 1927 there being 72 more than shown in my last report.

1927	..	..	..	413
1949	..	..	..	927

INSTITUTIONS.

METROPOLITAN.

GRESSWELL SANATORIUM.

Medical Superintendent: Dr. D. B. Rosenthal.

192 beds (Male Patients).

Dr. D. B. Rosenthal has returned to duty after his tour of England and the Continent, and has submitted his report to the Government.

The nursing staff problem has improved considerably since my last report, but, unfortunately with increased male employees, due to operation of the 40-hour week, it has not been possible to open one of the 24-bed wards as a portion of this is used as quarters for members of the staff. Plans are in hand for the extension of the present male quarters to accommodate them when the ward will then be opened in its entirety.

Great progress has been made with the construction of the new Nurses' Home and it is anticipated that, by the end of this year, it will be occupied by those nursing and domestic staff who are at present occupying the Nurses' Hostel loaned by the Mental Hygiene authorities and also others who are inadequately accommodated in the Administration Block.

The final four of the further six residences provided for married members of the male staff have now been completed and are occupied by key employees.

Garden developmental projects have progressed, and areas of lawns have been extended, particularly in front of one of the new 24-bed Wards, reflecting credit on the work of the gardening staff, and the supervision of Mr. McSwan, whose services are made available by the Mental Hygiene Department in monthly visits to the Sanatoria, and his instruction and advice on the laying out of gardens and grounds.

The kitchen has been enlarged by the removal of the patients' servery into a new unit constructed in an area taken from the dining hall.

Unfortunately, due to the building of the Nurses' Home, the anticipated early construction of a staff tennis court has been delayed. It will be proceeded with at an early date.

The Patients' Social Club again has demonstrated the interest taken by patients in its activities, the turnover for the financial year being well above last year's figures.

Occupational therapy continues to interest patients, the majority of whom are participating in this interesting work. Art therapy has commenced with the aid of teachers from the Victorian Arts Association, and, with the direction of Mr. F. L. Coles, it is making steady progress. The Red Cross Society continues to make available a full-time Occupational Therapy Instructress and the Officer's services are fully appreciated by all concerned. Mr. Purnell, of the Education Department, continues to instruct in woodwork and Mr. Johnson in boot repairing. With the variety of activities associated with such instruction, some patients are enabled to leave the Sanatorium at the end of their term with a new means of livelihood.

Alterations are being made to the large and newly acquired ex-Army hutment to further extend activities and amenities for patients. In this connection the Gresswell Ladies' Auxiliary have presented to the Social Club a refrigerator of a comprehensive type, and this is now in use in the building.

Exhibitions of hand-crafts were held in December, 1948, and June, 1949, and were well attended. The numerous exhibits reflected the excellence of the instruction given in therapy work.

GREENVALE SANATORIUM.

Medical Superintendent: Dr. M. E. Playle.

96 Beds—(Female Patients).

It is regretted that the new 144-bed Ward Block has not yet been completed in its entirety due to delay in electrical installations, furniture, &c. Progress is being made and at an early date the Ward Block will be ready for occupation.

The extensions to the Administration Block to accommodate extra nursing and domestic staff are proceeding steadily; it is hoped that they will be completed in a few months hence. In the meantime it will be necessary to accommodate staff in the Block and use only a portion for the reception of patients. In this connection it is to be noted that, due to the operation of the 40-hour week, the male staff have increased and accommodation for the additional employees engaged has become acute. Extensions to the existing male quarters are being planned and are in the hands of the Public Works Department.

The new recreation hall, with its accommodation for 350 patients and staff, has been completed and the necessary furnishings are being forwarded which will enable it to be used in the near future for concerts, motion pictures, &c., for those staff and patients at present resident at the Sanatorium. The old recreation hall will then be used by staff for their Social Club functions. The tennis court and swimming pool are fully appreciated by the staff.

The vast area of the Sanatorium has been constantly under the supervision of Mr. McSwan, our Supervisor of Sanatoria Gardens and Grounds, and with his advice, areas of lawns and garden plots have been sown and planted presenting a delightful vista to all who have occasion to visit the Sanatorium.

Occupational Therapy.

Since my last report we have obtained the services of Miss Falconer, a full-time resident ex-Australian Red Cross Society Handicrafts Instructress. Under her able tuition the activities of Occupational Therapy have been advanced and it is anticipated that a very fine exhibition of work accomplished by patients, will be presented later in the year.

HEATHERTON SANATORIUM.

Medical Superintendent: Dr. B. Cleahan.

170 Beds (Female Patients).

The two new 72-bed Ward Blocks have now been completed and are ready for occupation by patients, but the accommodation for staff necessary to cope with them has delayed their occupation except for a small number of patients who have been hospitalized in a floor of one of the units. Until the new Nurses' Home, which is at present in an advanced state of construction, is completed with accommodation for 160 employees, it has been found necessary to utilize one of the Blocks for staff accommodation. Furthermore, resignations of Medical Staff have rendered it impossible to admit more than 136 patients until replacements from the medical field are obtained. It is anticipated that, with recent rises in salary the three doctors required will be obtained when it will be possible to open an extra 34 beds bringing the total bed accommodation of the Sanatorium to 170.

Alterations are planned to the present Administration Block which will provide offices, medical consulting rooms, medical dining room, and facilities in common with modern institutions.

Furthermore, to cope with increased activities, extensions are being made to the boiler house, dining rooms, and store rooms at the Sanatorium.

Gardens and grounds, under the supervision of Mr. McSwan and the attention given by the gardeners, still maintain delightful surroundings to the various wards.

Amenities for staff and patients are being extended.

The Patients' Social Club continues to function successfully.

Occupational Therapy.

The activities of patients in Occupational Therapy have increased to such a degree that it has been found necessary to employ a part-time Instructress, Miss E. Alsop, who is giving Miss E. Keys valuable help in daily instruction to the increased number of patients now resident at the Institution. It has been found that the purchase of an ex-Army hut to be used as a work-room similar to buildings provided at the other Sanatoria cannot be effected as the Commonwealth Government is retaining all hutments for their own specific purposes. The Public Works Department are at present planning a composite unit which will embrace library and work-room to meet the needs of patients for the enlarged Institution which will ultimately receive 268 patients.

AUSTIN HOSPITAL.

Medical Superintendent: Dr. V. Bristow.

84 beds (Male), 44 beds (Female), 12 beds (Children).

Austin Hospital, as the surgical centre for tuberculosis cases, has a fine Sanatorium section under the supervision

of Dr. Bull. Two thoracic surgical teams, formed in 1947, are doing excellent work, the personnel being—

Dr. R. H. Orton

Dr. A. L. Bridges-Webb... Anaesthetist

Mr. C. J. O. Brown ... } Thoracic Surgeons

Mr. J. Hayward ... }

Dr. R. Blaubaum ... Bronchoscopist

A summary of their work over the year is shown hereunder.

Hospital staff accommodation is at present acute, and of the 140 beds available for tuberculosis cases, only 83 are at present occupied. Forty of these beds are set aside for major surgery, and when the present empty beds are available, 20 more will be allotted to a third surgical team, for the appointment of which approval is now being sought.

Streptomycin is extensively used, especially with surgical treatment, and is producing excellent results.

MINT PLACE ANNEXE.

Medical Superintendent: Dr. M. Renth.

48 beds (Female), 12 beds (Male).

Since 4th September, 1947, the Rachel Foster Block of the former Queen Victoria Hospital has been used, and has proved of inestimable value in relieving Sanatoria and Austin Hospital waiting lists for the reception of acute and chronic cases of tuberculosis. The need for this accommodation to be vacated for reception of cancer cases is unfortunate, but it is not anticipated that this will take place for at least six months. In the meantime, with the approval of the Board of Management of the Queen Victoria Hospital, we are opening two wards which will enable a further nineteen patients to be admitted. Eventually, when it becomes necessary to vacate these premises, we will allocate the patients amongst the Sanatoria and Austin Hospital, at each of which Institutions we hope to have wards, now closed or occupied by staff, available for the reception of such cases.

MOUNT ROYAL, ROYAL PARK.

*Dunstan Chalet (19 Male Patients).**Eleanor Shaw Chalet (12 Female Patients).*

These chalets continue to function for the reception of chronic indigent patients, and are attached to the Mount Royal Benevolent Home.

As previously reported by me, although these male and female beds are available, there is an urgent need for increase in the number of beds for indigent patients. In this direction it would be extremely advantageous if other Benevolent Homes would arrange to provide accommodation for this type of case.

OPERATIONS AT AUSTIN HOSPITAL SANATORIUM WARDS, 1948-49.

Type of Operation.	Total Number of Operations.	Patients.	Male.	Female.	Austin Patients Only.					
					Number of Patients.	Arrested.	Improved.	I.S.Q.	Worse.	Death.
Thoracoplasty	88	51	14	37	44	22	21	1	..	..
Pneumonectomy	11	11	..	11	11	2	8	..	..	1
Lobectomy	3	3	3	..	3	1	2	..	..	..
Monaldi Drainage	5	5	1	4	5	1	4	..	..	..
Phrenic nerve operations—										
Crush	37	37	20	17	5	1	2	1	1	..
Recrush	4	4	1	3	..	..	..	..	..	..
Evulsion	5	5	3	2	..	..	..	..	..	..
	46	46	24	22	..	..	..	..	..	..
Thoracoscopy	85	83	24	59	3	2	1	..	..	..
Bronchoscopy	94	94	21	73	48	19	21	6	1	1
Drainage of Empyema	6	5	3	2	5	2	..	..	..	3
Cavernostomy	3	2	..	2	2	1	1	..	..	..
Thoracotomy	3	3	1	2	2	..	1	1	..	..

SANATORIA ACTIVITIES.

Institutions.	Admissions.		Discharges.		Deaths.	
	Male.	Female.	Male.	Female.	Male.	Female.
<i>Metropolitan.</i>						
Austin ..	65	120	58	112	19	6
Greenvale ..	..	99	..	58	..	9
Gresswell ..	160	..	148	..	10	..
Heatherton ..	..	111	..	92	..	10
Mint Place						
Annexe ..	14	56	11	45	4	9
Dunstan Chalet	20	..	13	..	13	..
Eleanor Shaw	..	15	..	10	..	6
Total ..	259	401	230	317	46	40

<i>Country.</i>						
Ballarat ..	12	16	6	9	2	3
Bendigo ..	26	23	9	8	5	3
Hamilton ..	7	7	7	6	..	..
Horsham ..	11	10	10	7	2	..
Mildura ..	16	9	15	5	1	2
Sale ..	18	22	7	5	2	4
Wangaratta ..	8	11	8	12	..	..
	98	98	62	52	12	12
Total in Metro- politan and Country ..	357	499	292	369	58	52

COUNTRY BED ACCOMMODATION.

There are at present seven Tuberculosis Chalets attached to Base Hospitals in the following centres:—

Hamilton ..	7 male	7 female beds
Horsham ..	7 "	7 "
Mildura ..	7 "	7 "
Wangaratta ..	7 "	7 "
Ballarat ..	10 "	10 "
Bendigo ..	14 "	10 "
Sale ..	20 "	20 "

Ballarat Tuberculosis Chalet has been replaced temporarily with an Army hut accommodation for twenty beds. When the new Infectious Diseases Block is built 34 beds will be provided. Similarly, in the case of Bendigo Tuberculosis Chalet, when it is replaced, 34 beds will also be available in the new Infectious Diseases Block.

These Chalets have served a very useful purpose in the reception of tuberculosis cases in their areas. It is anticipated that the Government will accept responsibility for the maintenance of patients in the wards made available at Mooropna (10 male, 10 female), and Warrnambool (7 male, 8 female).

Negotiations are proceeding with the Geelong Hospital for the opening of a section of the Infectious Diseases Block—30 beds (15 male and 15 female)—for treatment of tuberculosis patients.

VISITING DENTISTS TO CHALETs.

A visiting dentist has been appointed to Sale Tuberculosis Chalet on a sessional basis to visit the Chalet once a month to attend to the needs of patients. It is hoped to extend this service to the larger Chalets at an early date if considered necessary.

DURATION OF STAY OF PATIENTS IN SANATORIA.

The following figures have been arrived at by averaging the stay, making correction for unduly short periods, due to death or where patients have left at own request:—

Gresswell ..	..	13 months
Heatherton ..	..	12 "
Greenvale ..	..	9 "
*Austin ..	..	3 "
Mint Place Annexe	..	12 "

* Austin Hospital, as the Surgical Centre, includes a number of short term beds.

CONSULTING SURGICAL, GYNAECOLOGICAL, DENTAL, OPHTHALMIC, AND LARYNGOLOGICAL SERVICES.

CONSULTING THORACIC SURGEONS.

Mr. C. J. Officer Brown, Surgeon, continues to visit each Sanatorium regularly, where, in consultation with the State Director and the Medical Superintendent, all suitable cases are considered and recommendations are made for surgical treatment where necessary.

GYNAECOLOGICAL SERVICES.

Dr. M. Ireland has continued her visits as Consultant Gynaecologist to the female Sanatoria—Greenvale and Heatherton.

OPHTHALMIC SERVICES.

We continue to have the services of Dr. Ellen J. M. Day, who visits each Sanatorium frequently for the purpose of examining patients who have some visual defect.

The supply of glasses to the poorer patients at a flat rate per head has continued under the arrangement with the Eye and Ear Hospital and proves to be satisfactory.

DENTAL SERVICES.

Visiting Dentists, Messrs. C. Dominey, F. Byrne, and Dr. Barker, still attend Sanatoria regularly on a sessional basis to attend to the dental needs of patients. It is intended in the near future to have this service extended to fortnightly visits instead of monthly as at present. Extra dental equipment will also be provided.

LARYNGOLOGIST SERVICES.

Dr. Walter Williams continues his visits to the Sanatoria for examination of patients requiring attention to ear, nose, and throat. He also attends the Central Tuberculosis Bureau on one half day each week.

It will be seen therefore that our Sanatoria patients have available to them highly-specialized services which are much appreciated.

CENTRAL TUBERCULOSIS BUREAU.

Clinical Tuberculosis Officer: Dr. H. M. James.

Herewith summary of X-ray activities at this Bureau for the period 1st July, 1948, to 30th June, 1949.

(a) 35M/M Micro Films.

Mass Surveys ..	..	2,670
Contacts ..	..	3,498
Total ..	..	6,168

(b) Large Films

..	..	12,875
Grand Total ..	..	19,033

Departments of Public Service dealt with—

Education Department
Victorian Railways
Metropolitan Gas Company
Sanatoria and Bureau Staff
Trans-Australian Airlines employees (Hostesses)
Red Cross Employees
Melbourne and Metropolitan Board of Works
Government Printing Office
Building Directorate
Miscellaneous

Follow up examinations revealed the following figures:—

Public Servants—

Active Tuberculosis ..	0.1 per cent.
Quiescent Tuberculosis ..	0.65 "

Contacts—

Active Tuberculosis ..	0.8 "
Quiescent Tuberculosis ..	1.15 "

BUREAU ATTENDANCES—METROPOLITAN AND COUNTRY.

Bureaux.	New Cases Applying.	Total Attendances Old and New Cases.	X-ray Examinations.		A.P. Refills Attendances.
			Films.	Screens.	
Central ..	8,316	30,603	19,033	4,342	1,433
Ballarat ..	161	767	530	1	132
Bendigo ..	593	2,164	925	208	215
Geelong ..	188	1,299	466	160	155
Prahran ..	6,380	7,403	977	..	..
Total ..	15,638	42,236	21,931	4,711	1,935

NUMBER OF CONTACTS EXAMINED.

Bureau.	Infecting Cases.	New Contacts.	Number of Re-examinations.	Total Number of Contacts Examined (Old and New).
Central ..	804	2,788	5,849	8,637
Ballarat ..	25	91	207	298
Geelong ..	43	134	584	718
Bendigo ..	60	124	459	583
Prahran ..	354	353	286	639
Total ..	1,286	3,490	7,385	10,875

CONTACTS FOUND ACTIVELY TUBERCULOUS FROM ABOVE EXAMINATIONS.

Bureaux—

Central ..	..	71
Ballarat ..	..	2
Bendigo ..	..	4
Geelong ..	..	7
Prahran ..	..	1
Total ..	..	85 = 0.78 per cent.

NUMBER OF CONTACTS EXAMINED BY VOLLMER PATCH TESTS.

—	Number.	Positive.	Negative.	No Record of Result.
Contact of cases with positive sputum ..	76	19	34	23
Contact of cases with negative sputum ..	26	2	19	5
Contact of cases with no record of sputum ..	289	37	149	103
Contact of cases with no sputum ..	37	..	25	12
Total ..	428	58	227	143

RESULT OF X-RAY OF POSITIVE VOLLMER TESTS.

Positive.	Negative.	Doubtful.	Total.
..	46	12	58

INVESTIGATION OF APPLICANTS FOR MINERS' PHTHISIS ALLOWANCES.

Bureaux.	Number Reviewed.	Silicosis.	Silicosis plus Tuberculosis.	Tuberculosis only.	Negative.
Central ..	11	9	2	..	..
Bendigo ..	5	3	..	..	2
Ballarat ..	11	5	..	..	6
Geelong ..	..	..	..	..	..
Prahran ..	..	..	..	..	..
Total ..	27	17	2	..	8

TRAINEES X-RAYED FOR FOUNDLING HOSPITALS—BROADMEADOWS AND EAST MELBOURNE.

Number Examined.	Positive.	Negative.	Doubtful.
3 ..	..	2	1

VISITING NURSES' ACTIVITIES.

We have at present nine visiting nurses at the Central Tuberculosis Bureau. In addition one nurse helps from the Melbourne Town Hall, three work at Country Bureaux, and five in Country Health Areas.

Tuberculosis Bureaux.

Since my last report, an increase has been shown in the number of visits from the Central Tuberculosis Bureau and Country Branch Bureaux. Replacements due to resignations have not given the visiting nurses service its full impetus, but it is anticipated that next year with our present staff, and cars provided, a greater improvement in the figures will be evidenced. Details of the activities are as shown hereunder:—

Bureaux.	First Visits.	Revisits.	Invalid Pensioners Visited.
Central ..	637	5,548	2,378
Ballarat ..	15	855	132
Bendigo ..	44	465	..
Geelong ..	246	243	177
Prahran ..	56	89	54
Total ..	998	7,200	2,741

Country Health Areas.

The five nurses attached to the Country Health Areas continue to carry out excellent work in visiting tuberculosis patients, arranging X-rays of contacts, Mantoux and Volmer Patch Testing of school children in various districts, and assisting generally in the Health Weeks

and Mass X-ray Surveys carried out in their Health Areas. A summary of their activities over the year is as follows:—

Area.	Number of Homes Visited and Re-visited.	Number of T.B. Patients Visited.	Number of Contacts Visited.	Number of X-Rays Ordered.	Number of Children Volmer Patch Mantoux Tested.
Eastern ..	256	86	464	119	2,844
Northern ..	576	59	1,731	638	9,080
North-Eastern ..	119	28	98	86	4
Western ..	178	55	288	110	56
North-Western ..	678	83	528	153	524
Total ..	1,807	311	3,109	1,106	12,508

TREATMENT.

Artificial Pneumothorax.

At present 275 patients are receiving the above treatment. A summary is set out hereunder:—

Bureaux, Chalets and Sanatoria.	Male.	Female.	Total.
Central	33	86	119
Ballarat	5	2	7
Bendigo	8	11	19
Geelong	2	4	6
Prahran	..	..	..
Sanatoria and Chalets ..	20	48	68
Austin Hospital	2	7	9
Mint-place Annexe	7	40	47
Total	77	198	275

GENERAL.

NEW SANATORIUM—WATSONIA.

Plans have been prepared for the building of an eleven-storied sanatorium at Watsonia to accommodate 400 patients with suitable staff accommodation. The land (86 acres) has been purchased by the Government.

HOSTELS FOR DISCHARGED SANATORIA PATIENTS.

For many years I have asked for the provision of hostels for certain discharged patients. The Minister has approved of the purchase of two buildings for this purpose. One has been acquired and will shortly be opened.

Function of Hostels.—Accommodation of certain selected ex-patients from sanatoria who are fit for work and who have no suitable home accommodation and would have to live either in lodgings or boarding houses. Supervision of their care and nutrition. Admissions to be arranged through the State Director of Tuberculosis.

Type of Resident.—

1. Resident must have arrested lesions.
2. Resident must be fit for work and have a job.
3. Resident should be willing to stay for a period of six to twelve months. This period may be extended by the Committee appointed, acting on medical service.

Transport Facilities.—These must be available in shape of bus, train, or tram.

Staff.—A small staff consisting of—

- (a) Matron, preferably, but not necessarily, a nurse.
- (b) A capable cook.
- (c) An assistant or relieving cook.
- (d) A handyman—cleaner.
- (e) Possibly in the male hostel additional help would be required, i.e., one or two domestics.

These buildings would, in fact, act as boardinghouses and would provide board and lodging of high standard for certain ex-sanatoria patients at the lowest possible cost. The patients would pay for their own keep and the project should be almost self-supporting.

It is proposed to ask the Victorian Division of the Red Cross Society to undertake the running of these institutions when purchased, the Government to make good all expenses connected therewith.

FINANCIAL ALLOWANCES TO TUBERCULOSIS SUFFERERS.

The Committee appointed by the Minister consisting of the Director of Tuberculosis, the Accountant of the Department of Health, Mr. N. S. Shiels, and Mr. L. Wilson, Chief Clerk of the Department of the Treasury, continue to administer the scheme. These allowances are paid to the following groups:—

Patients on Waiting List for Sanatoria—

1. Single persons.
2. Breadwinners or patients with dependents.

Patients in Sanatoria or Hospitals for Tuberculosis—

1. Breadwinners or patients with dependents.

Patients Discharged from Sanatoria for not more than Six Months—

1. Single persons.
2. Breadwinners or patients with dependents.

TUBERCULOSIS ALLOWANCES.

The scheme provides for the payment of allowances to sufferers from pulmonary tuberculosis who are considered to be unfit for work, and who are receiving satisfactory medical attention and supervision. The means test of the Department of Social Services is applied to all applications, and if a sufferer comes within this test he or she is assured of the following income *per week* until such time as considered fit to resume employment.

Single Persons—	£	s.	d.
Invalid Pension	2	2	6
Tuberculosis Allowance	0	10	0
	2	12	6

N.B. Single persons do not receive any tuberculosis allowance for the period whilst they are receiving free institutional treatment in a sanatorium, chalet, or hospital.

Married Persons—	£	s.	d.
(a) Man and Wife—			
Invalid Pension	2	2	6
Wife's allowance under Invalid Pension ..	1	4	0
Tuberculosis Allowance	1	5	0
	4	11	6

(b) Man, Wife, and 1 dependent child—

Invalid Pension	2	2	6
Wife's allowance under Invalid Pension ..	1	4	0
Child allowance under Invalid Pension ..	0	9	0
Tuberculosis Allowance	1	10	0
	5	5	6

	£	s.	d.
(c) Man, Wife, and 2 dependent children—			
Invalid Pension	2	2	6
Wife's allowance under Invalid Pension ..	1	4	6
Child allowance under Invalid Pension ..	0	9	0
Child Endowment	0	10	0
Tuberculosis Allowance	1	15	0
	6	0	6

(d) Man, Wife, and 3 dependent children—			
Invalid Pension	2	2	6
Wife's allowance under Invalid Pension ..	1	4	0
Child allowance under Invalid Pension ..	0	9	0
Child Endowment	1	0	0
Tuberculosis Allowance	2	0	0
	6	15	6

The tuberculosis allowance then increases by 5s. per week for each additional dependent child.

RENT ALLOWANCE.

The Victorian Government has also made available a sum of money for the payment of rent allowances to married sufferers who have been accepted for sanatorium treatment. This provides for the payment of rent of up to 30s. *per week* and is in addition to the above payments.

CHEST CLINIC EXTENSION, MINT-PLACE.

The building, formerly used by the Venereal Diseases Division, next door to the Central Tuberculosis Bureau, is now fully occupied. Two extra medical officers and two nurses have been appointed, relieving the congestion at the Central Tuberculosis Bureau to a large extent. Appointments of a Supervisor of Mass X-ray Surveys, under the direction of Dr. Lyall Andrews and Dr. J. O'Rorke, have been made, and these officers are accommodated on the top floor of the building. Mass X-ray Surveys have been set apart as a separate Division under Dr. Andrews' direction.

Dr. O'Rorke, Medical Rehabilitation Officer, has recently been appointed in place of Dr. R. Boyle who has assumed a clinical post in the Central Tuberculosis Bureau.

It has been found that the extra premises, provided by this building, have not been sufficient to cope with the office accommodation, &c., of the rapidly expanding activities of the Mass X-ray Division.

CONSULTATIVE COUNCIL ON TUBERCULOSIS.

This body was disbanded on 2nd March, 1949. Details of its recommendations have been presented to the Minister of Health in September, 1947, and were set out in my last report.

The State Sanatoria Board which had functioned since 1933, was replaced by the Departmental Tuberculosis Committee early this year.

STREPTOMYCIN.

Funds have been provided by the Government for the use of Streptomycin in selected cases of tuberculosis at Austin Hospital, the Sanatoria, and Country Tuberculosis Chalets. This substance appears to offer considerable promise.

An article was published by Dr. Rosenthal, and another by Dr. Bristow, Dr. Bull and myself in the *Medical Journal of Australia*. Streptomycin has a definite but limited use in the treatment of lung tuberculosis. It is particularly helpful in association with surgical procedure. It does not, and should not be expected to, replace the well-tried methods of bed-rest and various well-tried procedures of collapse therapy. Rest is still a keystone of successful treatment of tuberculosis.

TUBERCULOSIS SICK LEAVE FOR STAFF.

I reiterate details of methods adopted in our institutions for the protection of staff against Tubercle Bacilli:—

- (a) *Mantoux Tests* at 9.15 a.m. on day of starting duty.

If negative, repeated in two monthly intervals.

- (b) *X-ray examination* on day of starting duty. X-ray examinations are made as follows:—

(a) Mantoux-positive staff at six-monthly intervals;

(b) Mantoux-negative staff at two-monthly intervals;

(c) Additional examinations made at any time required.

2. Monthly record of weight seen by Matron and a Medical Officer.
3. Daily sick parade at 9.15 a.m. with reference to visiting specialists as required.
4. Wearing of overalls on wards. All members of nursing staff wear overalls when on duty. There is no exception to this rule.
5. Every patient is asked to avert his or her head from anyone in attendance. This simple precaution means that, in the event of a patient talking, coughing, or sneezing suddenly, infected droplets shall not be directed at the nurses' face.
6. Bowl of disinfectant in pan rooms.
7. Masks available on request and compulsorily worn in certain specified cases.
8. B.C.G. for Mantoux negative staff.
9. Staff—respiratory tract infection, warded or given duties away from patients.
10. Staff on duty before breakfast must take food before going to the wards.
11. Nurses get an arranged series of lectures from Medical Officers.
12. Ward sisters instruct newcomers in hygiene. Lectures to patients fortnightly regarding droplet infection, &c.

We are endeavouring to have these methods applied to Base Hospitals. In our sanatoria, members of the staff who contract tuberculosis, are eligible for six months' leave on full pay and three months on half pay under the Public Service Regulations 40, (4 and 5).

B.C.G.

We have previously obtained this vaccine from Montreal, Canada, but I am happy to report that the Commonwealth Serum Laboratories have established a separate laboratory in charge of Dr. E. North for the production of B.C.G. to be available in Australia.

To date 2,000 persons have been vaccinated in Victoria. We now have a clinic open at the Central Tuberculosis Bureau several days a week and are extending the work to suitable subjects. In the first place contacts of patients segregated in Sanatoria are vaccinated and later their contacts in the city, where possible. It is our endeavour to extend our work to Branch Bureaux and Base Hospitals, and in future to vaccinate all negative skin-tested children on leaving school.

PREVENTION OF BOVINE TUBERCULOSIS AND SAFE MILK SUPPLY.

This Branch strongly endorses the recommendation of the Health Commission for Pasteurization of Milk.

It is impossible to mention individuals by name in this report, but I would like to express my very great appreciation of the work of all members of the staff during the year.

J. BELL FERGUSON, M.D., M.R.C.P.,
D.P.H., F.R.A.C.P., F.C.C.P.
DIRECTOR OF TUBERCULOSIS

REPORT OF THE DIVISION OF CHEST X-RAY SURVEYS, 1st JULY, 1948, TO 30th JUNE, 1949.

The latter part of 1948 and the early part of 1949 constituted a period during which considerable follow-up work was finalized from previous surveys. It also saw much planning of fresh equipment and methods.

New impetus was given to the survey drive by the delivery of two new machines from the manufacturers. Those machines had been the result of much thought and much planning and considerable caution was used before putting them into action in big surveys. This slowed down the tempo of surveys and this period was usefully employed in training new members of the staff, in improving equipment and in systematising office routine. It was not until 1949 was well advanced that a series of successful surveys in Sandringham, Geelong, and Ballarat was undertaken, 45,000 people being X-rayed in these three places alone. In spite of this slowing down of the work, 150,000 people were X-rayed in the twelve months, and this result must be considered very satisfactory in the face of earlier difficulties. The delivery of several new machines in the next few months is expected.

The efficiency of the work has been greatly assisted by the extended loan from the Royal Australian Air Force of an X-ray tender. This vehicle, which incorporates a fully-equipped and heat-controlled dark room, enables the continuous monitoring of films and has added considerably to the technical efficiency of surveys.

More vehicles of this same general type are on order. We have also taken delivery of a caravan vehicle, which, when an X-ray unit has been fitted, will be extremely useful in providing a service to small country centres and factories.

The year, too, has seen the expansion of the skin-testing campaigns amongst school children and pre-school children by the General Health Branch. The provision of X-ray facilities by the Division has added considerably to the bulk of our work. This work however, has been of considerable interest and a close liaison has been maintained with the District Health Officers. It is hoped soon to produce very interesting statistics on the epidemiology of tuberculosis. This work, unfortunately, was not sufficiently advanced for inclusion in this report.

The statistical side of the work of the Division has been considerably hampered by the lack of a tabulating system and machine. Many of the appended tables would hold a good deal more meaning, especially when dealing with age-groups, if they could have been expressed in percentages of the number X-rayed. The volume of the work is so great, however, that a very large statistical staff would have to be kept for sorting and production of figures. The introduction of a tabulating machine must be regarded as a high priority for the coming year.

Even so, the figures now being produced are much more accurate and statistically reliable as the Division expands more and more its close check and follow-up of cases. Without this and the investigation of cases until at least a provisional diagnosis is secured and an intelligent disposal of the case made, much of the value of our work would be lost and much public money wasted. It is probably the most important of our activities. In terms of time (and money) spent per case it is relatively expensive but is nevertheless absolutely essential. In this regard, tribute must be paid to the valuable work performed by the nursing staff in particular. They have shown an intelligent appreciation of the general situation and a tact and discretion in the handling of the public which has earned much good will. They have attained a high skill in carrying out the necessary investigational work and in case-history taking. They

have also shown a marked aptitude as pupils in the actual operation of X-ray machines. In fact it is not too much to say that, with the totally inadequate medical help available, the Division could not have carried on without them.

The quality of films produced by the technicians has now reached a high standard, and the radiological specialists who have so loyally assisted us in this work now express themselves as well satisfied with the films presented to them.

It will be noted that, in the twelve months under review, 528 active and possibly-active cases and 2,306 healed or quiescent cases, or 0.45 per cent. and 1.48 per cent. respectively of the total number X-rayed, were discovered. The ratio between the two is regarded as important. From the case histories it is obvious that large numbers of people recover from tuberculosis without any particular help. It is felt that the surveys may enable more people to obtain just that little assistance from their medical advisers which will turn the scale in their favour and reduce not only the morbidity but the mortality.

Early diagnosis will also reduce the number of chronic, incurable, and infectious cases loose in our midst. There are already far too many of these and they constitute a major problem.

Mention must be made too of the general public satisfaction expressed at the fact that all examinees are notified of the results individually and confidentially. This adds considerably to the bulk of the work. It needs careful and painstaking attention to detail by the reporting staff but is felt to be well worth while.

Reference is necessary to the 3,600 people who were found to be suffering from conditions other than tuberculosis. Many patients and many medical men have expressed their gratitude for timely warnings of a large variety of conditions and it is inevitable that, if we are to keep up with the trend of modern thought in other parts of the world, this aspect of the work must receive more attention. No medical man with a true appreciation of his profession can regard these things with indifference. After all, from the point of view of the individual and the point of view of the health of the nation, they are tremendously important.

In one essential matter the Division does not feel happy about the future. With the handing over of the former Queen Victoria Hospital to the Cancer Institute the provision of other accommodation is extremely urgent. As is seen from the tables, many thousands of cases are being investigated here each year, and this number is sure to increase.

Loss of the quarters which we occupy without provision of other accommodation would of course mean the complete collapse of all our work. The uncertainty of tenure is at present hampering necessary re-organization.

RECOMMENDATIONS.

1. That new quarters be provided. Also provision for the garaging of vehicles.
2. That adequate medical staff be obtained. This should include—
 - (a) two radiologists at appropriate salaries;
 - (b) a well-qualified physician to assist in the assessment and disposal of the great variety of conditions presented and to watch over follow-up work generally;
 - (c) two (at present) junior physicians to supervise surveys in country districts and to conduct the follow-up investigations in those areas.

L. ANDREWS.

INDEX OF SURVEYS.

AT	..	Ararat	LE	..	Lakes Entrance
AV	..	Avoca	LS	..	Life Savers (St. Kilda)
BA	..	Bairnsdale	MA	..	Maryborough
BE	..	Benalla	MBN	..	Moorabbin
BF	..	Beaufort	ME	..	Merbein
BR	..	Brunswick (Sacred Heart)	MI	..	Mildura
BO	..	Bendigo	MY	..	Myer's
CL	..	Camberwell	PN	..	Preston
CC	..	Colac	QV	..	Queen Victoria Hospital
CA	..	Castlemaine	RC	..	Red Cliffs
CN	..	Camperdown	RI	..	Richmond
CO	..	Collingwood	RM	..	Russell Manufacturing
DA	..	Dandenong	S	..	Sandringham
D/C	..	Die Casters	SA	..	St. Arnaud
EC	..	Electrolux	SR	..	Shepparton
EX	..	Exhibition	SM	..	South Melbourne
EU	..	Euroa	SU	..	Sunshine
FR	..	Frankston	SW	..	Stawell
FTG	..	Ferntree Gully	TAA	..	Trans Australian Airways
GL	..	Geelong	TG	..	Terang
HDL	..	Handley's	TO	..	Toora
HW	..	Hawthorn	WA	..	Wangaratta
HO	..	Horsham	WK	..	Warracknabeal
HP	..	Holeproof	WO	..	Wonthaggi
KY	..	Kyneton	YF	..	Yarra Falls
			BT	..	Ballarat

T.B. AND NON T.B. ABNORMALITIES.

PERCENTAGE OF TOTAL NUMBER X-RAYED DURING YEAR ENDED 30TH JUNE, 1949.

(Children and Adults—Micro and Large Films.)

—	X-rayed.	Proved and Possibly Active T.B.		Healed or Quiescent T.B.		Total T.B.		Non T.B.	
		Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.
Metropolitan Area	77,532	323	0.41	1,227	1.53	1,550	1.94	1,512	1.95
Country	72,673	354	0.49	1,042	1.43	1,396	1.92	2,164	2.96
Total	150,205	677	0.45	2,269	1.48	2,946	1.93	3,676	2.46

PERCENTAGE OF CHILDREN X-RAYED DURING YEAR ENDED 30TH JUNE, 1949.

—	X-rayed.	Proved and Possibly Active T.B.		Healed or Quiescent T.B.		Total T.B.		Non T.B.	
		Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.
Metropolitan Area	3,953	16	0.40	182	4.60	198	5.00	47	1.19
Country	6,357	18	0.28	99	1.56	117	1.84	15	0.24
Total	10,312	34	0.34	281	3.08	315	3.42	62	0.72

PERCENTAGE OF ADULTS X-RAYED DURING YEAR ENDED 30TH JUNE, 1949.

—	X-rayed.	Proved and Possibly Active T.B.		Healed or Quiescent T.B.		Total T.B.		Non T.B.	
		Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.
Metropolitan	73,577	307	0.42	1,045	1.42	1,352	1.84	1,465	1.99
Country	66,316	336	0.51	943	1.42	1,279	1.93	2,149	3.24
Total	139,893	643	0.46	1,988	1.42	2,631	1.88	3,614	2.62

MANTOUX AND VOLLMER POSITIVE CHILDREN.

Total X-rayed.	Proves and Possibly Active T.B.		Healed or Quiescent T.B.		Total T.B.		Non T.B.	
	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.
2,100	23	1.10	193	9.20	216	10.29	37	1.76

Survey.	Micro Films.					Large Films.					T.B. Abnormalities.					Non T.B. Abnormalities.			TFD. to Bureau.
	Adults.		Children.		Total.	Adults.		Children.		Total.	Proved Active.	Possibly Active.	Healed or Quiescent.	Total.	Cardiac.	Other.	Total.		
	Male.	Female.	Male.	Female.		1st L.F.	Re-Ray.	1st L.F.	Re-Ray.										
Ararat	1,328	1,509	254	249	3,340	189	2	56	3	250	4	4	52	60	33	28	61	..	
Ballarat	8,638	10,391	597	664	20,290	1,641	..	501	..	2,142	5	82	307	394	207	315	522	..	
Beaufort	271	313	66	68	720	38	3	6	..	47	..	1	8	9	6	17	23	..	
Bendigo	4,689	5,763	590	733	11,775	879	9	227	5	1,120	26	63	208	307	225	192	417	1	
Camberwell	3,031	4,281	247	273	7,832	322	74	330	254	980	8	16	174	198	59	58	117	29	
Camperdown	737	812	57	58	1,664	262	4	32	..	298	1	9	46	56	57	24	81	..	
Colac	2,315	2,459	160	165	5,099	372	27	82	19	500	3	23	75	101	102	61	163	5	
Die-Casters	193	61	..	..	254	38	9	..	..	47	..	1	11	12	2	2	4	1	
Echuca	1,685	1,712	261	272	3,930	259	..	83	..	342	..	13	44	57	15	27	42	..	
Electrolux	268	86	..	..	354	18	7	..	..	25	..	1	7	8	1	3	4	2	
Frankston	462	687	245	293	1,687	59	8	18	3	88	1	..	24	25	22	11	33	4	
Geelong	7,643	7,393	576	576	16,188	1,011	23	279	5	1,318	6	66	173	245	119	209	328	1	
Hawthorn	1,709	2,140	154	163	4,166	248	55	235	183	721	11	20	145	176	27	23	50	29	
Holeproof	281	218	29	15	543	41	4	6	..	51	..	3	16	19	1	1	2	2	
Kyneton	267	304	134	131	836	38	1	10	..	49	1	1	4	6	18	5	23	..	
Moorabbin (1st Survey) ..	1,098	496	25	17	1,636	144	9	196	16	365	1	6	41	48	12	27	39	6	
Mooroopna Base Hospital ..	653	748	..	..	1,401	10	..	..	..	10	..	5	5	10	8	6	14	..	
Preston	3,115	3,786	326	409	7,636	837	108	42	4	991	10	39	183	232	97	114	211	55	
Queen Victoria Hospital ..	1,576	1,481	48	56	3,161	550	59	198	87	894	10	29	119	158	27	61	88	28	
Russell Manufacture	247	73	..	..	316	47	10	..	..	57	1	1	9	11	9	11	20	1	
Sacred Heart Hospital	2,341	3,046	..	..	5,387	147	24	8	3	182	16	9	66	91	39	52	91	28	
St. Arnaud	372	422	100	157	1,051	87	4	1	1	93	1	6	26	33	20	12	32	..	
Sandringham	4,470	3,628	293	354	8,745	714	59	461	55	1,289	8	42	130	180	106	146	252	37	
Seymour	816	801	52	45	1,714	113	..	30	1	144	..	18	22	40	11	21	32	..	
South Melbourne	5,049	3,376	675	960	10,060	564	108	74	215	861	36	27	176	239	58	150	208	59	
Stanford X-rays	34	5	1	..	40	1	..	..	..	1	..	..	..	..	..	1	1	..	
Stawell	623	776	290	190	1,879	169	2	53	..	224	4	10	33	47	21	24	45	2	
T.A.A. and D.A.P.	1,085	54	24	2	1,163	167	..	5	..	172	1	2	18	21	4	17	21	4	
Terang	778	798	58	62	1,696	230	4	68	..	302	..	7	44	51	53	28	81	1	
Yarra Falls	301	262	12	17	592	18	4	1	..	23	..	..	4	4	10	4	14	..	
Totals	56,071	57,881	5,276	6,019	125,247	9,215	617	2,999	854	13,688	154	504	2,259	2,917	1,169	1,740	2,909	295	

LARGE FILMS FOR OTHER SURVEYS.

FOLLOW-UP FILMS FROM SURVEYS OUTSIDE THE PERIOD
1ST JULY, 1948 TO 30TH JUNE, 1949.

Survey.	Adults.		Children.		Total.
	1st L.F.	Re-ray.	1st L.F.	Re-ray.	
Alexandra	..	..	22	..	22
Avoca	..	..	1	..	1
Bairnsdale	2	..	..	..	2
Castlemaine	4	2	..	1	7
Collingwood	..	57	..	297	354
Dandenong	1	36	..	..	37
Euroa	1	..	..	..	1
Exhibition	1	4	..	..	5
Ferntree Gully	..	20	119	99	238
Foster	..	1	..	..	1
Handleys (1st Survey) ..	..	18	..	..	18
Horsham	3	1	..	1	5
Lakes Entrance	2	..	..	..	2
Maryborough	15	1	..	..	16
Mansfield	..	..	37	..	37
Merbein	82	1	7	1	91
Mildura	193	..	34	2	229
Myers	12	11	2	..	25
Red Cliffs	139	1	12	..	152
Richmond	1	29	..	..	30
St. Kilda Life Saving ..	..	1	..	..	1
Staff	33	16	..	..	49
Sunshine	4	11	..	159	174
Toora	..	1	..	..	1
Warracknabeal	48	1	12	4	65
Williamstown	..	..	124	1	125
Wonthaggi	6	4	2	..	12
Yallourn	2	..	54	..	56
Yea	1	..	9	..	10
Totals	552	216	435	565	1,768

(Abnormalities in this section not included in totals).

Large Films received from Country Hospitals, &c., during period 1st July, 1948, to 30th June, 1949 = 396.

Large Films sent to Private Doctors (on loan) for inspection during period 1st July, 1948, to 30th June, 1949 = 278.

Large Films forwarded to Central T.B. Bureau during period 1st July, 1948, to 30th June, 1949 = 295.

Micro Films taken by Central T.B. Bureau (excluding Bureau contacts) = 2,391.

PRAHRAN FIXED CENTRE.

Micro Films.			T.B. Abnormalities.			Non T.B. Abnormalities.		
Male.	Female.	Total.	Possibly Active.	Healed or Quiescent.	Total.	Cardiac.	Other.	Total.
3,313	3,175	6,488	19	29	48	61	198	259

WILLIAMSTOWN FIXED CENTRE.

Micro Films.			T.B. Abnormalities.			Non T.B. Abnormalities.		
Male.	Female.	Total.	Possibly Active.	Healed or Quiescent.	Total.	Cardiac.	Other.	Total.
2,034	2,178	4,212	5	18	23	61	37	98

SUMMARY.
Total Micros.

Surveys (1948-49)	125,247
T.B. Bureau	2,391
Fixed Centres	10,700
Total	138,338

Total Large Films.

Surveys (1948-49)	13,685
Other Surveys	1,768
Country Hospitals	396
Total	15,849

T.B. Abnormalities.

<i>Proved Active—</i>	
Surveys	154
<i>Possibly Active—</i>	
Surveys	504
Fixed Centres	24
Total	528

Healed or Quiescent—

Surveys	2,259
Fixed Centres	47
Total	2,306

Non T.B. Abnormalities.

<i>Cardiac—</i>	
Surveys	1,169
Fixed Centres	122
Total	1,291
<i>Other Non T.B.—</i>	
Surveys	1,740
Fixed Centres	235
Total	1,975

T.B. ABNORMALITIES IN AGE GROUPS.
(EXPRESSED IN PERCENTAGES OF TOTAL T.B. FOUND.)

Age Group.	Percentage of Proved and Possibly Active T.B.	Percentage of Healed or Quiescent T.B.	Percentage of Total T.B. Abnormalities.
	%	%	%
16-17 years	1.34	1.36	1.35
18-20 "	6.71	2.55	4.63
21-23 "	7.38	2.95	5.17
24-26 "	4.86	3.97	4.41
27-29 "	6.04	4.48	5.26
30-32 "	5.03	3.79	4.41
33-35 "	5.70	5.95	5.82
36-38 "	5.37	7.46	6.42
39-41 "	4.86	7.79	6.32
42-44 "	4.86	7.23	6.05
45-47 "	5.37	7.34	6.36
48-50 "	6.88	8.42	7.65
51-55 "	9.39	11.05	10.22
56-60 "	8.56	9.52	9.04
61-65 "	6.88	7.12	7.00
66-70 "	5.70	4.98	5.34
Over 70 years	5.03	4.19	4.61

THE FOLLOWING IS A SUMMARY OF THE
ACTIVITIES AT THE MINT-PLACE ANNEXE
FOR THE FIRST SIX MONTHS OF 1949.

Month.	Number X-rayed.	Large Films.	Micro Films.	Transferred to Bureau.	Mantoux Examinations.	Sputum Examinations.	Interviewed by Doctor.
January	721	521	200	16	389	..	119
February	1,087	912	175	56	575	49	385
March	1,458	1,180	278	22	318	204	151
April	1,338	1,160	178	38	421	124	194
May	1,242	844	398	61	282	217	229
June	792	219	573	7	68	203	46
Total	6,638	4,836	1,802	200	2,053	797	1,124

HEALED AND ACTIVE T.B. IN MALES AND
FEMALES.

DISTRIBUTION BY AGE GROUPS. EXPRESSED IN
PERCENTAGE OF TOTAL T.B. FOUND.

Age.	Healed or Quiescent T.B.		Active T.B.	
	Males.	Females.	Males.	Females.
	%	%	%	%
14-15	0.58	0.80	0.53	..
16-17	0.87	1.34	1.05	1.81
18-20	1.46	2.14	3.68	3.61
21-23	1.60	2.67	3.16	8.43
24-26	2.04	4.01	3.68	11.45
27-29	3.34	4.41	3.16	8.43
30-32	4.08	4.27	3.68	5.99
33-35	4.66	6.01	4.73	5.43
36-38	6.26	8.41	4.73	4.22
39-41	5.82	8.41	3.68	4.82
42-44	6.99	6.54	6.32	5.99
45-47	7.99	7.34	7.36	2.40
48-50	9.89	6.54	8.42	7.23
51-55	13.24	8.81	10.53	5.99
56-60	13.10	10.15	9.47	4.82
61-65	6.99	7.74	9.47	5.99
66-70	6.10	5.61	8.95	9.04
71-over	5.10	4.81	7.36	4.22

STATISTICS SHOWING THE RELATIONSHIP
BETWEEN PLEURAL AFFECTIONS AND
PARENCHYMAL LESIONS OF THE LUNG
TISSUES AS REVEALED BY CHEST
SURVEY RECORDS.

Total number of cases showing pleural abnormality	476
Number showing partial or complete obliteration of the costo-phrenic angle	306
Number with adhesions between the basal pleura and diaphragm	96
Number with scarred or thickened pleura above the diaphragm	71
Number with history of pleurisy	3
No radiological evidence of parenchymal lesion	240 (50.4 per cent.)
Radiological evidence of parenchymal lesion	236 (49.6 per cent.)
Total	476

Of the 236 with parenchymal lesions—

198 showed evidence of tuberculosis.

38 showed non-tuberculosis lesions (mostly due to chest trauma, in most of these metal pieces were found in the lungs, some were associated with old fractured ribs, while others were associated with old pneumonias and empyemas.)

Of the 198 tuberculosis cases—

20 (10.1 per cent.) suffered from an active form.
178 (89.9 per cent.) were healed or quiescent forms.

Suffering from an active form of tuberculosis were those whose—

- (a) sputum was found to contain Koch's bacillus (five cases only);
- (b) whose consecutive X-ray films showed an increase of infiltration;
- (c) who had a massive infiltration of recent date;
- (d) those in whom the clinical opinion obtained from the Bureau or attending practitioner was to this effect.

Without a longer period of examination and more intensive clinical investigation the division into active and quiescent forms shows a vague margin and the figure of 20 active cases out of 198 must be regarded as statistically unreliable. One can only state that out of 198 tuberculosis sufferers, 20 or more have an active form, and 178 or less have a quiescent form or are healed.

It is pointed out that due to certain vagueness in the records a statistical correction would place the percentage of parenchymal lesions at 55 to 60 per cent., and tuberculosis at 50 per cent.

VARIABILITY IN TUBERCULIN SKIN TESTING.

Early in the surveys, certain apparent discrepancies were noted in the Mantoux results as compared with the Radiological and Clinical findings. An attempt has been made to express this variation statistically in the tables and analyses hereunder. Random groups were selected for this purpose, and although the results must be regarded as incomplete, and to some extent inconclusive, they do indicate the necessity for further investigation. To these tables have been appended results from the Ballarat Survey. Most of the early work was done with 1-1,000 Commonwealth Serum Laboratory Old Tuberculin ready diluted. In Ballarat, Mantoux Testing amongst the adults was done either with freshly prepared Old Tuberculin or with Park Davis P.P.D. In the Ballarat Survey, certain tendencies can be seen from the tables which might be worth following up. It would appear that people with calcified nodules show a positive skin test in a higher percentage than those with fibrotic lesions. It seems that females incline to react to a tuberculosis infection with calcification more than males; males showing a greater tendency to fibrotic changes. This may explain to some extent why the tuberculosis-infected females show a positive reaction in a higher percentage than the males.

A total of 497 cases in adults were analysed.

Of these—

317 showed a positive reaction.
215 showed a negative reaction.

This must not be taken as an indication of the relative percentage of positive and negative in the community as, although many of these tests were done before the X-ray examination, many of the people were those who had been recalled for examination in connection with some abnormality noted in their films.

MANTOUX TESTING.

Positive reaction.

Total	317
No radiological evidence of T.B.	51 (16.1 per cent.)
Doubtful radiological evidence ..	30 (9.5 ")
X-ray evidence of parenchymal lesion	236 (74.4 ")

Of these latter 236—

58 or 24.6 per cent. had an active form of T.B.
178 quiescent or healed forms.

Negative reaction.

These are the people with whom this analysis is principally concerned—

Total	215
No radiological evidence of T.B.	52 (23.7 per cent.)
Doubtful radiological evidence ..	110 (51.1 ")
X-ray evidence of parenchymal lesion	53 (25.2 ")

Of these latter 53—

2 or 3.8 per cent. had a proved active form of T.B., the remainder were quiescent or healed.

Results of some children showing negative reaction to the Mantoux test were also taken.—

Total	18
No radiological evidence of T.B.	12
Doubtful cases	5
X-ray evidence of parenchymal lesion ..	1

VOLLMER TESTING.

The total number shown as having been Vollmer-tested amongst adults was 25.

Positive reaction.

Total	22
No radiological evidence of T.B.	8
Radiological evidence of T.B. ..	14

Negative reaction.

Total	3
No radiological evidence of T.B.	1
Radiological evidence of T.B. ..	2

CHILDREN—VOLLMER TESTING.

Positive reaction.

Total	497
No radiological evidence of T.B.	427 (85.9 per cent.)
Radiological evidence of T.B. ..	70 (14.1 ")

(A comparative group of 336 children Mantoux tested and showing positive reaction had shown 18 or 5.5 per cent. with radiological evidence of T.B.)

Negative reaction.

Total	8
No radiological evidence of T.B.	6
Doubtful	2
Radiological evidence of T.B. ..	Nil

The meaning of the severity of reaction to Mantoux and Vollmer Tests.

MANTOUX TEST.

Positive reaction.

Out of those showing no signs of T.B. on X-ray films (total 51), four had an extraordinarily severe reaction.

Out of those showing an active T.B., 8 had a very mild reaction, 3 had a strong reaction, and the remaining 47 had what might be called a normal positive reaction.

Two cases with active T.B. had a negative reaction.

VOLLMER TESTING.

No observations as to intensity were made.

A further survey of those adults and children showing negative reactions was also entered into. This was aimed at showing how many people who had ample opportunity according to our records of becoming infected remained Mantoux or Vollmer negative. The criterion here was that there must be a clear history of *prolonged* infection such as from husband and wife, or father or mother, and where the possible infecter was actually an active case.

Of the 215 Mantoux negative adults referred to above, 21 showed evidence of continuous contact with an infected person.

133 cards showed record of no contact.

61 cards had no record.

Of these 21—

5 showed radiological evidence of T.B.

12 gave doubtful appearances.

4 showed no X-ray evidence of T.B.

The Vollmer negative adults gave no history of contact.

CHILDREN.

Number of Mantoux negative children—18.

Likely to have been exposed to continuous infection	2
Having been exposed occasionally to infection..	3
No contact known	10
No record	3
	18

Number of Vollmer negative children—8.

Likely to have been exposed to continuous infection	2
Having been exposed occasionally to infection..	2
No contact known	3
No record	1
	8

Considerations—

The readings refer to reaction to Commonwealth Serum Laboratory Old Tuberculin of strength 1-1,000. To C.S.L. Vollmer patches and to patches prepared at Gresswell.

No consideration has been given to reactions to Old Tuberculin of greater concentration which were taken out in the course of investigation, as it is felt that this memorandum must refer to the standard method adopted by the Department as a method of screening the population by skin testing.

The method must stand the test of its efficacy using standard solutions not likely to produce a dangerous reaction administered by people of average ability, such as doctors and nurses as the people the Department is likely to have available for such work.

The numbers involved in this Survey are not large, under 1,500, but the results must make one seriously consider the following points, especially as fresh instances are constantly occurring (many since these figures were taken out).

(a) Whether our technique and methods are sufficiently standardized and accurate; or

(b) Whether there are sufficient people in the community whose digestion-immunity systems react in a different manner to the majority as to make this a dangerous method on which the Department is to hang not only its own reputation but the safety of the public.

With regard to the former point, the great majority of these people were tested by doctors who must be taken to be of average skill.

The solutions were vouched for by the Commonwealth Serum Laboratories, who state that the ready-prepared solutions which they put up will undoubtedly retain their potency until the date marked on the packages.

What might be called a reverse view of the figures may be taken based on two findings—

(a) The intensity of the Mantoux reaction appears to have no bearing on the intensity or severity of the tuberculous infection.

(b) The majority of those having a positive Mantoux reaction have apparently normal X-ray pictures. (94 per cent. in children and 25 per cent. in adults), as regards tuberculosis.

It must be admitted, on a point of sheer evidence, that there is nothing in these figures to deny the claim of anybody saying that the Mantoux reaction was a non-specific reaction which might be caused by other things than Koch's bacillus. Rather when combined with the analysis of negative reactors above, there might reasonably be said to be much to support such a claim.

MANTOUX-TEST IN PROVED CASES OF ACTIVE PULMONARY TUBERCULOSIS IN RELATIONSHIP TO AGE.

Age.	Positive.	Mildly Positive.	Negative.	Total.
5-10	2	..	..	2
10-20	5	2	2	9
20-30	20	6	3	29
30-40	22	1	0	23
40-50	21	4	8	33
50-60	13	3	7	23
60-70	4	3	11	18
70-80	..	..	5	5
Total	87	19	36	142

(The same in percentages.)

	%	%	%	Total Number Examined.
5-10	100	0	0	2
10-20	56	17	17	9
20-30	69	20	10	29
30-40	96	4	0	23
40-50	64	12	24	33
50-60	56	14	30	23
60-70	22	17	61	18
70-80	0	0	100	5
Total	61	14	25	142

MANTOUX-TEST IN RELATION TO TYPE OF T.B. AND AGE.

Age.	Exudation.	Nodulation.	Opacity.	Calcification.	Infiltration and Astenomagnaly.	Infiltration (Apical).	Fibrotic Infiltration.	Fibro-caseous Infiltration.	Fibro-cavernous Infiltration.	Total.
5-10—										
Positive ..	..	..	..	..	1	1	..	..	..	2
Mild positive ..	..	..	..	..	..	..	..	..	..	..
Negative ..	..	..	..	..	..	..	..	..	..	..
10-20—										
Positive ..	..	1	..	..	..	2	1	..	1	5
Mild positive ..	..	1	..	..	..	..	1	..	..	2
Negative ..	1	..	..	..	1	..	..	..	..	2
20-30—										
Positive ..	4	4	..	2	..	5	4	..	1	20
Mild positive ..	..	1	..	..	..	..	1	1	3	6
Negative ..	..	1	..	..	..	..	..	1	1	3
30-40—										
Positive ..	6	2	..	..	..	6	3	..	5	22
Mild positive ..	..	..	..	..	..	..	..	..	1	1
Negative ..	..	..	..	..	..	..	..	..	..	..
40-50—										
Positive ..	2	4	1	..	..	5	8	..	1	21
Mild positive ..	..	..	..	..	..	..	3	..	1	4
Negative ..	..	..	..	..	1	..	6	..	1	8
50-60—										
Positive ..	4	3	..	..	..	3	2	..	1	13
Mild positive ..	..	..	..	..	..	..	1	1	1	3
Negative ..	..	..	..	1	..	1	2	..	3	7
60-70—										
Positive ..	..	..	1	..	..	1	..	..	2	4
Mild positive ..	..	2	..	..	..	..	2	..	..	4
Negative ..	..	1	..	..	..	..	4	1	5	11
70-80—										
Positive ..	..	..	..	..	..	..	..	..	..	..
Mild positive ..	..	..	..	..	..	..	..	..	..	..
Negative ..	..	..	..	..	..	1	4	..	..	5
Total—										
Positive ..	18	15	2	2	2	23	20	0	11	87
Mild positive ..	3	..	..	..	..	..	8	2	6	19
Negative ..	1	2	1	1	1	2	16	2	10	36
										142

T.B. IN MANTOUX-TESTED CHILDREN.

(Consolidation of Sandringham, Geelong, Bendigo, and Ballarat Surveys.)

—	Total Number Surveyed.	Within Normal Limits.	Total T.B. Found.	Healed T.B. Found.	Possible Active T.B. Found.	Non-T.B. Abnormal Found.
Mantoux positive ..	971	867 (89·29 per cent.)	92 (9·47 per cent.)	77 (7·93 per cent.)	15 (1·55 per cent.)	12 (1·23 per cent.)
Mantoux negative ..	174	159 (91·38 per cent.)	7 (4·02 per cent.)	4 (2·30 per cent.)	3 (1·72 per cent.)	8 (4·60 per cent.)

ILLUSTRATIVE FIGURES TAKEN FROM BALLARAT SURVEY.

Distribution of T.B. in age groups is as follows:—

ADULTS.

Table 1.

Healed T.B.

	11-20.		21-30.		31-40.		41-50.		51-60.		61-70.		71-80.		81-90.		Total.		Grand Total.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Mantoux positive	2	6	2	9	9	23	24	28	25	21	12	10	5	3	..	..	79	100	179
Mantoux negative	2	..	3	1	2	3	4	1	3	9	8	8	2	3	1	..	25	25	50
Not skin tested	1	3	3	2	2	4	1	5	9	11	8	4	3	..	1	2	28	31	59
Totals	5	9	8	12	13	30	29	34	37	41	28	22	10	6	2	2	132	156	288
	14		20		43		63		78		50		16		4				

Table 2.

Possible Active T.B.

	11-20.		21-30.		31-40.		41-50.		51-60.		61-70.		71-80.		81-90.		Total.		Grand Total.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Mantoux positive	2	..	2	8	4	7	4	4	1	3	7	1	3	..	..	..	23	23	46
Mantoux negative	3	..	2	2	1	..	1	1	4	..	2	2	1	..	..	..	15	5	20
Not skin tested	..	..	1	2	1	..	2	1	2	..	2	..	1	..	..	..	9	3	12
Total	5	..	5	12	6	7	8	6	7	3	11	3	5	..	..	..	47	31	78
	5		17		13		14		10		14		5		..				

Table 3.

Proved Active T.B.

	21-30.		31-40.		41-50.		51-60.		Total.		Grand Total.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Mantoux positive	..	1	..	..	1	..	..	1	1	2	3
Mantoux negative	..	..	..	..	1	..	..	..	1	..	1
Not skin tested	..	..	..	1	..	..	..	..	..	1	1
Total	..	1	..	1	2	..	..	1	2	3	5

CHILDREN.

Table 4.

Healed T.B.

	3-5.		6-7.		8-9.		10-11.		12-13.		14-15.		16-Over.		Total.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Mantoux positive	..	1	..	3	..	3	..	6	..	4	..	1	..	1	19
Mantoux negative	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Not skin tested	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total	..	1	..	3	..	3	..	6	..	4	..	1	..	1	19

Mantoux re-action in T.B. cases is as follows:—

ADULTS.

Table 5.

	Healed T.B.			Possible Active T.B.			Proved Active T.B.			Total T.B.			Percentage.
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	
Mantoux positive	79	100	179	23	23	46	1	2	3	103	125	228	61.46
Mantoux negative	25	25	50	15	5	20	1	..	1	41	30	71	19.14
Not skin tested	28	31	59	9	3	12	..	1	1	37	35	72	19.40
Total	132	156	288	47	31	78	2	3	5	181	190	371	..

Table 6.

	Healed T.B.			Possible Active T.B.			Proved Active T.B.		
	M.	F.	Average.	M.	F.	Average.	M.	F.	Average.
Mantoux positive	59.85	64.10	62.15	48.94	74.19	58.97	50.00	66.66	60.00
Mantoux negative	18.94	16.03	17.36	31.91	16.13	25.65	60.00	..	20.00
Not skin tested	21.21	19.87	20.49	19.15	9.68	15.38	..	33.34	20.00

Table 7.

	11-20.	21-30.	31-40.	41-50.	51-60.	61-70.	71-80.	81-90.	Average.
Mantoux positive	57.14	55.00	74.42	82.54	58.97	44.00	50.00	..	61.46
Mantoux negative	14.29	20.00	11.63	7.94	15.38	32.00	31.25	25.00	19.46
Not skin tested	28.57	25.00	13.95	9.52	25.64	24.00	18.85	75.00	19.40

CHILDREN.

Table 8.

	Total Number Surveyed.	Within Normal Limits.	Total Number Abnormal Found.	Total Number of T.B. Found.	Healed or Quiescent T.B.	Possible Active T.B.	Number of Non-T.B. Abnormal.
Mantoux positive	424	399	25	23	19	4	2
Mantoux negative	1	1	..	..	..	..	..
Not skin tested	8	7	1	..	..	..	1
Total	433	407	26	23	19	4	3

Table 9.

	Calcified Nodules.	Fibrotic Scars.	Mixed Form.
Mantoux positive	116	40	23
Mantoux negative	22	20	8
Total tested	138	60	31
Not skin tested	40	17	2
Total	178	77	33

Table 10.

	Calcified Nodules.	Fibrotic Scars.	Mixed Form.
Mantoux positive	84.06	66.70	74.19
Mantoux negative	15.94	33.40	25.81

Table 11.

	Mantoux Positive.		Mantoux Negative.		Total.	
	M.	F.	M.	F.	M.	F.
Calcified nodules	43	73	9	13	52	86
Fibrotic scars	24	16	14	6	38	22
Mixed forms	11	12	2	6	14	18

CARDIAC ABNORMALITIES.

	A.		B.		C.		D.		E.		D.		G.		Total.		Grand Total.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
AT	6	12	1	2			4	7			2				11	23	34
AV	1	1						2					4		1	7	8
BA					1								3	2	4	4	8
BE		1	1					2					2		1	5	6
BF	2	2					1	1							3	3	6
BO	31	78	5	9	1	1	37	30	10	21	5	1	8	13	97	153	250
BR	6	14	1	6	1	1	2	5	3	1		2	4		17	29	46
CL	8	25	2	9	1	4	3	12	5	3		2	1	2	20	57	77
CC	7	30	1	5	3	1	13	25	7	7		2	3		33	71	104
CA	12	7			2	5	5	12	2	1		1	2		22	27	49
CN	9	20	1	1			11	4	5	4			2	3	28	32	60
CO	9	9	1	3	2	2	10	7	1		3				23	24	47
DA	4	9	1	3	2	1	10	5	3	7		1	1		21	26	47
D/C	2	1		1											2	2	4
EC	1				1		1								3		3
EU		3		1												4	4
EX		1							1						1	1	2
FR	6	4	1		2		4	3		1				2	13	10	23
FTG		3		3		1	6	3							6	10	16
G	15	34	1	18	2	2	11	17	9	14	2	1	8	7	48	93	141
HDL							3	1					1		4	1	5
HW	3	13	4		1	4	3	7	1	1		2	1	1	13	28	41
HO	3	9	4	1			7	8				1	3		17	19	36
HP																	
KY	3	5					1	7	1			1		1	5	14	19
LE	1	8													1	8	9
LS	1		1									1			3		3
MA		5	3				7	2							10	7	17
MBN	4			1			3		2	1			1	1	10	3	13
ME	2	4					1	1					2		3	7	10
MI	13	8	2	1		2	6	4	2	3			2	3	25	21	46
MY	2	10	1	3			4	7	2	2		1	1	2	10	25	35
PN	11	38	3	4	3	2	12	9	6	8	2	2	6	5	43	68	111
QV	3	5	2		1	2	2	2	9	4		1	1	1	18	15	33
RC	6	8		2	1		1	4	1	1			2	1	11	16	27
RI	4	4		1			6	3					1		11	8	19
RM	4	1		1	1		2		3						10	2	12
S	10	25	5	6	3	3	14	8	5	15	2	5	5	5	44	67	111
SA	5	7		1			2	3			1	1	1	1	9	13	22
SR		1						1					1		1	3	4
SM	10	12	4	8	4		5	5	7	1		3	5		33	31	64
SU							1	1		1					1	2	3
SW	3	4	1	5	1	1			1			1	1		6	12	18
TAA	1		2				1		2				1		7		7
TG	5	14	1		2	1	9	11	8	5					25	31	56
TO				1					1	1					1	2	3
WA							1						1	1	2	1	3
WK	2	3	2		1	2		2	1				1	1	7	8	15
WO	4	13	1	1	2		8	6	3	4			1	1	19	25	44
YF	2	2	1		2		1	1					1		7	3	10
BT	24	60	7	19	5	1	25	25	8	13	4	6	3	7	76	131	207
Total	245	513	60	117	45	3	243	255	108	120	16	32	69	79	786	1,152	1,938

Percentage of cardiac abnormalities in males 1.00
 Percentage of cardiac abnormalities in females 1.31
 Average percentage of cardiac abnormalities in population 1.15

CARDIAC ABNORMALITIES.—DISTRIBUTION IN AGE GROUPS.

	A.		B.		C.		D.		E.		F.		G.		Total.		Grand Total.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
0-10			4	3									2		4	5	9
11-20	9	5	13	15			2	1					13	8	39	30	69
21-30	20	12	18	27	1	2	6	2	1			1	13	13	59	57	116
31-40	22	48	8	30	2		9	6	10	5			13	18	64	107	171
41-50	53	110	11	28	7	8	39	44	25	27	1	1	14	14	150	232	382
51-60	60	171		7	21	17	75	91	41	48	3	12	10	14	210	360	570
61-70	46	123	2	5	10	7	73	77	22	29	6	13	3	4	162	258	420
71-80	32	38	1	1	3	3	33	28	6	10	5	3	2	5	82	87	169
81-90	3	6	1		1		6	6	3	1	1	2	1	1	16	16	32
Total	245	513	60	117	45	36	243	255	108	120	16	32	69	79	786	1,152	1,938

A.—The transverse cardiac diameter increased beyond normal limits.
 B.—Mitral lesion suggested ("mitral" outline, fullness in pulmonary conus).
 C.—Aneurysms of the aorta.
 D.—Widening and/or unfolding of the aorta.
 E.—Hyperpietic cardioaortic outline.
 F.—Calcifications of the aorta.
 G.—Other abnormalities (congenital heart, displacement of the heart, pulmonary lesions).

REPORT OF THE DIRECTOR OF MATERNAL, INFANT, AND PRE-SCHOOL WELFARE, 1948-49.

In spite of many difficulties, the various avenues of Child Care co-ordinated through this Department continue to progress. More rapid expansion is impossible owing to lack of trained staff and difficulty in erecting buildings.

ANTE-NATAL.

The ante-natal centres are being conducted in ten municipalities, and two other municipalities (Coburg and Preston) are soon establishing clinics. The figures for the year show an increase of 300 individuals and 1,502 attendances over last year's figures. This is satisfactory, but a much greater extension of ante-natal care is called for. Attendances at Infant Welfare Centres for advice on ante-natal hygiene are still very small. In July, 1948, a letter was sent to all members of the British Medical Association calling attention to this service. Much more publicity on the need for ante-natal care and much more teaching for expectant mothers are required in view of the large percentage of infant deaths due to prematurity.

A card system for keeping records of all ante-natal cases attending Medical Supervision Clinics is now being used at the Department, and more detail regarding cases should be available in next year's report.

The setting up of clinics under Physiotherapists, where mothers could be taught ante-natal exercises, would prove very beneficial to mothers attending centres.

INFANT WELFARE.

The infantile mortality rate for Victoria for 1948 was 23.93, the lowest yet recorded for this State. The neo-natal death rate was 17.1 per 1,000, and 44 per cent. (7.6) of the neo-natal deaths were due to prematurity.

Towards the end of 1948, the Department was asked to supply the Commonwealth with some data regarding prematurity in Victoria. A survey of the facilities available for premature babies at 25 metropolitan hospitals was made, and a questionnaire was sent out to country hospitals through the Hospitals Commission. From the information obtained, it is obvious that accommodation for premature babies is very poor, especially when their susceptibility to infection is considered. They are usually kept in the general nursery, and in most hospitals these are small, overcrowded, and unsuitable rooms. This does not apply to the large metropolitan hospitals where separate staff is kept for these babies.



Baby Ambulance.

At the time of the survey no special means of transport was provided, but since then a very satisfactory ambulance for conveyance of these babies to hospital has been designed at the Women's Hospital by Dr. Refshauge, the Medical Superintendent, and Mr. Murphy, Engineer.

A Committee has been set up by the Hospitals Commission to consider the question of prematurity, and already one circular has been forwarded to members of the British Medical Association, and efforts are being made to publicize the whole question.

The number of Infant Welfare Centres in Victoria has increased to 393. This includes one new travelling centre in the Swan Hill Shire, for which approval was given for six months' trial. A van was made available for the purpose by the Victorian Baby Health Centres Association.

EMERGENCY HOUSING AREAS.

Camp Pell.

The Department has opened a Combined Infant Welfare and Pre-School Centre, with an Infant Welfare Sister in charge of the Centre, and two Pre-School Mothercraft Nurses in charge of the Play Groups. The Medical Officer of the Department visits the Centre once weekly.

Watsonia.

A Departmental Infant Welfare Sister conducts a part-time Centre, and plans are being developed to establish a Play Group in this area.

MOBILE SERVICES.

In May, the Government agreed to provide during the year 1949-50, £28,000 for Mobile Services, and as a result many new circuits will be formed. The Minister has approved of a policy by which a grant of £700 will be made available to a Municipality purchasing a car for an approved circuit. This subsidy is not available to cities and municipalities within 15 miles radius of Melbourne, and the minimum weekly mileage travelled must be 100 miles. The replacement of the vehicle is the responsibility of the municipality, but a depreciation allowance of £50 per annum is given. Seven special vans are to be constructed for van service conducted by the Department in remote rural areas. Municipalities concerned will meet a proportion of the running costs of the service.

BUILDINGS.

£80,000 has been provided for buildings for Infant Welfare Centres, Kindergartens, and Crèches, when plans sponsored by the municipality concerned have been approved by the Department. Grants have been on a £1 for £1 basis with a maximum of £1,000. Requests from 50 Infant Welfare Centres have been approved. New centre buildings have been opened at Footscray, Albert-street; Footscray, Clare-street (Infant Welfare Centre and Kindergarten); Pakenham, Koo-wee-rup. The new centre at Albert-street, Footscray, which is a teaching centre, has been admirably planned for this purpose, and in addition provides a rest room for mothers. (Illustrations opposite page).



Footscray Health Centre.



Footscray Health Centre Interior.

Centres incorporated in other buildings have been constructed at—

1. Fisherman's Bend (Ada a'Beckett Kindergarten).
(This is to be known as the Vera Scantlebury Brown Memorial Welfare Centre).
2. Monbulk, in the Muriel Peck Cottage.

CORRESPONDENCE.

Advice given to mothers in remote country areas, who cannot attend local centres, is given by correspondence letters from the Department. This service is greatly valued, and the number of letters sent out from the Department for 1948-49 was 50,906. This service is available until the child is six years of age. Monthly letters are also sent to expectant mothers.

CONFERENCES.

Monthly conferences for Centre Sisters are now held in Out-Patients, Queen Victoria Hospital. Attendances have been excellent at the conferences. The Sisters are most appreciative of the help received from talks given at these conferences, and the Department thanks all those who have contributed. The following addresses have been given:—

- | | |
|-------------------|--|
| 3rd July, 1948 .. | Dr. Elizabeth Turner, "Menin-
gitis". |
| 7th Aug., 1948 .. | Dr. V. L. Collins, "The Grizzly
Child". |
| 4th Sept., 1948.. | Dr. H. E. Williams, "Breast
Feeding". |
| 2nd Oct., 1948 .. | Films. |
| 6th Nov., 1948 .. | Dr. M. L. Powell, "Congenital
Heart". |
| 4th Dec., 1948 .. | Afternoon Tea at Maternal and
Child Hygiene Branch; talk
by Dr. Smallwood. |
| 5th Feb., 1949 .. | Dr. Guy Springthorpe, "Pre-
School Child". |
| 5th Mar., 1949 .. | Sister Catherine L. Dossetor,
"Experiences in U.S.A." |
| 2nd April, 1949.. | Dr. John F. Williams,
"Prophylactic Psychiatry". |
| 7th May, 1949 .. | Mrs. Margaret Eldridge, Director
of Speech Therapy, Children's
Hospital, "Speech Therapy". |
| 4th June, 1949 .. | Dr. Ella McKnight, "Natural
Childbirth". |

STAFFING CENTRES.

Much difficulty is being experienced in obtaining staff for country centres. Some municipalities have waited for as long as six months before being able to make a permanent appointment, and there is no prospect of improvement. This seems to be due in large measure to the difficulty in obtaining suitable accommodation. Where new Centres are being considered it is sometimes recommended that accommodation for the Sister be provided in the plan. Consideration should also be given to the provision of an increased living allowance for country Sisters.

TRAINING.

As many trainees come from other States and others on completion of their course go abroad, comparatively few graduates are available for work in Infant Welfare Centres.

Scholarships for training on condition that holders give one year's service in Infant Welfare Centres, might provide a solution to this problem. A feeling exists that some revision of the Infant Welfare course is needed to include more training in pre-school and social work. A conference of those concerned will shortly be held to consider this matter.

Refresher courses would be welcomed by many Sisters in Centres. This could be arranged if a Departmental Relieving Officer were provided.

MOTHERCRAFT NURSES.

In January, a deputation representing the Mothercraft Nurses Council, and Matrons of Mothercraft Training Schools, approached the Minister with regard to registration. They received a favorable hearing, and enabling legislation is now before the House. This provides for registration of Mothercraft Nurses under the Department of Health.

The demand for Mothercraft Nurses greatly exceeds the supply. They are being used in nurseries, in midwifery hospitals under the supervision of trained sisters, in Crèches and Play Centres, as well as in private homes.

No new Mothercraft homes have been opened, though that erected by the Grey Sisters in Mont Albert-road, Canterbury, has been completed and will open shortly. It is very desirable that additional training schools be established and that any existing schools with plans for extension be given permission to build as soon as possible.

MOTHERCRAFT TEACHING.

Mothers leaving Midwifery Hospitals may go to certain Mothercraft Training Schools and learn principles of Infant Care. This is an important and very constructive service, and although accommodation for eighteen more mothers will be available when the Grey Sisters open their new home, still more is required.

Mothercraft Teaching in State and Catholic schools in the city area is being given by one of the Sisters of this Department. Similar work is being done by a Sister from the Victorian Baby Health Centres Association. In country areas, Infant Welfare Sisters are encouraged to give instruction in local schools. This service is much appreciated and should be greatly extended, as in this way, the child is shown the importance of a knowledge of mothercraft and indirectly may become interested in nursing as a profession. (See illustration.)

Much could be done by means of the radio to bring the importance of Mothercraft Teaching before the public. Regular sessions are conducted by the Victorian Baby Health Centres Association and the "Truby King" League, and talks are given by members of this Department when requested. Country Sisters are encouraged to give talks on local stations when opportunity offers.

The Departmental staff is hampered in its teaching work by lack of visual aids, e.g.—films, posters, &c., and lack of equipment for displaying films.

Home Help Schemes are operating in several Municipalities. Difficulty is being experienced in obtaining housekeepers but this may be overcome by an increased subsidy which will be effective from July, 1949. The help of the Social Worker on the Department's staff is available to municipalities in establishing this service.



Mothercraft Teaching.

PRE-SCHOOL SECTION.

Kindergartens now subsidized through the Department number 122, providing for 5,117 children. An additional 384 are enrolled at 15 crèches and day nurseries, and 725 in 26 play centres (22 with trained leaders and 4 under parent leadership) under the supervision of the Department, making a total of 6,226. Different groups function at these play centres for portion of each day. Grants have been approved for the erection of 44 pre-school centres, and 5 combined infant welfare and pre-school centres. The following new kindergartens have been erected—

Ada Mary a'Beckett ..	..	Fisherman's Bend
Ashburton Community ..	..	Ashburton
Clare-street Pre-School ..	..	Kingsville
St. Margaret Mary's ..	..	Brunswick
Scot's Free Kindergarten ..	..	West Footscray

The erection of new buildings is very difficult owing to the necessary priority for houses, but more use could be made of church halls if small adjustments were made to meet the Department's requirements regarding toilet, lighting facilities, &c. In many instances, such adaptations have been most successful. The real difficulty is the *shortage of trained leaders*. Many reasons have been put forward to explain this—the low birth rate in the depression, the high cost of training, the new avenues of work available to young girls, e.g.—occupational therapy, social work, &c. Sixty places were available at the Kindergarten Training College for first year students, but only 34 were taken up, and this number was reached only after Government scholarships had been offered. All five scholarships given in November, 1948, were accepted. For these there were numbers of applicants, but by March, when additional scholarships were provided, very few candidates were interested. It would seem desirable that much more Government help be provided and that a larger number of scholarships be made available and the public notified by October. It is also essential that more trained staff be provided to train students, nurses, and mothercraft nurses. Overseas Travelling Scholarships for suitable graduates would help to ensure a regular supply of highly qualified staff for this purpose.

CRÈCHES AND DAY NURSERIES.

This year the Government decided to make grants to crèches and day nurseries available through this Department. A *per capita* grant of £25 per child per annum was approved and conditions of subsidy were drawn up. These require the premises, staffing, programme, and records to be approved by the Minister. Where children under two are taken, the matron must be a triple certificated nurse or one with training at a Children's Hospital, but where children over two only are taken, a nursery kindergartener may be in charge. Other approved staff are mothercraft nurses, play leaders, and social workers.

Medical examinations for children receiving all-day care is provided by the Department if desired. The Victorian Association of Crèches and Day Nurseries and the Victorian Day Nurseries Development Association are most anxious to raise the standard of child care in Day Nurseries, and the Department by regular inspection, reports, and advisory talks to crèche workers, is co-operating with them.

It would seem that—

- (i) Some method of teaching mothers whose children are being cared for—general principles of mothercraft or special guidance with their own particular child—is required.

- (ii) More financial aid is necessary to bring equipment in these institutions to the required standard.
- (iii) More assistance for the social worker to ensure that this service is not used by mothers who could care for their children at home for portion of the day.

UNSATISFACTORY PRE-SCHOOL CENTRES.

The attention of the Department is drawn to many such centres. In a number of these, children are gathered together in large numbers in most unhygienic surroundings with inadequate toilet facilities, equipment, and limited playing space. Registration of buildings used for pre-school purposes would enable some control to be given to these centres. Centres without adequate facilities may be definitely injurious to the health of the children attending.

DEPARTMENTAL STAFF.

Miss Thelma Baker one of our Infant Welfare Inspectors who has given considerable service on the Department's Mobile Units, was awarded the first Vera Scantlebury Brown Memorial Scholarship. This entitled her to a year's experience abroad with the option of extending her stay at her own expense for another twelve months. Miss Baker left for England in January, 1948, and is returning in November, 1949.

Miss Jane Muntz, another of our Infant Welfare Inspectors, who has given many years' service to the Department was awarded a British Council Scholarship, and left for England in August, 1948. She returns in September, 1949.

Dr. Marjorie Gilchrist, Pre-School Medical Officer, who obtained her Diploma Psy. Med. in November, 1948, was granted a Commonwealth Scholarship and left for England in February, 1949. She has just completed a six months' course in Child Guidance at the Maudsley Clinic, and will remain for another six months.

Miss Dorothy Serpell, Correspondence Sister, was also granted leave to visit England, and is expected to return in December.

Dr. Winifred Champion resigned her position as part-time Ante-Natal Medical Officer.

Dr. Joan Mowlam was appointed in her place.

Dr. Bell Brodrick, Departmental Ante-Natal Medical Officer, undertook portion of Dr. Gilchrist's pre-school work; and

Dr. Margaret Aikin was also appointed as half-time pre-school medical officer.

OTHER WORKERS IN THE FIELD—who have gone overseas:—

Dr. Margaret Mackie was appointed in November as the second Vera Scantlebury Brown Memorial scholar. Dr. Mackie who worked for some time in one of the Municipal Ante-Natal Clinics is in England, investigating, particularly, developments in ante natal care.

Miss Windsor, Matron of Prahran Crèche, is leaving for England and proposes taking the Child Development Course, Institute of Education, London University.

Miss Keir, Matron of Footscray Crèche has also left for England.

SURVEYS.

At the request of Dr. Dale, the Department of Psychology of the University of Melbourne, in conjunction with Dr. Hilda Kincaid, undertook an investigation to establish Norms for Heights and Weights of Infant and Pre-School children in the City of Melbourne.

The results of this survey show:—

- (a) The difference in the average height of males and females seems to be so great as to require separate norms. Average heights of the sexes are also appreciably different.
- (b) There has been a considerable rise in the average height and weight of infants and pre-school children in the City of Melbourne between 1936 and 1946. Such evidence as was available suggested that there had been a smaller increase between 1926 and 1936.
- (c) The average weight of infants in the City of Melbourne is apparently about the same as that shown by the most recently available data from New Zealand.
- (d) The average weight of infants in the City of Melbourne is considerably higher than that which is shown as normal on the printed graphs of the Infant Welfare Centres in use throughout Victoria.
- (e) The graphs give a norm line together with a zone bounded by the tenth and ninetieth centiles.

Dr. Gilchrist made a survey of the examination of 50 pre-school children with neurotic tendencies attending kindergartens in industrial suburbs.

Dr. Kelso made a survey of facilities available for premature infants and results of care provided.

An investigation is now being made on Breast Feeding but the results have not yet been analysed.

PRE-NATAL SECTION.

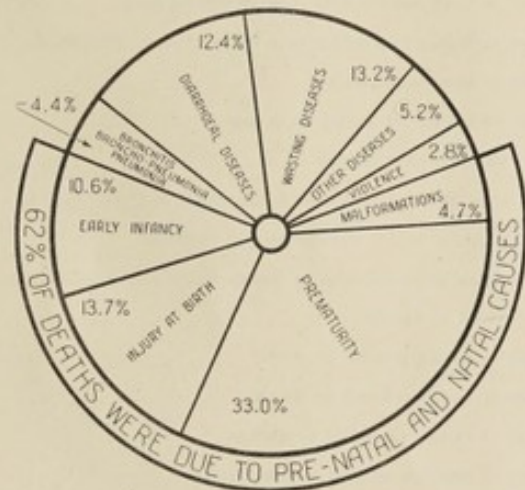
ATTENDANCES OF EXPECTANT MOTHERS FOR YEAR ENDED 30TH JUNE, 1949, AT:—

(a) *Metropolitan—Municipal Pre-natal Medical Supervision Centres.*

Name of Centre.	Number of Patients.	Number of Visits to Centres.
Collingwood	143	836
South Melbourne	245	1,153
Fitzroy	162	733
Northcote	336	1,445
Hawthorn	184	830
Sandringham	135	530
Fairfield	88	345
Richmond	189	916
Sunshine	123	437
Prahran	381	1,763
Total	1,986	8,988

(b) *Attendances of Expectant Mothers for Pre-natal Hygiene at Victorian Infant Welfare Centres.*

—	1947-48.	1948-49.
Number of individual cases ..	5,646	5,981
Number of new cases ..	4,177	4,298
Total number of consultations ..	12,880	12,954



INFANT HEALTH SECTION.

NUMBER OF CENTRES.

Of the 198 Municipalities—

181 contribute to the support of 393 Infant Welfare Centres.

17 do not support or contribute to any Infant Welfare Centre.

Of the 181 contributing or supporting Municipalities—

34 Metropolitan Councils support 120 Infant Welfare Centres

121 Country Councils support .. 258

20 Councils contribute to adjacent

6 Councils support 15 Circuit Infant Welfare Centres

181

393

MATERNAL AND CHILD HYGIENE BRANCH.
STATISTICS.

—	1946.	1947.	1948.
Population	2,039,769	2,061,689	2,106,315
Area of State (Acres) ..	56,245,760	(87,884 square miles)	
Birth-rate	22.99	23.06	22.06
Death-rate	10.60	10.44	10.44
Infant Mortality Rate (per 1,000 Live Births) ..	27.2	26.3	23.9
Neo-Natal Mortality Rate (per 1,000 Live Births) ..	20.19	19.59	17.14
Maternal Mortality Rate (per 1,000 Births)	12.64	14.90	11.5

DEVELOPMENT OF INFANT WELFARE SERVICES IN VICTORIA.

(Comparative Figures.)

	1917-18.	1926-27.	1947-48.	1948-49.
Number of birth notifications received during year	..	..	43,062	43,547
Number of babies responding as a result of such notifications	..	..	27,543	28,476
Number of new babies on roll	..	..	46,723	46,202
Number of individual babies at Centres—				
(a) under twelve months	..	..	48,152*	48,157*
(b) over twelve months (including those over two years)	..	..	52,875*	53,192*
Total individual babies and children at Centres	913	25,735	93,772†	97,116†
Total number of attendances of babies and children at Centres	4,116	192,142	989,490	962,223
Nurses' visits to homes	1,407	62,535	87,446	93,093
Number of babies referred to doctor	..	..	11,588	11,795
Number of babies referred to hospital	..	..	1,798	2,008
Number of mothers referred to doctor	..	..	1,888	1,978
Number of mothers referred to hospital	..	..	1,798	423
Telephone consultations	..	..	37,416	38,260

* Including transfers.

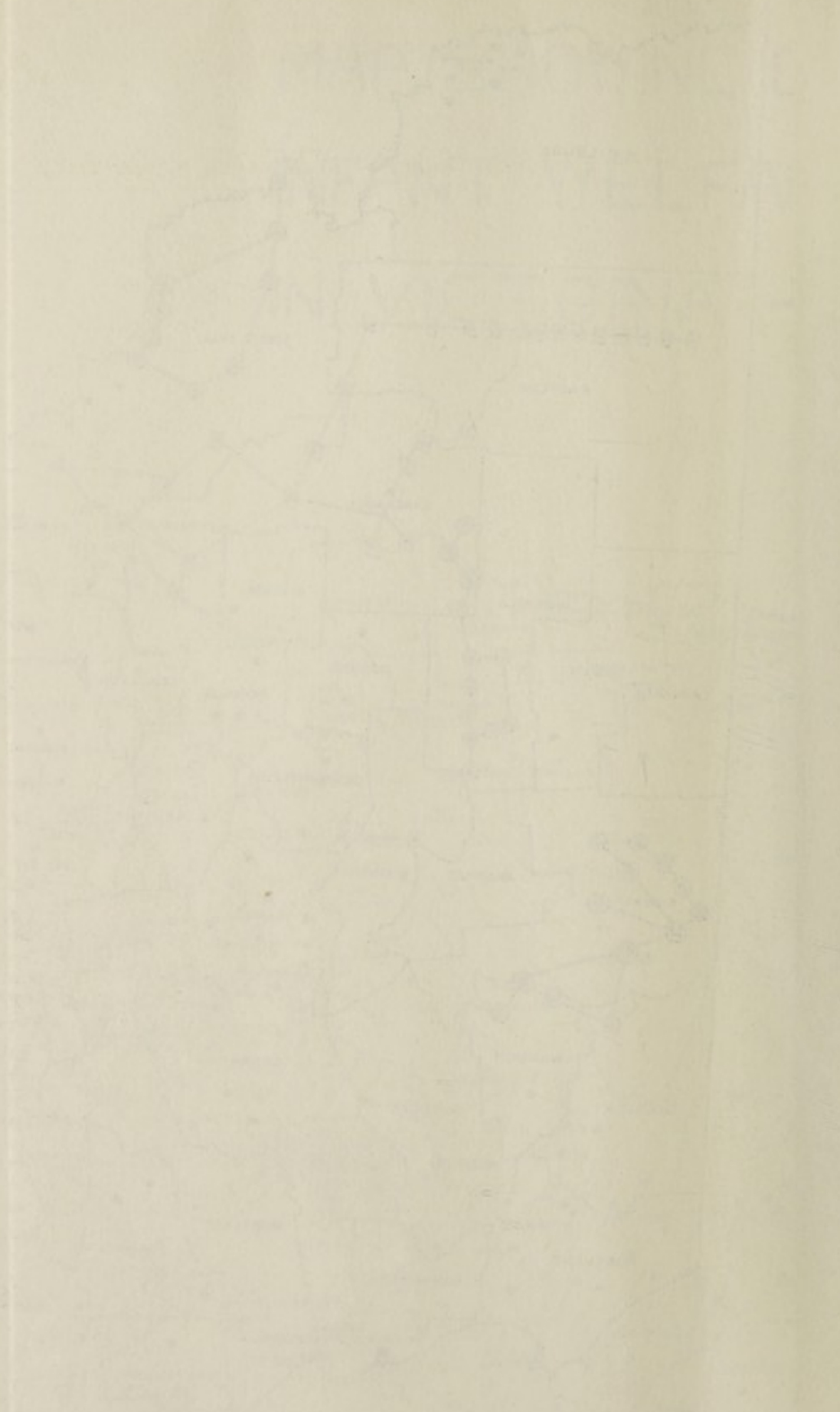
† Excluding transfers.

TABLE I.—INFANT MORTALITY IN VICTORIA, 1910-1948.

Period.	Rate per 1,000 Births.			Period.	Rate per 1,000 Births.		
	Greater Melbourne.	Remainder of State.	Victoria.		Greater Melbourne.	Remainder of State.	Victoria.
1910-14	84.2	64.9	73.8	1936	44.1	40.7	42.3
1915-19	76.2	55.4	66.1	1937	37.1	36.3	36.7
1920-24	71.6	58.6	65.3	1938	34.1	34.3	34.2
1925	69.2	53.7	57.0	1939	32.3	38.9	35.6
1926	61.6	49.5	55.6	1940	39.7	39.2	39.5
1927	62.5	49.4	56.1	1941	34.6	38.1	36.2
1928	56.8	54.5	55.6	1942	43.8	38.9	41.6
1929	50.5	43.9	47.2	1943	34.1	38.2	35.8
1930	50.7	42.3	46.5	1944	31.0	33.3	32.0
1931	48.0	41.4	44.5	1945	26.87	29.61	28.03
1932	47.7	38.7	43.0	1946	27.04	27.32	27.16
1933	49.9	40.0	40.4	1947	26.82	25.57	26.28
1934	48.2	41.4	44.6	1948	23.77	24.12	23.93
1935	43.0	39.5	41.2				

MAP SHOWING COUNTRY INFANT WELFARE SERVICES IN VICTORIA — 1948-9





VICTORIA. INFANT MORTALITY RATE 1900-1949

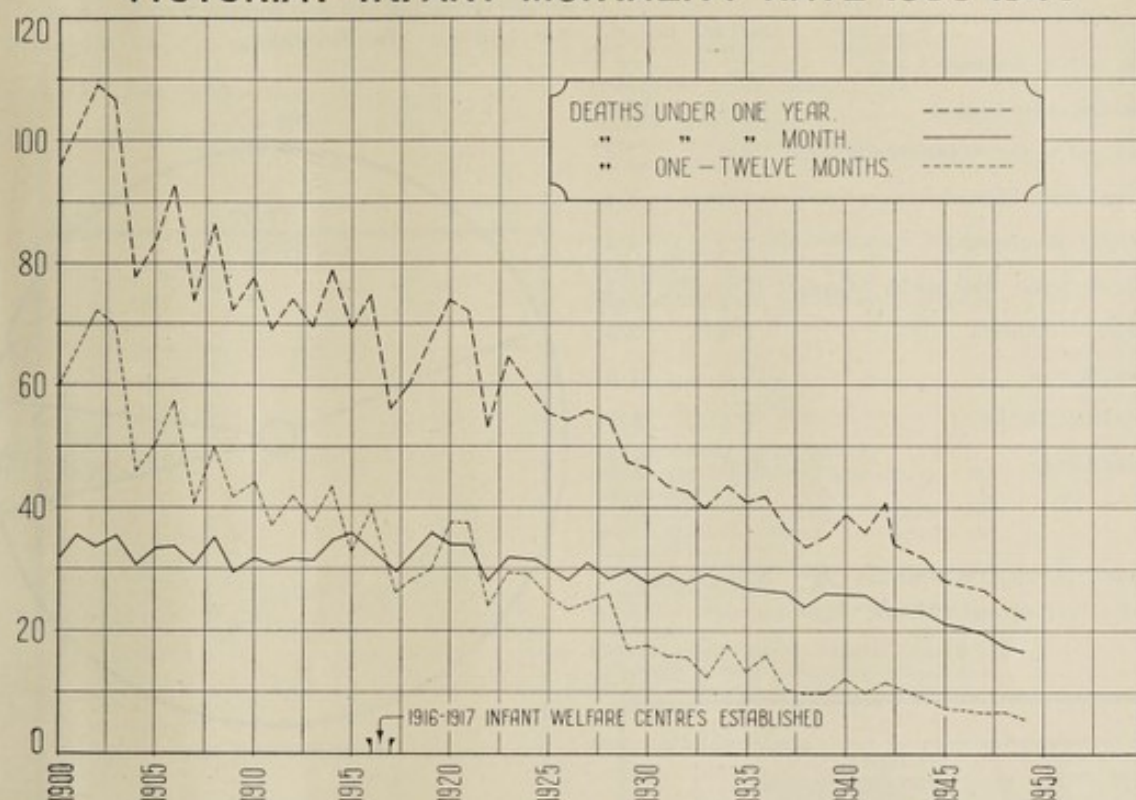


TABLE II.—INFANTILE DEATH RATES FROM CERTAIN CAUSES 1930-1948.

Causes of Deaths.			Deaths Under One Year per 1,000 Births.																		
			1930.	1931.	1932.	1933.	1934.	1935.	1936.	1937.	1938.	1939.	1940.	1941.	1942.	1943.	1944.	1945.	1946.	1947.	1948.
Ep4d.	..	..	3.08	3.59	2.84	2.61	3.59	2.37	2.84	1.89	0.75	1.15	3.47	1.37	2.95	2.22	1.12	0.97	0.90	0.61	0.96
Bron.	..	..	5.28	6.33	5.24	5.49	7.55	6.31	6.72	4.81	3.48	4.17	5.13	4.56	6.21	4.99	3.99	3.45	3.45	3.31	2.95
Diar.	..	..	4.98	2.31	3.09	1.62	2.88	1.72	2.46	1.41	1.06	1.64	1.78	1.08	2.39	2.07	1.49	0.90	1.31	0.99	1.13
Mal.	..	..	4.38	4.55	3.86	5.18	4.39	4.73	4.71	3.40	4.08	3.57	4.54	4.04	4.62	4.06	4.29	3.54	3.56	3.48	3.17
W.D.	..	..	5.13	3.26	3.35	3.13	2.80	2.04	2.60	2.05	1.48	1.64	0.97	1.42	1.20	1.20	0.97	0.53	0.56	0.36	0.37
Prem.	..	..	14.25	14.14	13.84	12.61	11.21	12.59	11.39	11.40	11.40	12.46	12.92	11.86	13.60	10.71	10.65	9.61	8.39	9.23	7.63
I. at B.	..	..	2.90	2.90	3.24	3.13	3.70	3.16	2.80	3.36	2.74	4.00	3.38	4.62	3.48	3.20	3.02	3.45	3.45	2.93	3.27
E.I.	..	..	3.05	4.32	4.15	4.16	5.14	5.02	4.74	4.61	4.72	3.34	3.94	4.48	3.70	4.22	3.56	3.28	3.32	2.77	2.54
O.D.	..	..	2.96	2.50	2.45	1.62	2.44	2.30	3.25	2.96	2.77	2.79	2.60	1.63	2.87	2.30	2.11	1.55	1.32	1.73	1.24
Viol.	..	..	0.51	0.63	0.94	0.88	0.93	0.93	0.80	0.81	0.83	0.82	0.72	1.13	0.58	0.79	0.76	0.75	0.90	0.87	0.67
Total	..	..	46.52	44.47	43.00	40.43	44.63	41.17	42.31	36.70	34.21	35.58	39.45	36.19	41.64	35.76	31.96	28.03	27.16	26.28	23.93

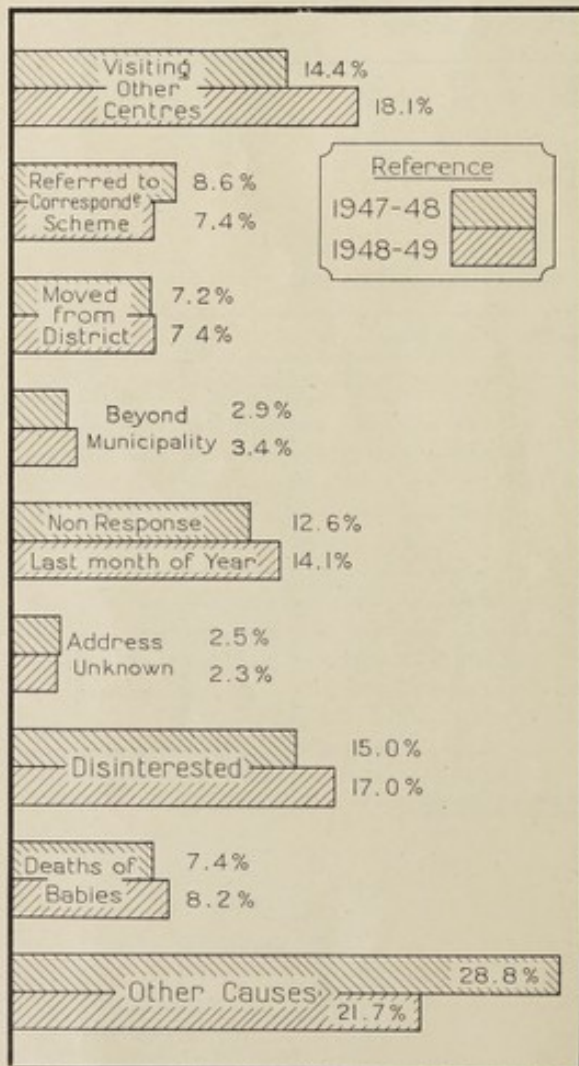
Epid. ... Epidemic, Endemic, and Infectious Diseases.
 Bron. ... Bronchitis, Broncho-pneumonia, Pneumonia.
 Diar. ... Diarrhoeal Diseases.
 Mal. ... Malformations.
 W.D. ... Wasting Diseases.
 Prem. ... Prematurity.
 I. at B. ... Injury at Birth.
 E.I. ... Early Infancy.
 O.D. ... Other Diseases.
 Viol. ... Violence.

Non-responses to Notifications of Births Invitations.

ANALYSIS OF REASONS GIVEN BY INFANT WELFARE CENTRE NURSES FOR NON-RESPONSES TO NOTIFICATIONS OF BIRTHS INVITATIONS.

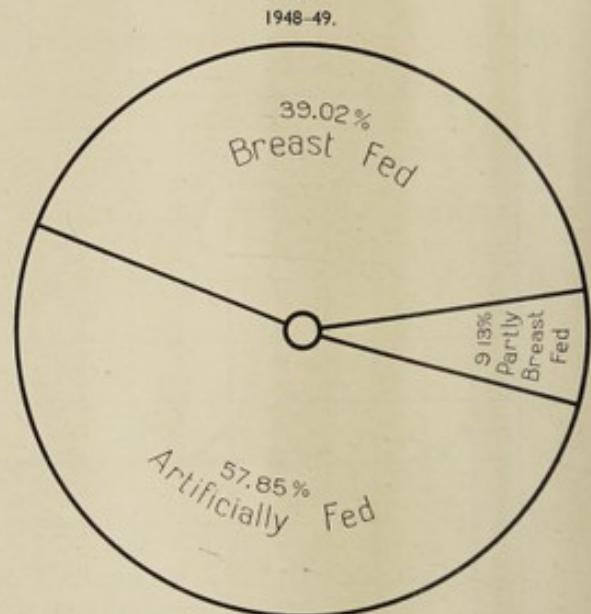
Cause of Non-Response :—	1947-48.	1948-49.
	%	%
Visiting other Centres	14.4	18.1
Referred to Correspondence Scheme	8.6	7.4
Moved from District	7.2	7.4
Beyond Municipality	2.9	3.4
Non-Response last month of year	12.6	14.1
Address Unknown	2.5	2.3
Disinterested	15.0	17.0
Deaths of Babies	7.4	8.2
Other Causes	28.8	21.7

Diagram showing comparison of "Non-Response" figures for 1947-48 and 1948-49.



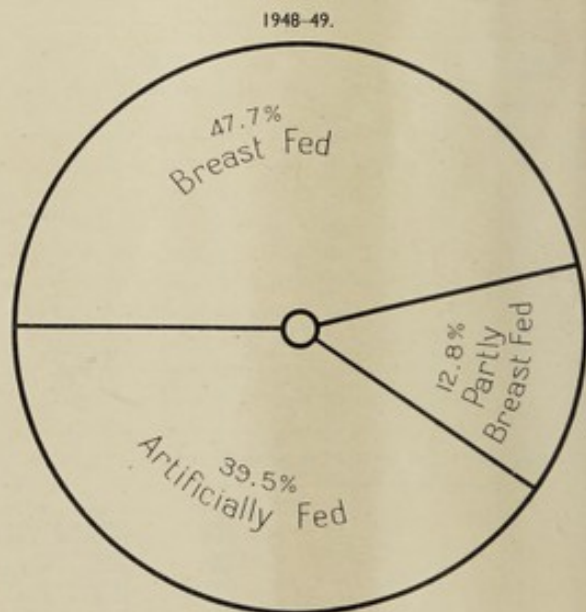
CLINICAL FEATURES.

The feedings of infants at six months of age were studied by noting type of feeding recorded on record cards of 32,616 infants between six and eighteen months of age attending Infant Welfare Centres during the year 1948-49. (See diagram).



At six months of age.

This is compared with the diagram shown below of special analysis made by the Infant Welfare Inspectors, showing the feedings at three months of age of 9,428 infants attending 249 Infant Welfare Centres.

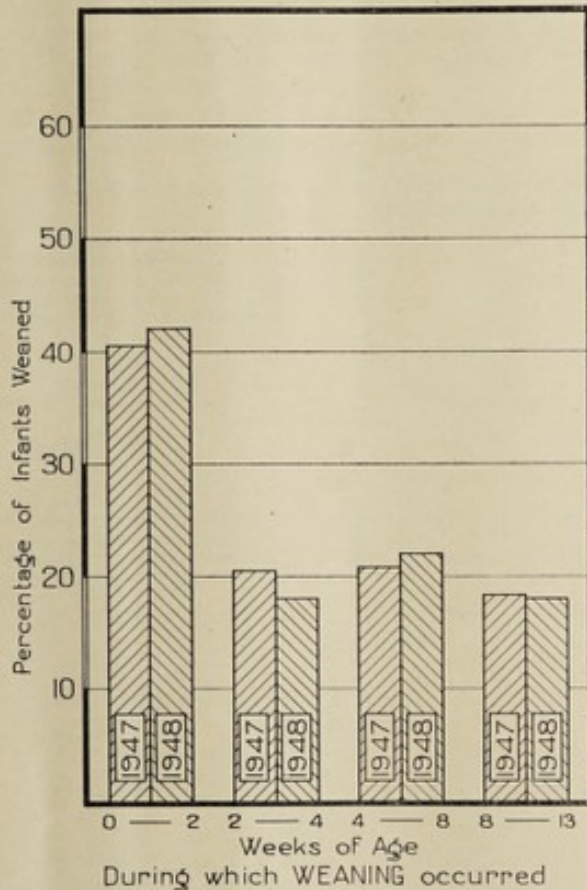


At three months of age.

Analysis was also made of ages at which 3,724 infants being artificially fed at three months of age, were weaned.

AGE OF WEANING OF 3,724 INFANTS BEING ARTIFICIALLY FED AT THREE MONTHS OF AGE. (See diagram.)

1-2 weeks, 1,566 infants, no breast milk or weaned	42 per cent. (approx.)
2-4 weeks, 681 infants weaned ..	18
4-8 weeks, 827 infants weaned ..	22
8-13 weeks, 650 infants weaned ..	18



INFANT WELFARE CORRESPONDENCE SCHEME.

	1947-48.	1948-49.
Invitations sent—		
(a) first	3,536	2,998
(b) second	1,757	1,441
Responses—		
(a) first invitation	1,500	1,327
(b) second invitation	544	427
	2,044	1,754
Non-responses (cards returned)—		
(a) attending centres	242	150
(b) babies died	36	22
(c) Disinterested	67	45
Expectant mothers advised ..	114	80
Total number of letters (ante-natal)	929	857
Personal letters answered ..	3,810	3,562
Progress letters sent	79,300	41,211
Number of children enrolled since inauguration	13,250	15,237
Number of letters posted for year	88,154	50,906

TRAINING IN INFANT WELFARE AND MOTHERCRAFT.

The number of infant welfare nursing students trained per annum during the last three years is as follows:—

	1947.	1948.	1949.
Presbyterian Babies' Home	13	14	13
Tandarra	10	19	20
Tweddle Baby Hospital	18	17	17
Victorian Baby Health Centres Association Training School	29	28	30

MOTHERCRAFT NURSES.

Training Schools.—There are now eight approved Mothercraft Training Schools, as follows:—

	Number of Trainees.	
	1947-48.	1948-49.
Bethany Babies' Home, Geelong	6	9
Foundling Hospital, Berry-street, East Melbourne	15	12
St. Joseph's Foundling Hospital, Broadmeadows	21	24
Methodist Babies' Home, 19 Copelen-street, South Yarra	13	9
Presbyterian Babies' Home, 19 Canterbury- road, Camberwell	14	15
St. Gabriel's Church of England Babies' Home, Balwyn	13	12
Victorian Baby Health Centres' Association Training School, Swanston-street, Carlton	..	..
Tweddle Baby Hospital, Barkly-street, Footscray	10	13

PRE-SCHOOL SECTION.

KINDERGARTENS.

44 are affiliated with the Free Kindergarten Union.
14 are affiliated with the Catholic Office of Education.
16 are affiliated with the Church of England Kindergarten Council.

13 are affiliated with the Presbyterian Kindergarten Council.

35 are independent of any organization and come directly under the Department.

MEDICAL EXAMINATION.

48 groups including 1 play group and 2 crèches.

Number of children examined for first time 1,249

Number of children re-examined 426

Total number of children examined 1,675

CRÈCHES.

3 are affiliated with the Victorian Day Nurseries Development Association.

10 are affiliated with the Victorian Association of Crèches and Day Nurseries.

2 are independent, although one of these is an associate member.

2 of the above centres are closed due to building operations.

SCHOLARSHIPS.

Number of girls on Government Scholarship at the Kindergarten Training College.

Second year Kindergarten Training 6

First Year Kindergarten Training 10

Play Leaders 10

Mothercraft Nurses, Pre-school Training 2

RECOMMENDATIONS.

1. Increased emphasis on the importance of ante-natal care, and provision of additional medical supervision clinics.

2. Early notification of prematurity to an officer especially appointed for the purpose and investigation of home conditions awaiting the child on discharge from hospital.

3. Provision of living allowance for Sisters in country centres.

4. Provision of Scholarships for Infant Welfare training.

5. Refresher courses for Infant Welfare Sisters.

6. Greater emphasis on importance of pre-school training for Infant Welfare Sisters and Mothercraft Nurses.

7. Provision of more Mothercraft Training Homes. It is important that all suitable children's homes be utilized. This service will then have a double purpose,

i.e., raise the standard of care, and to increase the supply of Mothercraft Nurses. Facilities for teaching mothers may be incorporated in these training centres.

8. *Publicity*.—Films, Posters, Projectors, and Radio Sessions be made available for teaching purposes.

9. *Pre-School*.—

(a) Provision of more scholarships for training at Kindergarten Training College, for Kindergarteners, Sisters, Mothercraft Nurses, Play Leaders, and Overseas scholarships for graduates to provide trained personnel necessary for teaching students.

(b) Registration of buildings used for Pre-School purposes.

W. BARBARA MEREDITH, B.A., M.B., B.S.,

Director of Maternal, Infant, and Pre-School Welfare.

9th September, 1949.

SCHOOL MEDICAL AND DENTAL SERVICES, 1st JULY, 1948, TO 30th JUNE, 1949.

STAFF (as on 30.6.49).

MEDICAL.

Chief Medical Officer Inspector	1
Medical Officers (full-time) (includes one appointed 2.5.49)	8
Nurses	12
Disinfectors	1

DENTAL.

Principal Dental Officer	1
Dental Officers (includes three appointed May, 1949)	7
Dental Attendants (includes one trained nurse)	9

SUMMARY OF WORK.

MEDICAL.

Children Examined.

—	Boys.	Girls.	Total.
State Primary Schools	7,920	7,052	14,972
Camps—Primary Schools	365	915	1,280
Technical Schools	457	..	457
Camps—Registered Schools	..	288	288
Total	8,752	8,255	17,007

Teachers Examined.

—	Men.	Women.	Total.
Entrants, Superannuation, &c.	1,303	1,464	2,767
Sick Leave	136	221	357
Total	1,439	1,685	3,124

DENTAL.

Children Treated.

Metropolitan	10,360
Country	2,741
Total	13,001

Our work is still restricted by lack of staff, but some improvement in numbers can be reported. A temporary full-time medical officer took up duty in May to compensate for long sick leave of two officers, and a part-time officer has been appointed and will take up duty shortly in the country. In addition, approval has been given for nine medical officers for rural work and an Assistant Chief Medical Officer. This will more than double our existing staff and, when appointed, should enable us to visit every school in Victoria once in four years and examine each child at least once and possibly twice during its school life between six and fourteen years of age. State primary schools within a radius of ten miles have been visited once in the last four years, and we are now commencing a second cycle. We feel, however, this is not frequently enough—the interval should certainly not be less than three years so that all children are seen at least twice during their school life.

During recent years more and more attention is being paid to the education of the physically and mentally handicapped child. It is realized that such a child trained to the full extent of its potentialities can be a useful asset to the community and not necessarily an invalid pensioner. Medical assessment and supervision are of special importance for these children, and we welcome every opportunity to help them. The child with a single defect is now fairly well catered for educationally, but the child with the multiple defect is still very difficult to place, e.g., the deaf child who is also a marked behaviour problem, the

mentally retarded child with very defective eyesight or hearing, &c. Early assessment before antisocial behaviour patterns become fixed is vital, since patient and sympathetic handling with enlightened recognition of their limitations can form an adult happy and productive in his job however humble it may be instead of a disgruntled malcontent at war with society and a menace to the peace of his own family and his neighbours.

SCHOOL NURSING STAFF.

No changes have taken place in the personnel during the year except for a temporary appointment for two months to replace a sister on leave. Excellent work is done by all members of the staff, and practically every school in the metropolitan area has been visited at least once a term to examine all children for hair and skin defects. Effective liaison has also been maintained with the municipal cleansing centres. In addition, assistance is given to the medical officers during school examinations and parents contacted *re* the treatment of defects found. Specially valuable work has been done in the visiting of homes *re* irregularity of school attendance, applications for exemption, &c., when the excuse of ill-health is put forward by the parent.

Holidays have been arranged for many children other than those referred as "special cases", and the ready co-operation of the authorities of the Ministering Children's League and Santa Casa has been sincerely appreciated.

An increase in the number of nurses employed is urgent. This would mean that each sister was responsible for a smaller group of schools and would enable her to make personal contact with all mothers whose children appear sub-standard in home care.

SPECIAL CASES.

A total of 497 "special" children have been investigated during the year. This includes "truants", applications for exemption or correspondence tuition on account of ill-health, behaviour problems, sub-standard mothercraft, &c. More than half of these (285) were referred either directly or indirectly by the Education Department, a further 20 per cent. by School Medical Officer or Sister for more detailed examination than could be given in school, and the remainder directly by the parent or by a hospital or other outside agency. Of the 125 children referred by the Attendance Branch of the Education Department, 34 were applications for exemption from school attendance. As might be expected the 13-year-old group was by far the largest—22, and 17 of these were girls—the usual reason being given as the illness of the mother. Every case was investigated carefully, and in six instances only was exemption recommended. In a number of cases it was found that there was an older sister living at home who, however, insisted upon going to work and refused to take any further share in home responsibilities.

Advice was sought specifically *re* behaviour problems in 70 children, and here the six year olds were in the majority—the inability of the child to adjust himself to the change-over from home indulgence to school discipline being the apparent cause. The fewest cases reported were in the ten-year-old group, but increased again in twelve-year-old adolescent group. Following the receipt of the report a School Sister visits the home and interviews the mother or guardian and then visits the school and obtains a report from the actual teacher of the child who can always supply interesting sidelights. This work required specially tactful and sympathetic handling since in many cases the mother's first reaction is defensive and resentful. Following a discussion of the various reports, it is decided what further action is necessary. Eighty-one children were reported because of inability to cope with school work and in practically every case this was associated either with a behaviour problem or a gross physical defect.

One hundred and ten cases were called in for special examination at headquarters, and a further 118 were referred to one of the available Psychiatric clinics. The Returned Soldiers' Children's Health Bureau has given ready assistance in what were frequently very difficult cases, and their help is gratefully acknowledged.

Table I. shows a detailed analysis of the children reported for special investigation.

OPEN-AIR SCHOOL, BLACKBURN.

Regular visits by a Medical Officer once a term and an intensive "follow-up" of defects by a School Sister have kept the children under medical supervision. The building has now been completely renovated, a specially wide verandah entirely enclosed by glass shutters has been added, the teacher's room enlarged, new canvas stretchers for the relaxation hour substituted for deck chairs, and the school room furnished with tables and chairs in place of dual desks. Under the enthusiastic leadership of the present teacher, a parents' club has been formed and is flourishing, and various amenities have been added as a result of their efforts. The children attending are all between the ages of eight and eleven and are drawn from the Richmond-Burnley area. It speaks volumes for the work of the teacher and housekeeper that not only do the children improve greatly in health during their attendance at the school but are able to more than hold their own when they return to their ordinary schools and classes.

The midday meal is still a modified form of the Oslo meal and appears to be thoroughly enjoyed by the children. Minor variations with the different fruits in season prevent monotony, and the plentiful supply of milk is always appreciated.

CLEANSING CENTRES.

These centres, established as a pre-evacuation measure in war time, have been retained in certain municipalities and are of tremendous help in reducing the incidence of verminous heads in school children and in treating minor skin complaints. Our special thanks are due to the nurses in charge of these centres for their co-operation with the members of our own nursing staff and for their untiring efforts in what cannot be described as a very pleasant task.

PARTIALLY SIGHTED CLASS.

Regular supervision of the children attending this class is undertaken by one medical officer, and children attend from widely scattered districts, but transport still proves a major problem and prevents some from attending.

HEALTH AND RECREATION CAMP, QUEENSCLIFF.

In conjunction with the Education Department we have assisted in the conduct of this Camp.

Fourteen camps of 100 children were held in 1948, nine for boys and five for girls. The children came from the following areas:—

Metropolitan Inspectorates—				
Boys	..	..	..	7 camps
Girls	..	..	..	3 ..
Catholic Schools—				
Boys	..	..	..	1 ..
Girls	..	..	..	1 ..
Country Inspectorates—				
Boys	..	..	..	1 ..
Girls	..	..	..	1 ..

TABLE I.—SPECIAL CASES.
(1st July, 1948 to 30th June, 1949.)

Age.	Sex.		Source of Reference.						Reason.										Referred to—							
	Male.	Female.	Education Department.			S.M.O. or Sister.	Parent.	Hospital or Outside Agency.	Irregular Attendance.	Truancy.	Exemption.	Behaviour.	Home Conditions.	Physical Defect.	Mental Defect.	Speech.	Change of School.	Psychiatric Clinic.								
			Attendance Branch.	Teacher.	Other.													Dr. Johnson.	Travancore.	Carlow House.	S.M.O. Special Examination.	Hospital, &c.	R.S.L. Children's Health Bureau.	Society for Prevention of Cruelty to Children.		
Pre-school ..	2	4	..	..	1	..	..	..	..	..	..	..	2	3	..	..	1	..	..	..	..	1	1	..		
5	18	5	2	9	..	6	3	1	..	..	..	4	1	6	6	2	2	1	3	..	4	6	..	..		
6	37	34	6	22	8	16	5	12	..	3	1	16	4	15	11	..	10	4	7	4	16	8	4	..		
7	28	23	8	12	5	18	3	2	2	2	..	8	6	12	10	2	6	5	3	1	14	4	3	3		
8	39	19	10	15	4	19	3	2	..	6	2	10	2	7	14	4	8	3	10	3	6	7	6	..		
9	30	16	6	9	4	15	4	7	..	5	..	5	4	6	9	3	6	3	5	5	6	4	2	1		
10	32	18	13	9	6	10	7	7	..	10	1	3	3	4	7	3	14	5	5	4	16	1	1	2		
11	25	22	15	10	2	11	3	2	1	7	2	7	3	8	6	2	6	6	2	6	13	7	2	2		
12	37	34	22	18	5	10	4	11	5	17	6	11	7	8	9	3	6	7	5	11	17	3	2	..		
13	23	51	40	12	6	7	5	3	5	14	22	3	10	8	7	3	10	5	1	2	18	5	..	3		
14	3	2	1	2	..	..	..	3	..	..	..	2	..	1	2	..	..	..	..	1	..	2	..	..		
15	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..		
16	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..		
Age not given (10) ..	..	..	2	1	..	..	1	..	..	1	..	1	..	..	..	..	..	1	..	..	..	1	..	..		
Total ..	275	230	125	119	41	112	38	50	13	65	34	70	42	78	81	23	69	40	41	37	110	50	21	11		

Before being admitted to the Camp, each child submits to a general medical examination and only those children who are capable of partaking in full camp activities are selected. The more delicate types such as those with heart disease or those who have recently recovered from severe illnesses are recommended for holidays at such places as Santa Casa or the Cottage by the Sea.

Parents are advised to obtain treatment for any defects found in the children examined, and all infections or contagious conditions must be treated.

One of our school nurses is in residence at the camp to supervise the health of the children, watch their diet and attend to minor accidents. A very satisfactory observation from the nurse's report is that practically without exception the children record an increase in weight in some cases up to four pounds in two weeks.

HEARING SURVEY.

Consequent upon the purchase of an audiometer, we have been enabled to make more accurate tests of severe hearing loss. Maternal pre-natal rubella as a cause of deafness in the child has been recognized only in recent years. The consequent non-development of speech and the serious behaviour problems which frequently arise may deceive even experienced teachers, and lead them to assess such a child as mentally defective.

Owing to the smallness of our medical staff, it has been impossible to make a complete hearing survey of the schools, but an attempt has been made, in conjunction with the Education Department, to assess the number of cases. Head teachers were requested by the Education authorities per medium of the Teachers' Gazette to send in the names and answer a questionnaire re any children attending their schools whom they suspected to be "hard of hearing". Judging by the numbers of replies, teachers generally were keenly interested. Thirty-six children were selected as probably "educationally deaf", i.e., with hearing so severely affected as to retard their educational progress. Twenty-six responded to an appointment for an audiometric test, and of these ten were considered suitable for a hearing aid, nine were deferred for re-examination in six to twelve months, and seven were referred for treatment.

SURVEY—AUGUST–SEPTEMBER, 1948.

	Notified for Examination.	Attended.	Suitable for Aid.	Opinion Deferred.
Metropolitan ..	24	15	6	5
Country ..	12	11	4	4

The parents of at least four of the children considered suitable have purchased aids, but the high initial cost and scarcity of instruments, and the very considerable expense of upkeep have deterred others.

SPEECH THERAPY.

Ninety-eight children have been referred to the School Medical Services during the year on account of speech defects. These children are given a general examination at headquarters, and the Speech Therapist of the Education Department is also in attendance for a discussion of cases, the home having been visited in advance by a School Sister, and the advantages of and facilities for treatment discussed with the parent.

Twenty children failed to keep their appointments, but for the remaining seventy-eight the following procedures were advised:—

Referred to Speech Therapist ..	52
Referred for psychiatric examination ..	5
Referred for medical or E.N.T. treatment ..	8
Deferred for re-examination in 6–12 months ..	13

REMEDIAL GYMNASIUM.

We are pleased to report that during the past year another remedial gymnasium has been opened at Elsternwick, in addition to those at Queensberry-street, Carlton, and Lygon-street, Prince's Hill.

A total of 800 children have attended the various centres, and we expect to be able to treat 900 next year. Children were selected from the following schools:—

Prince's Hill; Lee-street, Carlton; Boundary-road, North Melbourne; Errol-street, North Melbourne; King-street, West Melbourne; Central Brunswick; and Elsternwick.

The selection of children is carried out by the School Medical Officers and the Physical Education Staff of the Education Department.

Parents of those children who require treatment for medical defects are notified, and school nurses endeavour to see that these recommendations are carried out.

The gymnastic work is in charge of the Physical Education Staff, and at the end of each term a further medical examination is carried out. About 75 per cent. are found to require no further attendance. The remaining 25 per cent. are retained at the gymnasium for a further period until such time as we are satisfied that no further improvement is to be expected.

An analysis of postural defects noted in 1,628 children is given. These children were examined by the School Medical Officers between 1st July, 1948, and 16th December, 1948, at inner industrial, suburban, outer suburban, and country schools. The number in each age group is not large, but some definite tendencies can be shown:—

1. Many postural defects are already present when the child commences primary school attendance.
2. A tendency towards improvement in some conditions—notably in "knock knees"—is shown with growth.
3. The genesis of many "foot troubles" in adult life can be detected in early years, and early treatment hence may save much unnecessary discomfort and disability.
4. The marked increase in Hallux valgus in the older age group is the probable result of unsuitable footwear.

TABLE II.—ANALYSIS OF POSTURAL DEFECTS.

Grades ..	I. and II.	III. and IV.	V. and VI.
Number of Children Examined ..	736.	263.	629.
Age Group ..	6-7 Years.	8-9 Years.	10 Years and Over.
	%	%	%
Thoracic abnormalities ..	16.1	10.98	12.56
Shoulder defects ..	40.94	49.49	32.89
Spinal defects ..	34.9	33.1	40.0
Everted or J-heels ..	42.6	49.4	37.8
Flat transverse arches ..	0.67	1.5	4.4
Pes planus ..	10.2	15.5	10.96
Hammer toes ..	1.08	1.1	2.7
Hallux valgus ..	1.08	3.4	6.3
Genu valgum ..	33.0	26.2	18.9
Short leg ..	2.3	1.5	0.47

TABLE III.—FACTORS POSSIBLY INFLUENCING POSTURAL DEFECTS.

Grades	Number Examined.		
	I. and II.	III. and IV.	V. and VI.
	%	%	%
Squints	17.14	16.6	13.59
Teeth	51.6	44.8	40.0
Tonsils and adenoids ..	26.9	15.3	12.0
Enlarged thyroid gland ..	1.83	2.26	14.94
Cardiac murmurs (physiological and pathological) ..	22.87	29.2	34.6
Conjunctival pallor ..	16.84	11.4	13.6
Sub-nutrition	16.98	11.9	10.6
Overweight	3.4	5.3	3.97
Allergic conditions ..	12.5	12.5	12.5

All children were not questioned regarding allergic conditions.

One hundred and eighteen children were questioned regarding school-bags, cases, &c., and of these:—

Seventy-nine carried bag in right hand or on right shoulder.

Thirty-nine carried bag in left hand or on left shoulder.

DEFECTS IN CHILDREN IN OPPORTUNITY GRADES, 1948-49.

Number Examined.	Boys. (336)	Girls. (199)	Total. (535)	Total Percentage.
1. Vision—				
Defect	21	21	42	7.8
Wearing glasses ..	15	14	29	5.4
2. Hearing	12	13	25	4.6
Nose and throat—				
Defect notified ..	26	25	51	9.5
Previous Operation ..	147	69	216	40.3
Teeth	130	73	203	38.0
Hair	4	25	29	5.4
Skin	13	13	26	4.8
Urinary	24	12	36	6.7
3. Posture	54	51	105	19.6
4. Heart	8	2	10	1.9
5. Nutrition	31	17	48	9.0
6. General health ..	21	27	48	9.0
Nail biting	52	30	82	15.3
7. Speech	28	17	45	8.4
8. Other defects ..	10	3	13	2.2

1. *Vision*.—Two with loss of sight in one eye (traumatic). Three others with perception of light only in one eye.

2. *Hearing*.—Twelve children deaf in both ears; five with partial hearing. Of the twelve, ten were under treatment when examined. Two children had previous mastoid operations, while six had otorrhoea at examination. In the case of five children, further audiometric investigation confirmed the deafness.

Twelve other children were deaf in one ear—two had previous mastoid operations, two gave no history and were referred for investigation, while eight others were under treatment. (Three had otorrhoea.)

3. *Posture*.—Only poor postures notified, and since being examined many of these have attended the remedial clinics.

4. *Heart*.—All were under medical supervision.

5. *Nutrition*.—In no case was the poor nutrition considered to be due to actual poverty. The quality of the food taken was mostly at fault, and in those cases where the quantity taken was inadequate, it was due to poor housekeeping and lack of knowledge of food values. Holidays were obtained for a large number of these children.

6. *General Health*.—Twelve children were notified for treatment. The remainder were under medical treatment for asthma, nervous conditions, epilepsy, excessive weight, bronchiectasis, &c.

7. *Speech*.—Attendance at Speech Therapy Clinics has been possible in only a very few cases. There is a great need for this treatment.

8. *Other Defects*.—Included torticollis, infantile paralysis, congenital deformity, cleft palate, three bony conditions under observation, &c.

DETAILS OF SCHOOLS EXAMINED, 1948-49.

			Number Examined.		
			Boys.	Girls.	Total.
METROPOLITAN STATE SCHOOLS.					
197	Doncaster	..	..	26	26
293	Hawthorn	..	292	256	548
294	Heidelberg	..	108	..	108
450	George-street, Fitzroy ..	..	242	190	432
773	Caulfield	..	..	258	258
888	Camberwell	..	245	245	590
1026	Balwyn	..	117	175	292
1075	Kew	..	340	307	647
1360	Gold-street, Clifton Hill ..	..	119	..	119
1396	Brighton-street, Richmond ..	..	104	146	250
1406	Yarra Park	..	179	166	345
1490/3918	Alfred-crescent/Falconer-street	..	326	384	710
1508	Glenferrie	..	160	144	304
1567	Gleadell-street, Richmond ..	..	249	174	423
1886	Abbotsford	..	193	91	284
1895	Cambridge-street, Collingwood ..	..	106	98	204
2084	Cremorne-street, Richmond ..	..	112	120	232
2096	Doncaster East	..	..	46	46
2436	Ivanhoe	..	209	..	209
2462	Cromwell-street, Collingwood ..	..	103	..	103
2711	Fairfield	..	288	..	288
2778	Surrey Hills	..	166	255	421
2798	North Richmond	..	50	154	204
2838	Station-street, Box Hill ..	..	..	297	297
2853	Burnley	..	193	202	395
2923	Blackburn	..	..	162	162
2948	Rathmines-road, Auburn ..	..	427	412	839
2955	Prince's Hill	..	300	..	300
2957	Victoria Park	..	257	150	407
3016	Toorak	..	268	277	545
3110	North Fitzroy	..	159	167	326
3146	Clifton Hill	..	55	..	55
3161	East Kew	..	..	291	291
3572	Canterbury	..	..	371	371
3599	Alphington	..	92	9	101
3680	Deepdene	..	322	245	567
3806	Pender's-grove	..	257	..	257
3889	Thornbury	..	230	..	230
3941	Mont Albert	..	90	247	337
4138	Box Hill South	..	..	153	153
4170	Camberwell	..	282	234	516
4177	Westgarth	..	406	..	406
4183	Auburn South	..	239	182	421
4267	Heidelberg West	..	143	165	308
4314	Chatham	..	45	199	244
4329	Fairfield	..	163	..	163
4386	Ivanhoe East	..	226	..	226
4639	Watsonia	..	58	54	112
			7,920	7,052	14,972

TECHNICAL SCHOOLS.

Preston	457	..	457
	457	..	457

HEALTH AND RECREATION CAMPS.

State Schools.

Camp No. 13	..	103	103
.. 14	..	127	127
.. 15	..	113	113
.. 16	40	60	100
.. 3	..	89	89
.. 4	..	84	84
.. 5	..	105	105
.. 6	..	121	121
.. 7	..	113	113
.. 9	115	..	115
.. 10	110	..	110
.. 11	110	..	110
	375	915	1,290

Registered Schools.

Camp No. 12	..	104	104
.. 17	..	75	75
.. 8	..	109	109
	..	288	288

**DEFECTS IN BOYS AND GIRLS IN ALL ELEMENTARY, TECHNICAL, AND REGISTERED SCHOOLS,
YEAR 1948-49.**

	Number Examined.		Vision.		Wear Glasses.		Hearing.		Nose and Throat.				Dental.					
									Defects.		Operations.		Defects.		Fillings.		Plates.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Metropolitan—																		
State	7,920	7,052	349	415	141	591	156	142	630	753	2,771	1,875	1,929	2,826	2,999	2,292	10	16
Percentage	..	..	4.4	5.8	1.8	2.2	1.9	2.0	7.8	10.6	34.9	26.4	24.1	40.0	37.8	32.5	0.1	0.2
Metropolitan—																		
Technical	457	..	22	..	16	..	14	..	25	..	220	..	175	..	169	..	10	..
Percentage	..	..	4.8	..	3.5	..	3.0	..	5.4	..	48.0	..	38.2	..	36.9	..	2.1	..
Health and Recreation																		
Camp—																		
State	375	915	16	45	6	24	14	10	8	51	140	274	108	336	184	333	6	1
Percentage	..	..	4.0	4.9	1.6	2.5	3.6	1.0	2.1	5.5	37.3	29.9	28.8	25.8	49.0	21.1	1.6	1.0
Health and Recreation																		
Camp—																		
Registered	..	288	..	10	..	13	..	1	..	3	..	100	..	126	..	78	..	2
Percentage	..	..	..	3.4	..	4.5	..	0.4	..	1.0	..	35.2	..	44.3	..	13.5	..	0.4
Total	8,752	8,255	387	470	163	196	184	153	663	807	3,131	2,249	2,212	3,288	3,352	2,703	26	19
Percentage	..	..	4.3	5.6	1.8	2.2	2.2	1.7	7.5	9.7	35.7	27.2	20.4	38.6	38.3	32.5	0.2	0.2
Grand Total ..	17,007		857		359		337		1,470		5,380		5,500		6,055		45	
Percentage	..	..	5.03		2.1		1.9		8.6		31.06		32.3		35.6		0.2	

**DEFECTS IN BOYS AND GIRLS IN ALL ELEMENTARY, TECHNICAL, AND REGISTERED SCHOOLS,
YEAR 1948-49—continued.**

	Hair.		Heart.		Anaemia.		Skin.		Other Defects.		Free from Defects.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Metropolitan—												
State	86	368	17	46	12	16	57	78	755	1,313	4,525	2,993
Percentage	1.0	5.0	0.2	0.6	0.1	0.2	0.7	0.9	9.1	18.6	57.3	42.4
Metropolitan—												
Technical	..	..	..	..	..	..	2	..	11	..	208	..
Percentage	..	..	..	..	..	..	0.4	..	2.4	..	41.1	..
Health and Recreation												
Camp—												
State	..	54	1	4	2	3	4	6	12	115	98	435
Percentage	..	5.9	0.2	0.4	0.5	0.3	1.0	0.6	3.2	12.5	2.6	47.5
Health and Recreation												
Camp—												
Registered	..	31	..	..	..	..	..	1	..	26	..	101
Percentage	..	10.7	..	..	..	..	..	0.3	..	9.0	..	34.0
Total	86	453	18	50	14	19	63	85	778	1,454	4,821	3,529
Percentage	0.9	5.6	0.2	0.6	0.1	0.2	0.7	1.0	7.8	18.2	55.0	42.7
Grand Total ..	539		68		33		148		2,232		8,350	
Percentage	4.4		0.5		0.1		0.8		13.1		49.0	

DEFECTS IN MEN AND WOMEN TEACHERS EXAMINED, 1948-49.

Number Examined	Men (1303).		Women (1464).	
	Number.	Per-centage.	Number.	Per-centage.
Rejected	43	3.3	(1) 42	2.8
Deferred	101	7.7	(2) 124	8.4
Hearing	22	1.6	22	1.5
Vision—				
Defect notified ..	56	4.2	52	3.5
Wearing glasses ..	239	18.3	(3) 251	17.0
Teeth—				
Caries	83	6.3	81	5.5
Artificial dentures ..	355	27.2	331	22.6
Nose and throat—				
Defects notified ..	18	1.3	27	1.8
Previous operation ..	554	42.5	642	43.8
General Health	100	7.6	61	4.1
Anaemia	5	0.3	31	2.1
Thyroid	4	0.3	9	0.6
Dysmenorrhoea	..	..	(4) 30	2.0
Diabetes	..	..	1	0.6
Hernia and varicose veins ..	105	8.0	8	0.5
Appendicectomy	122	9.3	153	10.4
Other defects	36	2.8	(5) 68	4.6
Physical deformity	35	2.7	55	3.7
Defects detected by X-rays ..	27	2.0	..	..

- (1) *Rejected*.—Consisted of sixteen permanently ineligible for superannuation, fourteen refused extra units of superannuation, and twelve for teaching profession.
- (2) *Deferred*.—Included those whose superannuation was deferred awaiting certificates from oculists, &c., those under observation regarding chest X-ray, those requiring medical treatment and further examination, and those requiring further time for adjustment.
- (3) *Glasses*.—A further 7 per cent. have glasses for reading only.
- (4) *Dysmenorrhoea*.—Only those included who show regular loss of school time.
- (5) *Other Defects*.—Included are those who require further chest X-rays.

SICK LEAVE IN MEN AND WOMEN TEACHERS 1948-49 (ONE MONTH OR MORE).

Number Examined	Men (136).		Women (221).	
	Number.	Per-centage.	Number.	Per-centage.
Number of Consultations	Men (214).		Women (280).	
Defects.	Number.	Per-centage.	Number.	Per-centage.
Respiratory disease—				
General	17	12.5	39	17.6
Tuberculosis	7	5.1	8	3.6
Circulatory disease	25	19.1	37	16.7
Gastro-intestinal	7	5.1	19	8.6
Mental diseases—				
Psychosis	6	4.4	5	2.2
Psychoneurosis and neurosis	36	26.4	44	19.9
Malignant growths and tumours	4	2.9	11	5.0
Urinary diseases	4	2.9	7	3.1
Gynaecological	..	..	8	3.6
Anaemia and general health ..	2	1.4	30	13.6
Ear, nose, and throat	8	5.8	12	5.4
Eye	3	2.2	3	1.3
* Infectious diseases	2	1.4	5	2.2
Accidents	10	7.3	11	5.0
Thyroid diseases	2	1.4	5	2.2
Rheumatism and bone diseases	11	8.0	12	5.4
Skin	2	1.4	8	3.6
Diabetes	4	2.9	1	0.45
Operations—				
Appendix	6	4.4	12	5.4
Ear, nose, and throat	1	0.7	8	3.6
Gynaecological	..	..	15	6.8
Others	17	12.5	23	10.4
Superannuation—				
New cases	12	8.8	13	6.0
Re-examinations	10	7.3	20	9.0

* *Infectious Diseases*.—The following were on sick leave but were not examined by the Schools Medical Officer:—

	Men.	Women.
Diphtheria	1	..
Pertussis	..	1
Parotitis	34	90
Scarlet Fever	2	3
Varicella	13	27
Rubella	5	31
Morbilli	12	19
Tinea	1	..
Impetigo contagiosa	2	2
Scabies	..	3

SCHOOL DENTAL SERVICE.

The following are extracts from the report of the Principal Dental Officer—

"Towards the latter end of this report period, the School Dental Service was deprived of the helpful assistance of Mr. E. S. Callanan who had remained on the staff for over four years after he had relinquished the position of Principal Dental Officer. At a time when dental services were at their lowest ebb in regard to staff, Mr. Callanan volunteered his further services as Temporary Dental Officer, and I feel that he has earned an expression of thanks from the School Dental Service for those extra years of dental duties. About the same time we received a staff compensation by the addition of two temporary Dental Officers who were recent graduates and one permanent Dental Officer."

"During this period the average age of Dental Officers made a further upward step towards the peak stage when, after many years of dental van work in rural areas, these experienced Dental Officers are no longer physically fit or should be expected to undertake any further duties in remote districts or under arduous conditions on mobile units. In the case of one officer, this has already been found necessary for medical reasons."

Analysis of the complete figures of the report show:—

Approximately the same number of children were treated during this year, but these children needed an increased number of visits to render them dentally fit. This would be due principally to the greatly extended interval between the school visits which are arranged in rotation.

In the same way, accentuated by lack of staff and other considerations making it impossible to operate the dental vans fully, the visits and treatment to country districts declined to some extent in numbers of children treated, but the policy adopted generally during the year of showing preference towards the smaller outlying schools entailed more daily travelling with a consequent greater loss of dental treatment time.

SUMMARY OF REPORTS—JULY, 1948, TO 30TH JUNE, 1949.

	Number of Children.	Number of Visits.	Deciduous Dentition.		Permanent Dentition.		General Anaesthetics.	Regulation.	Dressings.	Other Operations.
			Extractions.	Fillings.	Extractions.	Fillings.				
City Schools ..	10,360	15,186	14,106	1,344	3,616	11,148	1,430	695	1,524	3,521
Country Schools ..	2,741	3,114	4,108	608	685	2,586	1	..	..	943
Totals ..	13,001	18,300	18,214	1,952	4,301	13,734	1,431	695	1,524	4,464

DISTRICTS—

City.—Inner Metropolitan Schools and Institutions.

Country.—Far East Gippsland—Omeo to Genoa, &c.

South Gippsland—to Currajung Hills.

Yarra Valley to Powelltown.

Northern Goulburn Valley and Mallee (Lower).

M. LANE, M.B., B.S.,

Chief Medical Inspector.

REPORT OF THE INDUSTRIAL HYGIENE DIVISION, 1948-49.

The following table shows the number of inspections and tests carried out in regard to various harmful agents during the year.

Classifications of Hazard.	Inspections.	Total.	Tests.	Total.
Body Temperature ..	1	1	3	3
Contact—Direct ..	6	6	..	..
Dusts and Smokes—				
Asbestos ..	8	..	..	..
Lead ..	70	..	70	..
Other Inorganic ..	19	..	..	..
Silica (Thermal Precip. 2. Impinger. 90, Owens 421 ..	301	..	513	..
Vegetable ..	4	..	..	..
Other Organic ..	17	..	..	..
Mixed Dusts ..	236	655	30	613
Fumes—				
Lead ..	10	..	2	..
Mercury ..	1	..	..	..
Zinc ..	3	..	..	..
Chromic Acid ..	20	..	2	..
Tin ..	4	38	..	4
Gases—				
Carbon Monoxide ..	31	..	11	..
Cyanide ..	15	..	..	..
Sulphur Dioxide ..	2	..	12	..
Oxides of Nitrogen ..	2	50	1	24
Mists, Spray, and Fog ..	265	265	87	87
No Hazard ..	185	185	..	..
Radiations—				
Ultra Violet and/or Infra Red ..	421	..	3	3
X-ray ..	..	..	..	..
Radio Active Rays ..	..	421	..	..
Undetermined ..	20	20	..	..
Vapours ..	277	277	..	..
Benzene ..	..	..	93	..
Organic Vapours and Benzene ..	..	..	24	..
Aromatic Vapours ..	..	..	65	182
	1,918	1,918	916	916

Note.—Tests under Dusts refer to samples taken by Owen's Instrument for dust counts in the laboratory. Not all the counts have been completed yet owing to shortage of staff.

In addition to the above field inspections and tests a large number of queries and requests for information on various aspects of Industrial Health and Hygiene have been received, and dealt with.

LABORATORY TESTS.

The following tests were carried out in the laboratory of the Division.

Blood films—

Examinations of slides for—

Stippled cell counts ..	396
Ratio of large lymphocytes and monocytes to small lymphocytes ..	244
Differential white cell counts ..	56
White cell counts ..	56
Haemoglobin Determination (Neoplan) ..	56
Determination of lead in Urine ..	215
Determination of lead in Blood ..	7
Determination of lead in the atmosphere ..	69
Dust counts in the atmosphere ..	142
Determination of Benzene in air ..	35
Determination of ratio of organic to inorganic sulphates in urine ..	9
Total ..	1,285

In addition to these a considerable number of analyses were done for the Division by the Health Department analyst and Mines Department analyst in the State Laboratories as follows:—

Determination of free Silica in Industrial Dust ..	88
Determination of Benzene in Solvents ..	9
Determination of Arsenic in Urine ..	1
Miscellaneous ..	16
Determination of free silica in Mines Dusts ..	10

OCCUPATIONAL DISEASES.

The following is a list of the occupational diseases reported to the Department or coming under its notice through investigation by the Division.

Occupational Diseases.	Number of Cases.
Lead Poisoning ..	27
Silicosis ..	17
Silicosis and Tuberculosis ..	2
Benzene Poisoning ..	5
Occupational Infections ..	11
Erysipeloid ..	8
Carbon Monoxide ..	1
Dermatitis Chrome 1 } other 2 }	3
Pneumoconiosis ..	1
Arsenic Poisoning ..	3
	78

With the exception of lead poisoning and silicosis the reporting of occupational diseases is still unsatisfactory.

In addition six cases of lead poisoning not definitely of occupational origin were investigated by the Division. In one of these a bad case of foot drop in a boy, the source of the lead was pills containing a considerable proportion of lead compound, which was alleged to have been prescribed by a Chinese Herbalist for Asthma.

In three other cases in which the victims were small children the source of lead has not yet been definitely located.

LEAD TRADES.

The number of reports of Medical Examinations under the Dangerous Trades, &c., Medical Examinations Regulations received was 1,288 concerning 490 different individuals; of these 27 were cases of lead poisoning. The distributions of these cases in regard to the industries concerned were as follows:—

Industry.	Number of Cases of Lead Poisoning.	—
Battery manufacture ..	18	Industry covered by the Medical Examinations Regulations
Manufacture of arsenate of lead ..	3	
Manufacture of paint ..	1	
Manufacture of collapsible metal tubes ..	1	Industries not covered by the above Regulations
Manufacture of solder and lead alloys ..	1	
Gas works ..	1	
Carrier handling lead battery plates ..	1	
Electric battery repairs ..	1	

In view of the results shown in the lower part of the above table and investigations in other industries, consideration is being given to the inclusion in the scope of the Dangerous Trades, &c., Medical Examinations Regulations, of certain other occupations *not at present included therein*.

EXTENSION OF TIME INTERVAL BETWEEN EXAMINATIONS.

In a considerable number of cases it has been found that the interval of time between successive medical examinations could safely be increased, and this has been done.

ATMOSPHERIC LEAD DETERMINATIONS.

A number of determinations of lead in the air of different kinds of factories was made. Most of these were in Electric Accumulator (Battery) works. On the whole the results showed that there was still too much lead in the air of most of the places. It is proposed to intensify the supervision of certain of the occupations in these lead trades by more numerous determinations of lead in air.

These trades as a whole cannot yet be described as in a satisfactory condition; whereas some are satisfactorily controlled, the conditions in others are such that cases of lead poisoning are bound to occur.

In some there have been periods during which considerable improvement has occurred, followed by some retrogression to unsatisfactory conditions. Constant vigilance is necessary in order to keep dust prevention equipment and measures at a satisfactory standard.

The carrying out of the regulations regarding periodical medical examination has been in some cases quite satisfactory. In others, considerable difficulty has been experienced in securing conformity with the regulations. Possibly prosecutions may have to be instituted in order to make some employers realize their responsibility in this matter.

A short lecture by one of the Medical Staff on lead poisoning and its prevention was given to the employees of one of the larger battery manufacturing establishments.

During the year a new factory for the manufacture of storage batteries commenced operations. The great majority of the employees had had no previous exposure to lead. A good opportunity thus arose of making a detailed investigation of the effects of increasing exposure to lead hazards on previously unexposed employees, and of relating the effects to definite exposure as determined by atmospheric lead determination. The management and medical officer of the company concerned co-operated cordially in this investigation. Interesting results have been obtained and it is proposed to prepare a detailed report when the investigation is complete.

ARC WELDING AND OXY-ACETYLENE WELDING.

Numerous cases of the use of ineffective goggles for protection of the eyes against the radiation produced by the above processes have come to the notice of this Division. It was decided to make a survey of the trades in which these processes are used, from the point of view of the effectiveness of the protection afforded by the lenses in use.

Many of the goggles were not branded as conforming to the British Standards Association's Specifications or those of the United States. Some of these were tested at the Defence Research Laboratories and found to be wholly or partially defective for the purpose for which they were being used.

Those which were branded as conforming to the above standards were regarded as "approved" and those which did not as "not approved". The following table shows the results of the survey.

Number of Factories Works.	Factories or Works Using—		
	Approved Type Only.	Approved and Not Approved Type.	Not Approved Type Only.
339	183	83	73
Percentage	54	24.5	21.5

This survey indicated that a very considerable percentage of the places in which arc welding or oxy-acetylene welding were carried on were using unsatisfactory protective equipment. In a large number of instances where this was so it was apparently due to ignorance, the idea being common that any sort of coloured glass would be effective. Steps were taken to inform those responsible of the position, and in many cases assurances were given that suitable lenses would be secured. It is proposed to repeat the inspections where necessary and to determine how far these assurances have been carried out. The Division is considering recommending to the Commission the introduction of legislation requiring the provision of effective goggles.

DUST IN FOUNDRIES.

EFFECT OF THE USE OF NON-SILICEOUS PARTING POWDERS IN THE FREE SILICA CONTENT OF FOUNDRY DUST.

In some States the use of parting powders or facing powder containing free silica is prohibited. This is so in New South Wales. That State also prohibits the use of material containing free silica as a constituent of steel moulding compositions "when sufficient quantities of suitable alternative non-siliceous materials are available."

A short investigation into the influence of the use of non-siliceous parting powders on the free silica content of air borne dust in foundries has been carried out.

Samples of air-borne dust were collected by the Greenburg-Smith Impinger from the breathing zone of men engaged on moulding and on dressing of castings in a number of foundries, in some of which siliceous parting powders such as brick dust, silica flour, &c., were used, and in others of which non-siliceous parting powders were used.

The free silica content of the parting powders used were as follows:—

Brick dust	69.7 per cent.
Silica flour	93.6 "
White facing	37.5 "
Two non-siliceous parting powders..	Nil in each

It was anticipated that the substitution of a non-siliceous for a siliceous parting or facing powder would have a considerable effect on the free silica content of the dust in the moulding sections, but a relatively much less effect on the free silica content of the dust in the dressing sections owing to differences in the nature of the operations carried out in the two sections.

This has been borne out by the investigations.

The following table shows the free silica content of the air borne dust collected under the different circumstances indicated.

MOULDING.
Free Silica Content of Air-Borne Dust.

Number of Tests.	Non-Siliceous Parting Powder.	Number of Tests.	Parting Powder Containing Free Silica, e.g., Bick Dust, Siliceous Flour.
23	0%	19	0%
	Nil		26
	Nil		20
	Nil		19.2
	11		26.9
	14.90		30.0
	19.10		Nil
	10.64		57.1
	10.76		Nil
	Nil		19.5
	Nil		Nil
	Nil		Nil
	Nil		11.86
	Nil		Nil
	Nil		Nil
	10.80		9.8
	21.70		20.3
	Nil		16.7
	Nil		40.6
	Nil		48.3
	18.00		
	Nil		
	Nil		
Average ..	5.31	Average ..	18.23

DRESSING.

Number of Tests.	Non-Siliceous Parting Powder.	Number of Tests.	Parting Powder Containing Free Silica, e.g., Bick Dust, Siliceous Flour.
23	0%	19	0%
	Nil		11.8
	15.2		35.1
	5.0		Nil
	Nil		Nil
	Nil		Nil
	28.1		Nil
	43.4		25.3
	12.25		43.4
	10.86		23.3
	10.2		Nil
	Nil		5.44
	Nil		6.25
	Nil		Nil
	Nil		10.94
	7.8		11.6
	11.95		8.4
	4.9		Nil
	14.98		22.5
	Nil		Nil
	26.2		
	Nil		
	11.0		
Average ..	8.77	Average ..	10.74

The average free silica content of the air-borne dust in the moulding section in 23 foundries using non-siliceous parting powder was 5.31 per cent., and for 19 foundries using siliceous parting powder 18.23 per cent., a very significant variation. The average free silica content of the air-borne dust in the dressing operation in 23 foundries using non-siliceous parting powder was 8.77 per cent., and the 19 foundries using siliceous parting powder 10.74 per cent.—only a slight increase.

**DISTRIBUTION OF PERCENTAGES OF FREE SILICA
IN AIR-BORNE DUST IN FOUNDRIES.**

Non-siliceous Parting Powder.			Siliceous Parting Powder.	
Percentage of Free Silica in Air-borne Dust.	Number of Foundries.	Percentage of Foundries in this Class.	Number of Foundries.	Percentage of Foundries in this Class.
0-10 ..	17	77.2	7	36.9
11-20 ..	4	18.2	6	31.6
21-30 ..	1	4.5	3	15.8
31-40 ..	..	..	1	5.3
41-50 ..	..	..	1	5.3
51 and over ..	..	..	1	5.3
	22	..	19	..

This table indicates the marked difference observed in the percentage of foundries in each class which had a free silica content of air-borne dust of a particular range. Thus in the moulding section only 4.5 per cent. of the foundries using non-siliceous parting powder had free silica content of air-borne dust of 21 per cent. or over, whereas 31.7 per cent. of the foundries using siliceous parting powder had values over the amount.

DRESSING.

Non-siliceous Parting Powder.			Siliceous Parting Powder.	
Percentage of Free Silica in Air-borne Dust.	Number of Foundries.	Percentage of Foundries in this Class.	Number of Foundries.	Percentage of Foundries in this Class.
0-10 ..	15	65.25	12	63.2
11-20 ..	5	21.7	2	10.5
21-30 ..	2	8.7	3	15.8
31-40 ..	..	..	1	5.3
41-50 ..	1	4.35	1	5.3
	23	..	19	..

In regard to the *dressing shops* the effects of the use of non-siliceous parting powder in moulding are not nearly so marked as in the moulding operations themselves. Thus the percentages of foundries in the two classes wherein the free silica content of the air-borne dust is up to 10 per cent. are almost the same.

For free silica contents up to 20 per cent. the percentages are 87 and 73.7 respectively for "non-siliceous" and "siliceous" parting powders and for free silica contents 21 per cent. and over 13 and 26.4 per cent. For the latter range of free silica content the siliceous has twice the percentage that the non-siliceous has. In contrast, for the moulding operations the siliceous has seven times the percentage that the non-siliceous shows.

DUST IN MINES.

A preliminary survey of the conditions as to atmospheric dust in certain Victorian gold mines was carried out. A copy of the report is included here.

**REPORT ON DUST CONDITIONS IN CERTAIN VICTORIAN
MINES.**

Since no detailed investigation of the dust conditions in Victorian gold mines had been made and since such an investigation is obviously advisable, a preliminary investigation of certain of these mines was undertaken by the Industrial Hygiene Division of this Department with the full co-operation and approval of the Mines Department in November, 1948.

A complete investigation was not attempted owing to certain limitations due to staff shortage and other factors, the idea being to get a fairly general view of the conditions.

In the light of the findings in this preliminary investigation a more complete investigation can be planned.

Dust samples were collected by the Owens' Dust Counter and the slides examined by a Zeiss Binocular Microscope using oil immersion lens with N.A.1 and using a total magnification of $\times 900$.

A number of determinations of the free silica content of airborne dust, collected by the Greenburg-Smith Impinger, and of settled samples were done by the Mines Department Laboratory of the State Laboratories, the analyses being carried out by Mr. Field.

The following table shows the results obtained:—

TABLE I.

Location and Type of Work being done.	Number of Slide.	Dust Count in Millions of Particles per Cubic Foot.		Percentage Free SiO ₂ .	
		Before Ignition.	After Ignition.	On Total.	After Ignition.
Mine No. 1.					
1,180-ft. level, 650 ft. in. Locality fired 10 hours previously and left without watering or extra ventilation. Fired 11.30 p.m. 8th November, 1948. Sampled 10 a.m. to 10.30 a.m. 9th November, 1948, during half-hour period	1A	51	35.4	10	21
	1B	49	35.4		
	2A	84	..		
	2B	102	..		
	3A	..	55.2		
	3B	100	69.3		
	4A	104	..		
4B	105	..			
8.30 p.m. 9th November, 1948—					
Afternoon shift—boring. 5 mins., boring	19A	623	..	..	..
Wet and dry bulb, 76° F.; 5 mins.; setting up machine	19B	226	..	..	..
Cross cut 1,180 ft.; drive 300 ft. in	5A	17	..	..	..
	5B	17	..	..	..
1,100-ft. level north; 150 ft. in cross cut; samples taken during drilling operations during half-hour period—					
	6A	131	..	27	38
	6B	221	..		
	7A	..	..		
	7B	165	..		
Drill stopped	8A	89	..		
Drill on	8B	179	..		
Collaring hole drill on	9A	188	135.5		
Drill stopped	9B	299*	215.9		
* Test taken by watch at five-minute intervals so possibly drill had been stopped only for a half minute or so.					
1,100-ft. level; 75 ft. in cross cut	10A	44	..	..	..
	10B	34	..	..	..
Stope above 1,020-ft. level—					
Top of heap in stope	11A	34.5	..	..	..
Top of heap in stope	11B	27.8	..	..	..
Bottom of heap in stope	12A	21.3	..	..	..
Approximately 20 ft. below	12B	20.0	..	..	..

Bulk sample of dust from 940-ft. level timbers 58.3 per cent. free SiO₂.

Bulk sample of dust from 550-ft. in from north drive, from walls, 65.1 per cent. free SiO₂.

Samples 19A, 19B were taken during boring and screwing up the machine. Although the percentage free silica in this dust was not determined there is not much doubt that the conditions here were very unsatisfactory.

TABLE I.—continued.

Location and Type of Work being done.	Number of Slide.	Dust Count in Millions of Particles per Cubic Foot.		Percentage Free SiO ₂ .	
		Before Ignition.	After Ignition.	On Total.	After Ignition.
<i>Mine No. 2. (Damp Conditions).</i>					
No. 9 sub-level. Approximately 750 ft. south at face. Samples taken over half-hour period. No work proceeding. One and a half hours previously boring and shovelling had been going on	13A	19.0	..	23	33
	13B	14.7	..		
	14A	5.7	..		
	14B	3.5	..		
	15A	10.7	..		
	15B	5.1	..		
	16A	6.6	..		
	16B	3.4	..		
In bye from mine to the north	17A	4.8	..	..	..
	17B	4.6	..	..	..
No. 11 level; 870-ft. shaft; 410 ft. north at bottom of rise. Sample taken two hours after boring	18A	11.6	..	..	..
	18B	11.4	..	..	..

TABLE I.—continued.

Location and Type of Work being done.	Number of Slide.	Dust Count in Millions of Particles per Cubic Foot.		Percentage Free SiO ₂ .	
		Before Ignition.	After Ignition.	On Total.	After Ignition.
Mine No. 3. (Damp Conditions.)					
No. 10 level north—					
Top of stope	20A	31.6	..	..	..
	20B	23.9	..	..	..
No. 10 level south—					
Bottom of stope approximately 30 minutes after firing	21A	34.6	..	..	..
Top of stope approximately 30 minutes after firing	21B	39.3	..	..	..
No. 9 level south; in stope above	22A	3.8	..	23	36
Work proceeding	22B	5.4	..		
Breaking and shovelling	23A	7.3	..		
Face consists of large quartz reef	23B	4.2	..		
Top of stope	24A	4.7	..		
	24B	5.5	..		
In stope	25A	4.7	..		
In stope. Tests during half-hour period	25B	5.0	..		
Loading chute; top of winze	26A	16.0	..	..	..
Main cross cut, No. 8 level	26B	13.4	..	..	..
No. 8 level; stopes above	27A	3.3	..	..	..
	27B	2.8	..	..	..
No. 7 level south; top of stope	28A	10.9	..	..	..
No. 7 level south; bottom of stope; shovelling	28B	11.8	..	..	..
No. 7 level north; top of stope	29A	10.5	..	..	..
Bottom of stope; shovelling	29B	11.3	..	..	..
South level, 140 ft.—					
Shovelling	1A	31.8	..	..	..
1½ hours after firing	1B	43.4	..	..	..
First just after shovelling started	2A	71.2	..	..	..
The other at intervals but not by watch	2B	88.0	..	..	..
South drive	3A	20.3	..	..	..
	3B	..	..	..	..
West cross cut, 440 ft. from shaft	4A	60.8	..	..	..
17 hours after firing	4B	62.1	..	..	..
Mine No. 5. (Damp Conditions.) 17th November, 1948.					
No. 9 level, 500 ft. north of shaft	1A	10.6	..	18	41
Fired 20 hours previously	1B	15.1	..		
	2A	19.8	5.2		
	2B	19.7	6.65		
Sample taken while shovelling, during half-hour periods	3A	26.6	..		
	3B	9.5	..		
	4A	16.4	..		
	4B	12.2	..		
(Bulk dust sample from broken heap on floor. 70.03 per cent. free SiO ₂ .)					
No. 9 level, 300 ft. west of shaft south of cross cut	5A	..	..	33	47
30 ft. below level in stopes	5B	..	..		
Fired 20 hours previously	6A	54.0	..		
	6B	26.0	..		
Sample taken while boring, during half-hour period	7A	42.7	..		
	7B	63.7	44.8		
20 ft. outbye	8A	24.8	..		
	8B	23.9	..		
Sample taken while spalling	9A	10.8	..		
Getting out big rocks	9B	16.8	..		
(Bulk dust sample taken from top of timber, 73.5 per cent. free SiO ₂ .)					
No. 2 south drive, 20 ft. below; connection of 3/2 rise with south drive ..	10A	22.6	..	..	..
Fired 23 hours previously	10B	18.9	..	..	..
Running No. 5/3 pass at No. 4 level (good ventilation)	11A	32.6	..	..	..
	11B	40.8	..	..	..
At connection of north stope above No. 4 level	12A	61.3	..	..	..
	12B	65.8	..	..	..
No. 5 level below pass midway between Nos. 5/1 and 5/3	13A	21.0	..	..	..
After shovelling	13B	12.8	..	..	..
Mine No. 6. (Dry Conditions.)					
18th November, 1948. No work being done during tests.					
South drive, No. 2 adit, at foot of No. 1 travelling way	14A	6.75	..	..	..
	14B	1.9	..	..	..
At top of No. 2 pass, No. 2 intermediate level, between Nos. 1 and 2 adits	15A	3.45	..	..	..
	15B	2.26	..	..	..
At foot of No. 2 pass, No. 2 intermediate level	16A	3.54	..	..	..
No. 2 pass 15 ft. below West 1 adit	16B	9.54	..	..	..
Bulk sample from sides of workings and timbers, was not analysed. The workings are in practically pure quartz so the free silica content of the dust would be very high.					

13A to 16B were taken in No. 9 sub-level. No work was being done. One and a half hours previously, boring and shovelling had been going on.

All that these tests indicate is that $1\frac{1}{2}$ hours after work ceased the conditions were quite satisfactory. At this mine no samples were secured while work was going on.

Mine No. 3.

Test No.	N ₁	N ₂
	(Count in millions)	
21A	7.96*	..
21B	9.03*	..
* Assuming free silica content same here at No. 10 level south as in No. 9 level.		
These were taken 30 minutes after firing:—		
22A	0.87	..
22B	1.24	..
23A	1.68	..
23B	0.97	..
24A	1.08	..
24B	1.26	..
25A	1.08	..
25B	1.15	..
Average ..	1.17	..

22A to 25B were done at No. 9 level south while breaking and shovelling were going on. The conditions here were satisfactory.

Mine No. 5.

Test No.	N ₁	N ₂
	(Count in millions)	(Count in millions)
1A	1.91	..
1B	2.27	2.13
2A	3.56	2.72
2B	3.54	..
3A	4.79	..
3B	1.71	..
4A	2.35	..
4B	2.20	..
Average ..	2.92	..

1A to 4B were taken in No. 9 level 500 ft. north of shaft, fired 20 hours previously. Samples were taken while shovelling. These conditions were satisfactory.

Test No.	N ₁	N ₂
	(Count in millions)	(Count in millions)
6A	17.8	..
6B	8.58	..
7A	14.09	..
7B	21.02	21.06
Average ..	15.37	..

6A to 7B were taken at No. 9 level 300 ft. west of cross cut. The locality was fired 20 hours previously. Samples were taken while boring. Conditions were unsatisfactory, the counts being three times the suggested standard.

Mine No. 4.

Test No.	N ₁	N ₂
1A to 2B free SiO ₂ content not determined, but if one assumes only 20 per cent. then N ₁ would be ..	6.3 8.7 14.0 17.6	
and for—		
4A	12.1	..
4B	12.4	..

The tests 1A to 2B were taken one hour after firing and during shovelling. They are too high.

Tests 4A, 4B taken twelve hours after firing but work not being done. They reveal poor ventilation.

CONCLUSION.

The survey does not cover all types of activity in each mine, indeed in some cases, no work was going on while the tests were being done.

The conditions generally, reveal the necessity for:—

1. A complete survey.
2. Frequent dust counts at regular intervals.
3. Improved methods of dust control in the cases where this survey has revealed unsatisfactory conditions, and in any other cases revealed by the more complete survey of conditions.
4. An X-ray of the miners which is recommended.

In regard to the recommendation as to X-ray survey, steps have been taken to arrange this with the Mass X-ray Division and the Mines Department. Some of the miners have already been examined.

MISCELLANEOUS INVESTIGATIONS.

Among the numerous matters investigated during the year, were the concentration of carbon monoxide in the atmosphere of a clothing factory heated by a gas stove; the concentration of sulphuretted hydrogen and sulphur dioxide in a fruit preserving factory; the health hazards in the manufacture of large steel water pipes; health hazard due to use of certain oils in the drying chamber in woollen mills; unsatisfactory condition in the hold of a ship due to faulty packing of caustic soda; &c.

LEGISLATION.

No new legislation was introduced during the year. Attention is being given to a number of matters in regard to which the introduction of new regulations or the amendment of existing regulations appears desirable. These are:—the extension of the Dangerous Trades (&c.), Medical Examination Regulations to include some occupations not at present included; modification in certain clauses of these Regulations; inclusion in the schedule of the Harmful Gases, &c., Regulations of a further list of substances, including dusts containing free silica; regulations requiring efficient protection in the operations of arc-welding and oxy-acetylene welding.

STAFF.

During the year Dr. A. J. Christophers, M.B., B.Sc., was appointed as assistant Medical Officer for Industrial Hygiene. Mr. G. Palmer, B.Sc., was appointed Scientific Officer (Chemist). The staff is still short of one Scientific Officer (Chemist). Miss Mooney was appointed part time as typist. The four Industrial Hygiene Inspectors passed a special examination in Industrial Hygiene.

LECTURES.

A course of eight lectures on Industrial Hygiene and related subjects to nurses taking the course for the Industrial Nursing Certificate established by the Royal Victorian College of Nursing was given. Three lectures were given in a course conducted by the Melbourne Technical College on "Industrial Safety and Accident Prevention" for business executives, safety officers, &c.

COMMITTEES.

Meetings of the Committee for Industrial Hygiene of the National Health and Medical Research Council, and a meeting of the Poisons Schedule Advisory Panel have been attended by the writer.

RESEARCH.

The work on the treatment and prophylaxis of lead poisoning by sodium citrate has been completed, but the opportunity has not yet occurred of publishing it, owing to pressure of other work. Further investigations into the influence of lead or the ratio of large lymphocytes and monocytes to small lymphocytes are proceeding. Research is being conducted into an improved spectrophotometric method for the determination of lead in body fluids.

A recently published method for the determination of benzene in air, which was claimed to be accurate in the presence of large amounts of toluene was tried out. The experience in this laboratory with this method has so far not been satisfactory. The problem of determining a better method will be taken up.

D. O. SHIELS, D.Sc., Ph.D., F.R.I.C.,
F.A.C.I., M.B., B.S.

Medical Officer for Industrial Hygiene.

The number of cases examined was 1,000 in 1911-12, 1,200 in 1912-13, 1,400 in 1913-14, 1,600 in 1914-15, 1,800 in 1915-16, 2,000 in 1916-17, 2,200 in 1917-18, 2,400 in 1918-19, 2,600 in 1919-20, 2,800 in 1920-21, 3,000 in 1921-22, 3,200 in 1922-23, 3,400 in 1923-24, 3,600 in 1924-25, 3,800 in 1925-26, 4,000 in 1926-27, 4,200 in 1927-28, 4,400 in 1928-29, 4,600 in 1929-30, 4,800 in 1930-31, 5,000 in 1931-32, 5,200 in 1932-33, 5,400 in 1933-34, 5,600 in 1934-35, 5,800 in 1935-36, 6,000 in 1936-37, 6,200 in 1937-38, 6,400 in 1938-39, 6,600 in 1939-40, 6,800 in 1940-41, 7,000 in 1941-42, 7,200 in 1942-43, 7,400 in 1943-44, 7,600 in 1944-45, 7,800 in 1945-46, 8,000 in 1946-47, 8,200 in 1947-48, 8,400 in 1948-49, 8,600 in 1949-50, 8,800 in 1950-51, 9,000 in 1951-52, 9,200 in 1952-53, 9,400 in 1953-54, 9,600 in 1954-55, 9,800 in 1955-56, 10,000 in 1956-57, 10,200 in 1957-58, 10,400 in 1958-59, 10,600 in 1959-60, 10,800 in 1960-61, 11,000 in 1961-62, 11,200 in 1962-63, 11,400 in 1963-64, 11,600 in 1964-65, 11,800 in 1965-66, 12,000 in 1966-67, 12,200 in 1967-68, 12,400 in 1968-69, 12,600 in 1969-70, 12,800 in 1970-71, 13,000 in 1971-72, 13,200 in 1972-73, 13,400 in 1973-74, 13,600 in 1974-75, 13,800 in 1975-76, 14,000 in 1976-77, 14,200 in 1977-78, 14,400 in 1978-79, 14,600 in 1979-80, 14,800 in 1980-81, 15,000 in 1981-82, 15,200 in 1982-83, 15,400 in 1983-84, 15,600 in 1984-85, 15,800 in 1985-86, 16,000 in 1986-87, 16,200 in 1987-88, 16,400 in 1988-89, 16,600 in 1989-90, 16,800 in 1990-91, 17,000 in 1991-92, 17,200 in 1992-93, 17,400 in 1993-94, 17,600 in 1994-95, 17,800 in 1995-96, 18,000 in 1996-97, 18,200 in 1997-98, 18,400 in 1998-99, 18,600 in 1999-00, 18,800 in 2000-01, 19,000 in 2001-02, 19,200 in 2002-03, 19,400 in 2003-04, 19,600 in 2004-05, 19,800 in 2005-06, 20,000 in 2006-07, 20,200 in 2007-08, 20,400 in 2008-09, 20,600 in 2009-10, 20,800 in 2010-11, 21,000 in 2011-12, 21,200 in 2012-13, 21,400 in 2013-14, 21,600 in 2014-15, 21,800 in 2015-16, 22,000 in 2016-17, 22,200 in 2017-18, 22,400 in 2018-19, 22,600 in 2019-20, 22,800 in 2020-21, 23,000 in 2021-22, 23,200 in 2022-23, 23,400 in 2023-24, 23,600 in 2024-25, 23,800 in 2025-26, 24,000 in 2026-27, 24,200 in 2027-28, 24,400 in 2028-29, 24,600 in 2029-30, 24,800 in 2030-31, 25,000 in 2031-32, 25,200 in 2032-33, 25,400 in 2033-34, 25,600 in 2034-35, 25,800 in 2035-36, 26,000 in 2036-37, 26,200 in 2037-38, 26,400 in 2038-39, 26,600 in 2039-40, 26,800 in 2040-41, 27,000 in 2041-42, 27,200 in 2042-43, 27,400 in 2043-44, 27,600 in 2044-45, 27,800 in 2045-46, 28,000 in 2046-47, 28,200 in 2047-48, 28,400 in 2048-49, 28,600 in 2049-50, 28,800 in 2050-51, 29,000 in 2051-52, 29,200 in 2052-53, 29,400 in 2053-54, 29,600 in 2054-55, 29,800 in 2055-56, 30,000 in 2056-57, 30,200 in 2057-58, 30,400 in 2058-59, 30,600 in 2059-60, 30,800 in 2060-61, 31,000 in 2061-62, 31,200 in 2062-63, 31,400 in 2063-64, 31,600 in 2064-65, 31,800 in 2065-66, 32,000 in 2066-67, 32,200 in 2067-68, 32,400 in 2068-69, 32,600 in 2069-70, 32,800 in 2070-71, 33,000 in 2071-72, 33,200 in 2072-73, 33,400 in 2073-74, 33,600 in 2074-75, 33,800 in 2075-76, 34,000 in 2076-77, 34,200 in 2077-78, 34,400 in 2078-79, 34,600 in 2079-80, 34,800 in 2080-81, 35,000 in 2081-82, 35,200 in 2082-83, 35,400 in 2083-84, 35,600 in 2084-85, 35,800 in 2085-86, 36,000 in 2086-87, 36,200 in 2087-88, 36,400 in 2088-89, 36,600 in 2089-90, 36,800 in 2090-91, 37,000 in 2091-92, 37,200 in 2092-93, 37,400 in 2093-94, 37,600 in 2094-95, 37,800 in 2095-96, 38,000 in 2096-97, 38,200 in 2097-98, 38,400 in 2098-99, 38,600 in 2099-00, 38,800 in 2100-01, 39,000 in 2101-02, 39,200 in 2102-03, 39,400 in 2103-04, 39,600 in 2104-05, 39,800 in 2105-06, 40,000 in 2106-07, 40,200 in 2107-08, 40,400 in 2108-09, 40,600 in 2109-10, 40,800 in 2110-11, 41,000 in 2111-12, 41,200 in 2112-13, 41,400 in 2113-14, 41,600 in 2114-15, 41,800 in 2115-16, 42,000 in 2116-17, 42,200 in 2117-18, 42,400 in 2118-19, 42,600 in 2119-20, 42,800 in 2120-21, 43,000 in 2121-22, 43,200 in 2122-23, 43,400 in 2123-24, 43,600 in 2124-25, 43,800 in 2125-26, 44,000 in 2126-27, 44,200 in 2127-28, 44,400 in 2128-29, 44,600 in 2129-30, 44,800 in 2130-31, 45,000 in 2131-32, 45,200 in 2132-33, 45,400 in 2133-34, 45,600 in 2134-35, 45,800 in 2135-36, 46,000 in 2136-37, 46,200 in 2137-38, 46,400 in 2138-39, 46,600 in 2139-40, 46,800 in 2140-41, 47,000 in 2141-42, 47,200 in 2142-43, 47,400 in 2143-44, 47,600 in 2144-45, 47,800 in 2145-46, 48,000 in 2146-47, 48,200 in 2147-48, 48,400 in 2148-49, 48,600 in 2149-50, 48,800 in 2150-51, 49,000 in 2151-52, 49,200 in 2152-53, 49,400 in 2153-54, 49,600 in 2154-55, 49,800 in 2155-56, 50,000 in 2156-57, 50,200 in 2157-58, 50,400 in 2158-59, 50,600 in 2159-60, 50,800 in 2160-61, 51,000 in 2161-62, 51,200 in 2162-63, 51,400 in 2163-64, 51,600 in 2164-65, 51,800 in 2165-66, 52,000 in 2166-67, 52,200 in 2167-68, 52,400 in 2168-69, 52,600 in 2169-70, 52,800 in 2170-71, 53,000 in 2171-72, 53,200 in 2172-73, 53,400 in 2173-74, 53,600 in 2174-75, 53,800 in 2175-76, 54,000 in 2176-77, 54,200 in 2177-78, 54,400 in 2178-79, 54,600 in 2179-80, 54,800 in 2180-81, 55,000 in 2181-82, 55,200 in 2182-83, 55,400 in 2183-84, 55,600 in 2184-85, 55,800 in 2185-86, 56,000 in 2186-87, 56,200 in 2187-88, 56,400 in 2188-89, 56,600 in 2189-90, 56,800 in 2190-91, 57,000 in 2191-92, 57,200 in 2192-93, 57,400 in 2193-94, 57,600 in 2194-95, 57,800 in 2195-96, 58,000 in 2196-97, 58,200 in 2197-98, 58,400 in 2198-99, 58,600 in 2199-00, 58,800 in 2200-01, 59,000 in 2201-02, 59,200 in 2202-03, 59,400 in 2203-04, 59,600 in 2204-05, 59,800 in 2205-06, 60,000 in 2206-07, 60,200 in 2207-08, 60,400 in 2208-09, 60,600 in 2209-10, 60,800 in 2210-11, 61,000 in 2211-12, 61,200 in 2212-13, 61,400 in 2213-14, 61,600 in 2214-15, 61,800 in 2215-16, 62,000 in 2216-17, 62,200 in 2217-18, 62,400 in 2218-19, 62,600 in 2219-20, 62,800 in 2220-21, 63,000 in 2221-22, 63,200 in 2222-23, 63,400 in 2223-24, 63,600 in 2224-25, 63,800 in 2225-26, 64,000 in 2226-27, 64,200 in 2227-28, 64,400 in 2228-29, 64,600 in 2229-30, 64,800 in 2230-31, 65,000 in 2231-32, 65,200 in 2232-33, 65,400 in 2233-34, 65,600 in 2234-35, 65,800 in 2235-36, 66,000 in 2236-37, 66,200 in 2237-38, 66,400 in 2238-39, 66,600 in 2239-40, 66,800 in 2240-41, 67,000 in 2241-42, 67,200 in 2242-43, 67,400 in 2243-44, 67,600 in 2244-45, 67,800 in 2245-46, 68,000 in 2246-47, 68,200 in 2247-48, 68,400 in 2248-49, 68,600 in 2249-50, 68,800 in 2250-51, 69,000 in 2251-52, 69,200 in 2252-53, 69,400 in 2253-54, 69,600 in 2254-55, 69,800 in 2255-56, 70,000 in 2256-57, 70,200 in 2257-58, 70,400 in 2258-59, 70,600 in 2259-60, 70,800 in 2260-61, 71,000 in 2261-62, 71,200 in 2262-63, 71,400 in 2263-64, 71,600 in 2264-65, 71,800 in 2265-66, 72,000 in 2266-67, 72,200 in 2267-68, 72,400 in 2268-69, 72,600 in 2269-70, 72,800 in 2270-71, 73,000 in 2271-72, 73,200 in 2272-73, 73,400 in 2273-74, 73,600 in 2274-75, 73,800 in 2275-76, 74,000 in 2276-77, 74,200 in 2277-78, 74,400 in 2278-79, 74,600 in 2279-80, 74,800 in 2280-81, 75,000 in 2281-82, 75,200 in 2282-83, 75,400 in 2283-84, 75,600 in 2284-85, 75,800 in 2285-86, 76,000 in 2286-87, 76,200 in 2287-88, 76,400 in 2288-89, 76,600 in 2289-90, 76,800 in 2290-91, 77,000 in 2291-92, 77,200 in 2292-93, 77,400 in 2293-94, 77,600 in 2294-95, 77,800 in 2295-96, 78,000 in 2296-97, 78,200 in 2297-98, 78,400 in 2298-99, 78,600 in 2299-00, 78,800 in 2300-01, 79,000 in 2301-02, 79,200 in 2302-03, 79,400 in 2303-04, 79,600 in 2304-05, 79,800 in 2305-06, 80,000 in 2306-07, 80,200 in 2307-08, 80,400 in 2308-09, 80,600 in 2309-10, 80,800 in 2310-11, 81,000 in 2311-12, 81,200 in 2312-13, 81,400 in 2313-14, 81,600 in 2314-15, 81,800 in 2315-16, 82,000 in 2316-17, 82,200 in 2317-18, 82,400 in 2318-19, 82,600 in 2319-20, 82,800 in 2320-21, 83,000 in 2321-22, 83,200 in 2322-23, 83,400 in 2323-24, 83,600 in 2324-25, 83,800 in 2325-26, 84,000 in 2326-27, 84,200 in 2327-28, 84,400 in 2328-29, 84,600 in 2329-30, 84,800 in 2330-31, 85,000 in 2331-32, 85,200 in 2332-33, 85,400 in 2333-34, 85,600 in 2334-35, 85,800 in 2335-36, 86,000 in 2336-37, 86,200 in 2337-38, 86,400 in 2338-39, 86,600 in 2339-40, 86,800 in 2340-41, 87,000 in 2341-42, 87,200 in 2342-43, 87,400 in 2343-44, 87,600 in 2344-45, 87,800 in 2345-46, 88,000 in 2346-47, 88,200 in 2347-48, 88,400 in 2348-49, 88,600 in 2349-50, 88,800 in 2350-51, 89,000 in 2351-52, 89,200 in 2352-53, 89,400 in 2353-54, 89,600 in 2354-55, 89,800 in 2355-56, 90,000 in 2356-57, 90,200 in 2357-58, 90,400 in 2358-59, 90,600 in 2359-60, 90,800 in 2360-61, 91,000 in 2361-62, 91,200 in 2362-63, 91,400 in 2363-64, 91,600 in 2364-65, 91,800 in 2365-66, 92,000 in 2366-67, 92,200 in 2367-68, 92,400 in 2368-69, 92,600 in 2369-70, 92,800 in 2370-71, 93,000 in 2371-72, 93,200 in 2372-73, 93,400 in 2373-74, 93,600 in 2374-75, 93,800 in 2375-76, 94,000 in 2376-77, 94,200 in 2377-78, 94,400 in 2378-79, 94,600 in 2379-80, 94,800 in 2380-81, 95,000 in 2381-82, 95,200 in 2382-83, 95,400 in 2383-84, 95,600 in 2384-85, 95,800 in 2385-86, 96,000 in 2386-87, 96,200 in 2387-88, 96,400 in 2388-89, 96,600 in 2389-90, 96,800 in 2390-91, 97,000 in 2391-92, 97,200 in 2392-93, 97,400 in 2393-94, 97,600 in 2394-95, 97,800 in 2395-96, 98,000 in 2396-97, 98,200 in 2397-98, 98,400 in 2398-99, 98,600 in 2399-00, 98,800 in 2400-01, 99,000 in 2401-02, 99,200 in 2402-03, 99,400 in 2403-04, 99,600 in 2404-05, 99,800 in 2405-06, 100,000 in 2406-07, 100,200 in 2407-08, 100,400 in 2408-09, 100,600 in 2409-10, 100,800 in 2410-11, 101,000 in 2411-12, 101,200 in 2412-13, 101,400 in 2413-14, 101,600 in 2414-15, 101,800 in 2415-16, 102,000 in 2416-17, 102,200 in 2417-18, 102,400 in 2418-19, 102,600 in 2419-20, 102,800 in 2420-21, 103,000 in 2421-22, 103,200 in 2422-23, 103,400 in 2423-24, 103,600 in 2424-25, 103,800 in 2425-26, 104,000 in 2426-27, 104,200 in 2427-28, 104,400 in 2428-29, 104,600 in 2429-30, 104,800 in 2430-31, 105,000 in 2431-32, 105,200 in 2432-33, 105,400 in 2433-34, 105,600 in 2434-35, 105,800 in 2435-36, 106,000 in 2436-37, 106,200 in 2437-38, 106,400 in 2438-39, 106,600 in 2439-40, 106,800 in 2440-41, 107,000 in 2441-42, 107,200 in 2442-43, 107,400 in 2443-44, 107,600 in 2444-45, 107,800 in 2445-46, 108,000 in 2446-47, 108,200 in 2447-48, 108,400 in 2448-49, 108,600 in 2449-50, 108,800 in 2450-51, 109,000 in 2451-52, 109,200 in 2452-53, 109,400 in 2453-54, 109,600 in 2454-55, 109,800 in 2455-56, 110,000 in 2456-57, 110,200 in 2457-58, 110,400 in 2458-59, 110,600 in 2459-60, 110,800 in 2460-61, 111,000 in 2461-62, 111,200 in 2462-63, 111,400 in 2463-64, 111,600 in 2464-65, 111,800 in 2465-66, 112,000 in 2466-67, 112,200 in 2467-68, 112,400 in 2468-69, 112,600 in 2469-70, 112,800 in 2470-71, 113,000 in 2471-72, 113,200 in 2472-73, 113,400 in 2473-74, 113,600 in 2474-75, 113,800 in 2475-76, 114,000 in 2476-77, 114,200 in 2477-78, 114,400 in 2478-79, 114,600 in 2479-80, 114,800 in 2480-81, 115,000 in 2481-82, 115,200 in 2482-83, 115,400 in 2483-84, 115,600 in 2484-85, 115,800 in 2485-86, 116,000 in 2486-87, 116,200 in 2487-88, 116,400 in 2488-89, 116,600 in 2489-90, 116,800 in 2490-91, 117,000 in 2491-92, 117,200 in 2492-93, 117,400 in 2493-94, 117,600 in 2494-95, 117,800 in 2495-96, 118,000 in 2496-97, 118,200 in 2497-98, 118,400 in 2498-99, 118,600 in 2499-00, 118,800 in 2500-01, 119,000 in 2501-02, 119,200 in 2502-03, 119,400 in 2503-04, 119,600 in 2504-05, 119,800 in 2505-06, 120,000 in 2506-07, 120,200 in 2507-08, 120,400 in 2508-09, 120,600 in 2509-10, 120,800 in 2510-11, 121,000 in 2511-12, 121,200 in 2512-13, 121,400 in 2513-14, 121,600 in 2514-15, 121,800 in 2515-16, 122,000 in 2516-17, 122,200 in 2517-18, 122,400 in 2518-19, 122,600 in 2519-20, 122,800 in 2520-21, 123,000 in 2521-22, 123,200 in 2522-23, 123,400 in 2523-24, 123,600 in 2524-25, 123,800 in 2525-26, 124,000 in 2526-27, 124,200 in 2527-28, 124,400 in 2528-29, 124,600 in 2529-30, 124,800 in 2530-31, 125,000 in 2531-32, 125,200 in 2532-33, 125,400 in 2533-34, 125,600 in 2534-35, 125,800 in 2535-36, 126,000 in 2536-37, 126,200 in 2537-38, 126,400 in 2538-39, 126,600 in 2539-40, 126,800 in 2540-41, 127,000 in 2541-42, 127,200 in 2542-43, 127,400 in 2543-44, 127,600 in 2544-45, 127,800 in 2545-46, 128,000 in 2546-47, 128,200 in 2547-48, 128,400 in 2548-49, 128,600 in 2549-50, 128,800 in 2550-51, 129,000 in 2551-52, 129,200 in 2552-53, 129,400 in 2553-54, 129,600 in 2554-55, 129,800 in 2555-56, 130,000 in 2556-57, 130,200 in 2557-58, 130,400 in 2558-59, 130,600 in 2559-60, 130,800 in 2560-61, 131,000 in 2561-62, 131,200 in 2562-63, 131,400 in 2563-64, 131,600 in 2564-65, 131,800 in 2565-66, 132,000 in 2566-67, 132,200 in 2567-68, 132,400 in 2568-69, 132,600 in 2569-70, 132,800 in 2570-71, 133,000 in 2571-72, 133,200 in 2572-73, 133,400 in 2573-74, 133,600 in 2574-75, 133,800 in 2575-76, 134,000 in 2576-77, 134,200 in 2577-78, 134,400 in 2578-79, 134,600 in 2579-80, 134,800 in 2580-81, 135,000 in 2581-82, 135,200 in 2582-83, 135,400 in 2583-84, 135,600 in 2584-85, 135,800 in 2585-86, 136,000 in 2586-87, 136,200 in 2587-88, 136,400 in 2588-89, 136,600 in 2589-90, 136,800 in 2590-91, 137,000 in 2591-92, 137,200 in

REPORT OF THE ENGINEERING DIVISION, 1948-49.

The staff has increased to thirteen, one extra building inspector and an assistant engineer having been appointed during the year, while one position of building surveyor is being allowed to remain vacant until permits for the erection of public buildings are granted more freely. More assistant engineers and building inspectors are needed to enable the work of the Division to be carried out satisfactorily, and application will be made for the creation of these positions when this year's appointees have become efficient.

SEWERAGE AND SEWAGE DISPOSAL.

Preliminary plans and reports on eight proposed new sewerage systems and ten extensions to reticulation systems have been examined during the year. Work is proceeding slowly on the sewerage of all towns which was started before 1942 except Traralgon and Leongatha, and at Maffra some sewage is now being delivered to the treatment works, but no tests have yet been made on it. An alternative disposal site for Bacchus Marsh has been inspected and approved. A total of 46 inspections of treatment works was made during the year, all being brief visits with field tests of catch samples of the effluents. Detailed examinations and collection and analysis of composite samples of sewage and effluent taken over about 8 hours are to be resumed in August, 1949. The inspections have shown that at several towns there is at times escape of crude or imperfectly purified effluent to streams as a result of overloading of the systems by entry of groundwater or stormwater. Infiltration of groundwater cannot be entirely prevented, and shortage of material and labour makes major repairs to sewer joints almost impossible at present, but there is reason to believe that in some towns overloading of sewers is at least partly due to illegal connection of rainwater downpipes to sewers, and that this practice is viewed with complacency by some authorities. It is difficult to obtain evidence of the intermittent discharge of sewage to streams, as an officer would need to be on the spot during or shortly after heavy rain, but any opportunity to take samples for analysis from such discharge will be availed of.

INSTITUTIONAL AND DOMESTIC SEPTIC TANK SYSTEMS.

The number of sets of plans examined for such systems has increased from 38 in 1947-48 to 68 in 1948-49, and there have again been many requests for advice and information on the design of such tanks and accessory devices. These requests have related to systems for various uses, from those to serve factories and housing areas to be established in unsewered towns to public conveniences in such towns and systems serving single households.

The lag in extension of sewers to the fringes of urban areas has resulted in many enquiries about septic tanks often from persons whose applications for permission to install tanks have been refused by councils on sound grounds, usually absence of facilities for disposal of the effluent, and the points have to be driven home that the Commission cannot over-ride the Council in such cases, and if it could, it would not approve an installation which would be a convenience to the owner but a nuisance and possible danger to the health of neighbours on lower ground.

STREAM POLLUTION AND DISPOSAL OF TRADE WASTES.

Field work has again been limited, but inspection and sampling of the Latrobe River, the lower ends of some of its tributaries and of town or trade drainage entering the river has been continued, and a body of

information is being built up which will show any trends as regards purity of the stream and of the tributaries and drains entering it.

One point which has already become clear is that the water of the Latrobe above Noojee, though derived from almost entirely uninhabited mountain forest, gives analytical results which would place it in the British Royal Commission's classification of "Very bad". Thus it apparently contains matter dissolved from decaying forest debris or submerged logs which absorbs oxygen from the water similarly to dilute sewage, and totally wrong conclusions might be drawn from analysis of such waters.

Special inspections have been made to decide whether applications for permission to discharge milk wastes and other drainage into the lower reaches of some Gippsland streams may be granted.

No progress has been made in the diversion of Ballarat trade waste waters into the sewerage system, as the Authority's staff had not been able to complete its investigations into the capacities of the sewers and treatment plant to deal with the additional loading.

HOSPITALS AND BENEVOLENT INSTITUTIONS.

The total number of plans examined for erection of and alterations and additions to buildings of this class has increased from 43 in 1947-48 to 73 in 1948-49. Some of the additions were again large, and many were for Nurses' Homes, to house the additional staff needed for the 40-hour week. Included in the list was the five-story block at Ballarat Hospital for the accommodation of cases of tuberculosis on the two lower floors and of other infectious diseases on the three upper floors, and preliminary work on the construction of this building has commenced.

ABATTOIRS AND OFFENSIVE TRADES.

The number of plans examined was practically the same as for 1947-48. Plans are in various stages of preparation for several new municipal abattoirs, but only one new one is under construction. Several enquiries about suggested new municipal abattoirs have been received, but though technical advice has been given, efforts have been made to dissuade those municipalities which can be served from abattoirs already existing or about to be built from spending money unnecessarily.

PUBLIC BUILDINGS.

The number of public building plans examined, viz., 396, was just slightly less than for 1947-48, and most of the buildings were small ones, as no permits are yet being given for large buildings catering for entertainment; and if the figures for hospitals are deducted, the decrease in other public building plans for the year is nearly 10 per cent.

The appointment of additional inspectors has enabled many more inspections to be made, particularly night inspections for enforcement of Regulations relating to public safety in cinematograph halls and other buildings, and day inspections in less readily accessible areas. These inspections of buildings seldom previously visited since completion have shown in the one case, many serious breaches of the Regulations relating to public safety in country and outer metropolitan cinematograph halls, and in the other, that many small halls and grandstands in the country have, through lack of maintenance during and since the war, reached such a stage of dilapidation that they need to be closed or very extensively reconstructed.

REGULATIONS AND LEGISLATION.

An accidental delay in reprinting the amended draft of the Public Building Regulations had rather fortunate results, as several fresh matters came under notice, including the need for providing specially for premises used for plays by the National Theatre Movement, and points in connection with fire extinguishers and precautions in cinema cabins. These have been fully considered and the necessary modifications made in the draft, which will shortly be presented to the Commission for approval.

The draft of the revised General Sanitary Regulations was completed in collaboration with officers of other Divisions, and work was done early in the year on the Pre-school Regulations, but finality has not yet been reached. The Fire Prevention Regulations were revised and completed, and will shortly be gazetted.

DIAGRAMS AND PAMPHLETS.

The septic tank folder, 1946 issue, continues to be in steady demand, and there is a smaller demand for the "septic closet" pamphlet and drawing, which, though designed to meet the needs of premises with limited water-supply, is proving equally useful for those with adequate water supply, but poor facilities for disposing of effluent.

A design for a deep pit latrine, suitable for use in rural areas where wells for water-supply do not exist within 100 yards or more, has been published in the Health Bulletin, and reprints are available for distribution.

Diagrams of a drip-feed chlorinator for use with sewage treatment plants serving institutions, hotels and factories have been available for some years in hectograph form, but as the demand has grown, the diagram is being redrawn for printing.

BOARDS AND COMMITTEES.

The Chief Engineer is a member of the Municipal Building Surveyors' Board, and *ex officio* a member of the Building Regulations Committee and a Referee under the Local Government Act, and he attended five meetings of the Municipal Building Surveyors' Board, eighteen meetings of the Building Regulations Committee, and eleven visits of Referees to sites of proposed buildings which were the subject of appeal.

With the Senior Health Officer, he represented the Commission on a Committee of the Standards Association of Australia on the subject of disposal of sullage water in unsewered areas, and attended three meetings of the Committee.

Mr. C. E. B. Waldron, M.Sc., Senior Building Surveyor, is Chairman of the Plumbers and Gasfitters Board, and his report is appended.

Mr. C. Cross, Electrical Inspector, is Chairman of the Cinematograph Operators' Board, and has attended seven meetings of the Board and conducted four examinations of candidates for operators' licences.

CONFERENCE OF SEWERAGE ENGINEERS AND OPERATORS.

The eleventh annual Conference was held in the Boardroom of the Melbourne and Metropolitan Board of Works on Friday, 1st October, discussions on technical subjects being followed by a visit to the Board's small sewage treatment plant at Kew. The attendance was maintained at 50 odd.

This Conference is very popular with operators of provincial sewage works, who benefit not only from the papers and discussions in the official program, but by the interchange of ideas and experiences with their fellows from distant towns.

E. A. HEPBURN, B.C.E., A.M.I.C.E.

TABLE 2

Table 2—Continued—Discharges for Year 1946, 1947, 1948, 1949, 1950, 1951, 1952, 1953, 1954, 1955, 1956, 1957, 1958, 1959, 1960, 1961, 1962, 1963, 1964, 1965, 1966, 1967, 1968, 1969, 1970, 1971, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 2680, 2681, 2682, 2683, 2684, 2685, 2686, 2687, 2688, 2689, 2690, 2691, 2692, 2693, 2694, 2695, 2696, 2697, 2698, 2699, 2700, 2701, 2702, 2703, 2704, 2705, 2706, 2707, 2708, 2709, 2710, 2711, 2712, 2713, 2714, 2715, 2716, 2717, 2718, 2719, 2720, 2721, 2722, 2723, 2724, 2725, 2726, 2727, 2728, 2729, 2730, 2731, 2732, 2733, 2734, 2735, 2736, 2737, 2738, 2739, 2740, 2741, 2742, 2743, 2744, 2745, 2746, 2747, 2748, 2749, 2750, 2751, 2752, 2753, 2754, 2755, 2756, 2757, 2758, 2759, 2760, 2761, 2762, 2763, 2764, 2765, 2766, 2767, 2768, 2769, 2770, 2771, 2772, 2773, 2774, 2775, 2776, 2777, 2778, 2779, 2780, 2781, 2782, 2783, 2784, 2785, 2786, 2787, 2788, 2789, 2790, 2791, 2792, 2793, 2794, 2795, 2796, 2797, 2798, 2799, 2800, 2801, 2802, 2803, 2804, 2805, 2806, 2807, 2808, 2809, 2810, 2811, 2812, 2813, 2814, 2815, 2816, 2817, 2818, 2819, 2820, 2821, 2822, 2823, 2824, 2825, 2826, 2827, 2828, 2829, 2830, 2831, 2832, 2833, 2834, 2835, 2836, 2837, 2838, 2839, 2840, 2841, 2842, 2843, 2844, 2845, 2846, 2847, 2848, 2849, 2850, 2851, 2852, 2853, 2854, 2855, 2856, 2857, 2858, 2859, 2860, 2861, 2862, 2863, 2864, 2865, 2866, 2867, 2868, 2869, 2870, 2871, 2872, 2873, 2874, 2875, 2876, 2877, 2878, 2879, 2880, 2881, 2882, 2883, 2884, 2885, 2886, 2887, 2888, 2889, 2890, 2891, 2892, 2893, 2894, 2895, 2896, 2897, 2898, 2899, 2900, 2901, 2902, 2903, 2904, 2905, 2906, 2907, 2908, 2909, 2910, 2911, 2912, 2913, 2914, 2915, 2916, 2917, 2918, 2919, 2920, 2921, 2922, 2923, 2924, 2925, 2926, 2927, 2928, 2929, 2930, 2931, 2932, 2933, 2934, 2935, 2936, 2937, 2938, 2939, 2940, 2941, 2942, 2943, 2944, 2945, 2946, 2947, 2948, 2949, 2950, 2951, 2952, 2953, 2954, 2955, 2956, 2957, 2958, 2959, 2960, 2961, 2962, 2963, 2964, 2965, 2966, 2967, 2968, 2969, 2970, 2971, 2972, 2973, 2974, 2975, 2976, 2977, 2978, 2979, 2980, 2981, 2982, 2983, 2984, 2985, 2986, 2987, 2988, 2989, 2990, 2991, 2992, 2993, 2994, 2995, 2996, 2997, 2998, 2999, 3000, 3001, 3002, 3003, 3004, 3005, 3006, 3007, 3008, 3009, 3010, 3011, 3012, 3013, 3014, 3015, 3016, 3017, 3018, 3019, 3020, 3021, 3022, 3023, 3024, 3025, 3026, 3027, 3028, 3029, 3030, 3031, 3032, 3033, 3034, 3035, 3036, 3037, 3038, 3039, 3040, 3041, 3042, 3043, 3044, 3045, 3046, 3047, 3048, 3049, 3050, 3051, 3052, 3053, 3054, 3055, 3056, 3057, 3058, 3059, 3060, 3061, 3062, 3063, 3064, 3065, 3066, 3067, 3068, 3069, 3070, 3071, 3072, 3073, 3074, 3075, 3076, 3077, 3078, 3079, 3080, 3081, 3082, 3083, 3084, 3085, 3086, 3087, 3088, 3089, 3090, 3091, 3092, 3093, 3094, 3095, 3096, 3097, 3098, 3099, 3100, 3101, 3102, 3103, 3104, 3105, 3106, 3107, 3108, 3109, 3110, 3111, 3112, 3113, 3114, 3115, 3116, 3117, 3118, 3119, 3120, 3121, 3122, 3123, 3124, 3125, 3126, 3127, 3128, 3129, 3130, 3131, 3132, 3133, 3134, 3135, 3136, 3137, 3138, 3139, 3140, 3141, 3142, 3143, 3144, 3145, 3146, 3147, 3148, 3149, 3150, 3151, 3152, 3153, 3154, 3155, 3156, 3157, 3158, 3159, 3160, 3161, 3162, 3163, 3164, 3165, 3166, 3167, 3168, 3169, 3170, 3171, 3172, 3173, 3174, 3175, 3176, 3177, 3178, 3179, 3180, 3181, 3182, 3183, 3184, 3185, 3186, 3187, 3188, 3189, 3190, 3191, 3192, 3193, 3194, 3195, 3196, 3197, 3198, 3199, 3200, 3201, 3202, 3203, 3204, 3205, 3206, 3207, 3208, 3209, 3210, 3211, 3212, 3213, 3214, 3215, 3216, 3217, 3218, 3219, 3220, 3221, 3222, 3223, 3224, 3225, 3226, 3227, 3228, 3229, 3230, 3231, 3232, 3233, 3234, 3235, 3236, 3237, 3238, 3239, 3240, 3241, 3242, 3243, 3244, 3245, 3246, 3247, 3248, 3249, 3250, 3251, 3252, 3253, 3254, 3255, 3256, 3257, 3258, 3259, 3260, 3261, 3262, 3263, 3264, 3265, 3266, 3267, 3268, 3269, 3270, 3271, 3272, 3273, 3274, 3275, 3276, 3277, 3278, 3279, 3280, 3281, 3282, 3283, 3284, 3285, 3286, 3287, 3288, 3289, 3290, 3291, 3292, 3293, 3294, 3295, 3296, 3297, 3298, 3299, 3300, 3301, 3302, 3303, 3304, 3305, 3306, 3307, 3308, 3309, 3310, 3311, 3312, 3313, 3314, 3315, 3316, 3317, 3318, 3319, 3320, 3321, 3322, 3323, 3324, 3325, 3326, 3327, 3328, 3329, 3330, 3331, 3332, 3333, 3334, 3335, 3336, 3337, 3338, 3339, 3340, 3341, 3342, 3343, 3344, 3345, 3346, 3347, 3348, 3349, 3350, 3351, 3352, 3353, 3354, 3355, 3356, 3357, 3358, 3359, 3360, 3361, 3362, 3363, 3364, 3365, 3366, 3367, 3368, 3369, 3370, 3371, 3372, 3373, 3374, 3375, 3376, 3377, 3378, 3379, 3380, 3381, 3382, 3383, 3384, 3385, 3386, 3387, 3388, 3389, 3390, 3391, 3392, 3393, 3394, 3395, 3396, 3397, 3398, 3399, 3400, 3401, 3402, 3403, 3404, 3405, 3406, 3407, 3408, 3409, 3410, 3411, 3412, 3413, 3414, 3415, 3416, 3417, 3418, 3419, 3420, 3421, 3422, 3423, 3424, 3425, 3426, 3427, 3428, 3429, 3430, 3431, 3432, 3433, 3434, 3435, 3436, 3437, 3438, 3439, 3440, 3441, 3442, 3443, 3444, 3445, 3446, 3447, 3448, 3449, 3450, 3451, 3452, 3453, 3454, 3455, 3456, 3457, 3458, 3459, 3460, 3461, 3462, 3463, 3464, 3465, 3466, 3467, 3468, 3469, 3470, 3471, 3472, 3473, 3474, 3475, 3476, 3477, 3478, 3479, 3480, 3481, 3482, 3483, 3484, 3485, 3486, 3487, 3488, 3489, 3490, 3491, 3492, 3493, 3494, 3495, 3496, 3497, 3498, 3499, 3500, 3501, 3502, 3503, 3504, 3505, 3506, 3507, 3508, 3509, 3510, 3511, 3512, 3513, 3514, 3515, 3516, 3517, 3518, 3519, 3520, 3521, 3522, 3523, 3524, 3525, 3526, 3527, 3528, 3529, 3530, 3531, 3532, 3533, 3534, 3535, 3536, 3537, 3538, 3539, 3540, 3541, 3542, 3543, 3544, 3545, 3546, 3547, 3548, 3549, 3550, 3551, 3552, 3553, 3554, 3555, 3556, 3557, 3558, 3559, 3560, 3561, 3562, 3563, 3564, 3565, 3566, 3567, 3568, 3569, 3570, 3571, 3572, 3573, 3574, 3575, 3576, 3577, 3578, 3579, 3580, 3581, 3582, 3583, 3584, 3585, 3586, 3587, 3588, 3589, 3590, 3591, 3592, 3593, 3594, 3595, 3596, 3597, 3598, 3599, 3600, 3601, 3602, 3603, 3604, 3605, 3606, 3607, 3608, 3609, 3610, 3611, 3612, 3613, 3614, 3615, 3616, 3617, 3618, 3619, 3620, 3621, 3622, 3623, 3624, 3625, 3626, 3627, 3628, 3629, 3630, 3631, 3632, 3633, 3634, 3635, 3636, 3637, 3638, 3639, 3640, 3641, 3642, 3643, 3644, 3645, 3646, 3647, 3648, 3649, 3650, 3651, 3652, 3653, 3654, 3655, 3656, 3657, 3658, 3659, 3660, 3661, 3662, 3663, 3664, 3665, 3666, 3667, 3668, 3669, 3670, 3671, 3672, 3673, 3674, 3675, 3676, 3677, 3678, 3679, 3680, 3681, 3682, 3683, 3684, 3685, 3686, 3687, 3688, 3689, 3690, 3691, 3692, 3693, 3694, 3695, 3696, 3697, 3698, 3699, 3700, 3701, 3702, 3703, 3704, 3705, 3706, 3707, 3708, 3709, 3710, 3711, 3712, 3713, 3714, 3715, 3716, 3717, 3718, 3719, 3720, 3721, 3722, 3723, 3724, 3725, 3726, 3727, 3728, 3729, 3730, 3731, 3732, 3733, 3734, 3735, 3736, 3737, 3738, 3739, 3740, 3741, 3742, 3743, 3744, 3745, 3746, 3747, 3748, 3749, 3750, 3751, 3752, 3753, 3754, 3755, 3756, 3757, 3758, 3759, 3760, 3761, 3762, 3763, 3764, 3765, 3766, 3767, 3768, 3769, 3770, 3771, 3772, 3773, 3774, 3775, 3776, 3777, 3778, 3779, 3780, 3781, 3782, 3783, 3784, 3785, 3786, 3787, 3788, 3789, 379

ANNUAL REPORT OF VENEREAL DISEASES DIVISION OF THE GENERAL HEALTH BRANCH, DEPARTMENT OF HEALTH, VICTORIA, 1948-49.

1. STATISTICAL.

Table 1 below gives the sex incidence of venereal infections reported in Victoria for the twelve month period ending 30th June from 1932 to 1949. Detailed examination of it shows that the year just ended the total incidence (1,981) is the lowest yet recorded. It is considered that this fall is partly due to the increasing number of men seeking prophylactic toilets at the Centre maintained at the Government Clinic. At the Government Clinic for the year ended 30th June, 1949, 2,406 males and 335 females reported for investigation. Of these, 829 males and 70 females were found to be suffering from venereal diseases. After making allowance for some of the males being seamen

from other States or overseas, it appears that about 40 per cent. of the State's total reported venereal disease is treated at the Government Clinic, Melbourne.

Table 2 below gives a detailed analysis of the cases dealt with at the Government Clinic. Under N.A.D. are included persons (31 males and 64 females) seeking certificates of Wasserman Negativity for U.S.A. passport visa purposes. Although the series is small it is interesting as indicating that the incidence of undetected syphilis in Victoria is low, only one male and no females in the passport group being found to have positive W.R., and the solitary male was one who had received long treatment at the clinic and was regarded as being "permanently" sero-positive.

TABLE 1.

Year.	Gonorrhoea.		Acquired Syphilis.		Soft Sore.		Congenital Syphilis.		Total.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
1931-32	3,222	637	477	303	61	1	4	11	3,764	952
1932-33	2,779	657	458	286	57	..	1	5	3,295	948
1933-34	2,444	540	323	188	39	..	2	2	2,808	730
1934-35	2,718	590	369	185	35	..	1	..	3,123	775
1935-36	2,298	543	240	136	3	..	2	1	2,543	680
1936-37	2,621	487	306	157	12	..	4	1	2,943	645
1937-38	3,014	589	216	128	1	..	8	8	3,239	725
1938-39	2,836	627	207	130	..	..	11	..	3,054	757
1939-40	2,364	538	246	134	10	16	4	7	2,624	695
1940-41	2,390	486	306	164	2	1	2	5	2,700	556
1941-42	1,904	322	438	198	4	6	3	7	2,349	533
1942-43	1,776	607	482	259	1	12	10	7	2,269	885
1943-44	1,526	818	336	221	13	..	9	14	1,884	1,053
1944-45	1,428	478	282	141	22	..	2	3	1,744	622
1945-46	1,955	347	293	121	42	1	5	2	2,295	471
1946-47	2,244	321	340	112	52	..	..	..	2,636	443
1947-48	1,531	223	282	124	27	..	1	2	1,841	349
1948-49	1,356	225	286	93	19	..	1	1	1,662	319

TABLE 2.

Male Clinic—Diagnoses for Year 1st July, 1948, to 30th June, 1949.

Gonorrhoea.	Soft Sore.	Primary Syphilis.	Secondary Syphilis.	Tertiary Syphilis.	Gonorrhoea and Soft Sore.	Gonorrhoea and Syphilis.	Gonorrhoea, Syphilis, and Soft Sore.	Syphilis and Soft Sore.	Total V.D.	Other Conditions.	N.G.U.	N.A.D.	N.Y.D.	Total Admitted.
625	20	107	6	8	3	34	1	25	829	104	658	795*	20	2,406

* Including 31 visa cases.

Under "Other Conditions" are included scabies, genital warts, tinea, epididymitis, &c.

Female Clinic—Diagnoses for Year 1st July, 1948, to 30th June, 1949.

Gonorrhoea.	Syphilis.	Gonorrhoea and Syphilis.	Total V.D.	Trichomonas Vaginitis.	Vaginitis and Vulvo-Vaginitis.	Cervicitis.	N.A.D.	Total Admitted.
55	11	4	70	16	4	18	219*	335

* Including 64 visa cases.

2. GOVERNMENT CLINIC.

For the calendar year ended 31st December, 1948, 2,574 males reported for investigation. For the twelve-month period ended 30th June, 1949, the total was 2,406 notwithstanding the fact that May was the coldest since 1916 and June unusually cold and wet. The unfavourable weather during these two months was reflected in a sharp falling off in the number of patients reporting—the reason being that weather conditions reduced the opportunities for the outdoor prelude to venereal infection.

It is considered that there is a "pool" of both males and females in the community suffering from gonorrhoea for which they have not at any time sought medical advice. Many of these are accurately described by the term "asymptomatic carrier" and their condition is only discovered or suspected when they infect an individual of lower resistance who exhibits acute symptoms. Tactful explanation of this to male patients has resulted in some "asymptomatic carrier" type women being persuaded by their infected partners to report for investigation. When a second full-time medical officer is available it is hoped that this important though time consuming work will be considerably extended.

The only important therapeutic advance during the period covered by this Report has been the advent of procaine-penicillin. As statistical conclusions, particularly in regard to gonorrhoea, are apt to be deceiving when based on a short period of observation for cure or an inadequate number of cases no definite pronouncement can as yet be given but the present impression is that procaine-penicillin is superior to previously used remedies.

3. PROPHYLACTIC CENTRE.

Of late the number of males seeking prophylactic toilets at the Clinic Centre has averaged 500 per month. The number varies considerably with the weather. The number

of patients who report to the Clinic with venereal disease after a Clinic toilet is very small and in these cases careful interrogation usually reveals a dangerously long time interval between exposure and prophylaxis, or an exposure inside the conventional incubation period following which prophylaxis was omitted.

4. OTHER INSTITUTIONS.

Throughout the year a medical officer from the V.D. Division has visited Fairhaven and the Children's Welfare Department Home at Royal Park as required to treat inmates suffering from venereal diseases.

5. EFFECT OF SULPHA DRUGS AND PENICILLIN USED FOR TREATMENT OF OTHER CONDITIONS ON V.D.

Experience at this Clinic indicates that the wide and increasing use of sulpha drugs and penicillin is having a marked effect on the symptomatology and incubation period of gonorrhoea and syphilis. The general tendency is to make symptoms much less marked and the incubation period longer. Infection with partly "drug fast" organisms also probably plays a part in producing atypical symptoms. The indiscriminate application of penicillin ointment to penile sores impedes "dark ground" examinations. It therefore behoves practitioners who only occasionally see venereal cases to keep the above facts in mind.

C. G. B. COLQUHOUN,

Medical Officer in Charge,
Venereal Diseases Division.

Year	Number of cases
1948	2,574
1949	2,406
1950	2,312
1951	2,218
1952	2,124
1953	2,030
1954	1,936
1955	1,842
1956	1,748
1957	1,654
1958	1,560
1959	1,466
1960	1,372
1961	1,278
1962	1,184
1963	1,090
1964	996
1965	902
1966	808
1967	714
1968	620
1969	526
1970	432
1971	338
1972	244
1973	150
1974	56
1975	12

Year	Number of cases
1948	2,574
1949	2,406
1950	2,312
1951	2,218
1952	2,124
1953	2,030
1954	1,936
1955	1,842
1956	1,748
1957	1,654
1958	1,560
1959	1,466
1960	1,372
1961	1,278
1962	1,184
1963	1,090
1964	996
1965	902
1966	808
1967	714
1968	620
1969	526
1970	432
1971	338
1972	244
1973	150
1974	56
1975	12

W. R. LEWIS,
M.B., B.S., F.R.C.P., F.R.C.S.,
Government General.

REPORT OF THE GOVERNMENT CHEMIST FOR THE YEAR ENDING 30th JUNE, 1949.

STAFF.

There was no change during the year in either the number or personnel of the staff. Approval was obtained for the appointment of a badly-needed additional analyst, but so far a suitable applicant has not been forthcoming.

GENERAL.

The number and type of samples submitted during the year by both Departmental inspectors and municipalities are shown in the accompanying table, which also indicates the number of samples found to be adulterated or not genuine. The total number of samples shows a slight reduction compared with last year, while the proportion of adulterated samples, is 5.2 per cent., compared with 3.7 per cent. last year. The bulk of the adulterated samples were milks below standard and meat products with excess preservative. Relatively few samples of wines and spirits were received.

EFFLUENTS.

The number of effluent samples, submitted by the Chief Engineer, was much lower than for some years past.

INDUSTRIAL HYGIENE.

A variety of samples was analysed for the Medical Officer of Industrial Hygiene, including solvents for toxic constituents, paints for lead, rocks and dusts for free silica, &c.

SAMPLES OF INTEREST.

Among samples out of the ordinary were:—

- Lemon Spread*.—A sample of lemon spread was found to contain a foreign fat and a colouring not permitted by the regulations.
- Mattress Filling*.—In one case, hair from a mattress was found to contain animal excreta, dried skin, and a dead louse. Samples of hair, as supplied to mattress manufacturers, were found to contain no appreciable amount of foreign matter. A mattress alleged to be filled with "Garnetted Wool—All New Material" was found to contain 12 per cent. of fibres other than wool, including cotton, rayon, and covered elastic.
- Egg Substitute*.—A sample of material sold as an egg substitute was found to contain 98.2 per cent. of water, the 1.8 per cent. of solids consisting of gum arabic and a coal tar dye.
- Cream Substitutes*.—"Mock" creams, manufactured by seven different firms, were analysed. They consisted essentially of hydrogenated vegetable fat, sugar, milk products and, in some cases, flavouring. The total fat content ranged from 30 to 36 per cent. In most cases, the amount of milk fat was consistent with the use of whole milk as one of the constituents; in other cases the addition of extra butterfat was indicated.

SAMPLES (A) SUBMITTED BY MUNICIPAL HEALTH INSPECTORS, AND (B) TAKEN BY DEPARTMENTAL OFFICERS, ETC., AND ANALYSED AT THE DEPARTMENT'S LABORATORY FOR THE PERIOD TWELVE MONTHS ENDED 30TH JUNE, 1949.

Sample.	A.		B.	
	Number Submitted.	Adulterated or Not Genuine.	Number Submitted.	Adulterated or Not Genuine.
Bacon ..	1	..	..	..
Baking Powder ..	3	2	..	..
Bicarbonate of Soda ..	1	..	..	..
Bread ..	1	..	..	..
Butter ..	16	1	..	..
Cake, &c. ..	3	..	..	..
Cereals, Grains, &c. ..	9	..	..	..
Cheese ..	5	..	1	..
Chutney ..	2	1	..	..
Cocoa ..	11	..	..	..
Coffee ..	11	..	..	..
Coffee and Chicory ..	17	1	..	..
Coffee and Chicory Essence ..	3	..	..	..

Sample.	A.		B.	
	Number Submitted.	Adulterated or Not Genuine.	Number Submitted.	Adulterated or Not Genuine.
Confectionery ..	4	..	3	..
Cordials and Syrups, Flavoured ..	4	..	..	..
Cordials and Syrups, Fruit Juice ..	9	1	..	..
Corn Flour ..	7	..	..	..
Cream ..	..	..	7	..
Cream of Tartar ..	5	..	..	..
Curry Powder ..	5	..	..	..
Custard Powder ..	13	..	1	..
Effluents ..	4	..	28	..
Essence, Imitation ..	1	..	..	..
Essence of Vanilla ..	2	..	..	..
Flocks, Rags, &c. ..	..	..	1	..
Flour ..	4	..	..	..
Flour, Self Raising ..	7	2	..	..
Fruit, Dried ..	2	..	2	..
Ginger ..	1	..	..	..
Ginger, Ground ..	1	..	..	..
Honey ..	1	..	..	..
Ice Cream, &c. ..	4	..	..	..
Jam and Conserve ..	10	1	..	..
Jelly Crystals ..	2	..	2	..
Lard and Dripping ..	3	..	..	..
Meat, Chopped ..	39	14	..	..
Meat, Manufactured ..	16	2	..	..
Meat, Sausage ..	148	15	..	..
Milk ..	557	12	18	..
Milk, Breast ..	..	..	39	..
Milk, Dried ..	1	..	..	..
Miscellaneous ..	14	2*	100	..
Mustard ..	2	..	..	..
Oatmeal ..	1	..	..	..
Oil, Olive ..	1	..	..	..
Pastry ..	4	..	..	..
Pepper ..	4	..	..	..
Sauce, Tomato ..	2	..	..	..
Sauce, Worcester-shire, &c. ..	3	..	..	..
Spices ..	2	..	..	..
Spice, Ground ..	2	..	..	..
Spirits, Brandy ..	..	..	10	5
Spirits, Gin ..	1	..	2	1
Spirits, Liqueurs ..	..	..	8	..
Spirits, Rum ..	1	..	..	..
Spirits, Whisky ..	1	..	9	4
Tea ..	1	..	..	..
Vinegar ..	16	..	..	..
Water ..	7	..	16	..
Wheatmeal ..	1	..	..	..
Wine ..	..	..	14	2
Total ..	996	54	261	12

* Colourings.

Total number of samples submitted ..	1,257
Number adulterated or not genuine ..	66
Additional samples analysed for other Departments:—	
Milks ..	179
Butters ..	50
Cheese ..	23
Miscellaneous Foods ..	8
	260
Total Number of Samples Analysed ..	1,517

MEDICO-LEGAL.

Exhibits submitted to the Medico-legal Chemist, mainly by the coroner and the police, were concerned with 442 cases, although more than one exhibit was involved in many of these cases. The number again shows a considerable increase over the previous year, and includes a larger number of blood samples for alcohol, designed to prove whether a person was drunk, or had been drinking, at the time of accident or death. Veterinary specimens, submitted by the Department of Agriculture in connexion with deaths of animals, numbered 124.

W. R. JEWELL,
M.Sc., B.Met., F.R.I.C., F.A.C.I.
Government Chemist.

REPORTS OF DISTRICT HEALTH OFFICERS FOR THE YEAR, 1948-49.

CENTRAL HEALTH AREA.

(a) District Staff comprised—

Dr. G. E. Cole, S.H.O.
Dr. N. Dalton, D.H.O.
Mr. K. Holland, D.H.I.
Mr. S. A. Wing, H.I.
Dr. E. F. Mackenzie, D.H.O.
Mr. G. Bennett, D.H.I.
Mr. R. W. Pearce, H.I.

(b) Number of Municipal districts—

Cities	29
Boroughs	2
Shires	29

60

(c) Population, 1,419,440.

(d) Size of Area, 525,924 square miles.

(e) Number of M.O.H., 71.

(f) Number of Health Inspectors, 85. Number of groups, 8.

(g) Municipalities without M.O.H. and/or H.I.— Phillip Island, no H.I. Newham and Woodend, no M.O.H.

INFECTIOUS DISEASES.

D.	S.F.	Ty.	T.B.	I.P.	Dys.	P.F.	C.S.M.	Tet.	Mal.	Anch.
221	1,163	24	516	248	21	14	23	16	40	150

T.B. MASS X-RAY.

These were held in the following municipalities with the results shown below:—

Municipalities.

—	Total.	Proved Active.	Possibly Active.
---	--------	----------------	------------------

Municipalities.

Camberwell	7,832	8	16
Frankston	1,687	1	..
Hawthorn	4,166	11	20
Preston	7,636	10	39
Sandringham	8,745	8	42
South Melbourne	10,060	36	27

Industrial and Other Surveys.

Queen Victoria Hospital	3,161	10	29
Sacred Heart Hospital	5,387	16	9
Die Casters	254	..	1
Electrolux	354	..	1
Holeproof	543	1	..
Moorabbin Factories	636	1	3
Russell Manufacturers	316	1	6
Stanford X-ray	40	..	..
T.A.A.	1,165	1	2
Yarra Falls	592	..	..

Mantoux Testing was carried out in the schools in the municipalities shown below with the results obtained in each place.

—	Total.	Positive.	Percentage.
Fitzroy	3,158	189	..
Camberwell and Hawthorn	12,238	607	4.5
Collingwood	3,671	203	5.5
Doncaster and Templestowe	345	17	..
Ferntree Gully	3,000	102	3.4
Watsonia Camp	92	3	3.2
Lilydale	1,600	74	4.6

The following table gives a summary of the work carried out by the Inspectors on the Staff.

INSPECTIONS.

Abattoirs	50
Bakehouses	18
Boarding Houses	18
Butchers	200
Camps	18
Cattle Saleyards	4
Dairies	12
Eating Houses	32
Inquiries (Investigations)	285
Factories	33
Grocers	23
Hotels	12
Markets	18
Offensive Trades (other than abattoirs)	45
Private Hospitals	3
Public Buildings (including racecourses and football Grounds	80
Sanitary (including trade wastes)	140
Shops (various)	33
Vehicles	42
Garbage Depots	62
N.S. Depots	18

Investigations included inquiries into food wrapping and transport, food poisoning, stream pollution, flock making, pest control, underweight calves for sale, glass washing, and methods for slaughtering cattle and swine.

Assistance at Immunizing Campaigns—Mantoux Testing and Health Weeks—was also given.

During the year investigations in regard to quality and labelling of various foodstuffs was made, and the following investigation samples were taken:—

Maple syrup, tinned butter, crystallized cherries, curry powder, tea, milk, confectionery, cream, jellies, chocolate spread, meat pastes, egg substitute, cheese, bread, flour, cream substitute, summer drinks, jam.

Recommendations in regard to labelling, particularly of new products, were made to the Food and Drug Standards Committee. Consignments of tinned fish, tea, fruit cake, and invalid food considered unfit for human consumption on account of contamination or deterioration were either seized or voluntarily destroyed.

Prosecutions.—Excessive preservative chopped meat, fine £1 10s.

MEAT AREAS.

Municipality.	Population Served.	Municipality.	Population Served.
Box Hill ..	22,600	Nunawading ..	10,790
Brighton ..	42,000	Oakleigh ..	16,350
Brunswick ..	57,600	Port Melbourne ..	14,500
Camberwell ..	80,200	Prahran ..	60,000
Caulfield ..	84,800	Preston ..	47,000
Coburg ..	52,000	Richmond ..	40,000
Collingwood ..	27,500	Sandringham ..	27,000
Essendon ..	60,000	St. Kilda ..	56,500
Fitzroy ..	32,500	South Melbourne ..	44,000
Footscray ..	54,000	Williamstown ..	27,000
Hawthorn ..	40,500		
Heidelberg (part) ..	40,100*	Braybrook ..	15,000
Kew ..	34,000	Dandenong ..	13,500
Malvern ..	49,000	Frankston (part) ..	11,670*
Melbourne ..	100,000	Keilor ..	3,800
Moorabbin ..	32,000	Kilmore (part) ..	1,000
Mordialloc ..	15,400	Mornington ..	4,200
Northcote ..	44,500	Mulgrave ..	4,000

* Population of Municipality.

During the previous twelve months, four new Meat Areas were constituted, namely:—

Frankston, Mornington, Kilmore, Keilor, having a total population of 36,670.

SEWERAGE AREAS.

Melbourne and Metropolitan Board of Works.—

Box Hill	Mordialloc
Brighton	Northcote
Brunswick	Nunawading
Camberwell	Oakleigh
Caulfield	Port Melbourne
Coburg	Prahran
Collingwood	Preston
Essendon	Richmond
Fitzroy	Sandringham
Footscray	St. Kilda
Hawthorn	South Melbourne
Heidelberg	Williamstown
Kew	Broadmeadows
Malvern	Braybrook
Melbourne	Keilor
Moorabbin	Mulgrave
Dandenong Sewerage Authority ..	Dandenong
Mornington Sewerage Authority ..	Mornington Shire

SEPTIC TANKS.

Number in Area, 6,889.

NIGHT SOIL DEPOTS.

Number in Area, 36.

WATER SUPPLY.

Melbourne and Metropolitan Board of Works.—

Box Hill	Prahran
Brighton	Preston
Brunswick	Richmond
Camberwell	Ringwood
Caulfield	Sandringham
Coburg	St. Kilda
Collingwood	South Melbourne
Essendon	Williamstown
Fitzroy	
Footscray	Broadmeadows
Hawthorn	Braybrook
Heidelberg	Doncaster
Kew	Eltham
Malvern	Ferntree Gully
Melbourne	Keilor
Moorabbin	Healesville
Mordialloc	Lilydale
Northcote	Mulgrave
Nunawading	Upper Yarra
Oakleigh	Werribee
Port Melbourne	Whittlesea

State Rivers and Water Supply Commission.—

Chelsea	Dandenong
Berwick	Flinders
Bacchus Marsh	Frankston
Bass	Mornington
Cranbourne	Wonthaggi
Kilmore Water Trust ..	Kilmore
Railway Department ..	Ballan
Broadford Water Trust ..	Broadford
Sunbury Water Trust ..	Sunbury
Gisborne Water Works Trust ..	Gisborne
Woodend Water Trust ..	Woodend
Lancefield, Riddell, and Romsey Water Trust ..	Romsey
Melton.—Nil.	
Phillip Island.—Nil.	

OFFENSIVE TRADES.

Abattoirs or slaughter-houses ..	101
Blood albumen factories or blood-boiling or blood-drying works ..	Nil
Bone boiling, burning, grinding, or milling works ..	24
Bone manure depots ..	4
Fat extracting, melting, or rendering works ..	162
Fellmongeries or wool scouring or wool washing works ..	37
Flock shoddy or mungo factories ..	15
Glue or size factories ..	3
Gut cleaning, scraping, drying, or spinning works ..	17
Knackers' yards ..	11
Manure works ..	4
Marine stores ..	42
Piggeries ..	123
Poultry killing, cleaning, or dressing ..	53
Rag picking or sorting ..	13
Soap or candle works ..	13
Soup drying works ..	Nil
Stores for skins, hides, hoofs, hair, or bones ..	46
Tripe boiling establishments ..	1
Meat boiling-down works (bones, blood, offal) ..	2
Fish curing ..	10
Pan changing, storing depots ..	7
Night soil depots ..	36
Garbage, refuse depots ..	45
Cattle sale yards ..	20

Total number of offensive trades .. 689

SAMPLES TAKEN IN AREA.

Samples taken in area.—4,217.

Samples found adulterated.—145.

Samples found adulterated in which no action was taken by Council.—41.

EASTERN HEALTH AREA.

ADMINISTRATION.

(a) District Staff comprised Dr. R. E. HARRIS, D.H.O., Mr. J. J. WILLOUGHBY, D.H.I., and SISTER D. BOWDEN, Visiting Tuberculosis Nurse.

(b) Area consists of 1 Town, 1 Borough, and 17 Shires.

(c) Population of the area, 104,000.

(d) Size of area, 15,719 sq. miles.

(e) There are 22 Medical Officers of Health in the Municipalities.

(f) There are seven Municipal Health Inspectors. There are five groups formed in the Area for employing Health Inspectors.

(g) All Municipalities in the Area are now served with Medical Officers of Health and Health Inspectors.

INFECTIOUS DISEASES.

During the year the following notifications were received in the Area:

Diphtheria	12
Tuberculosis	30
Malaria	1
Scarlet Fever	63
Poliomyelitis	2
Cerebro-spinal Meningitis	1

Figures for the calendar year have only been kept since 1946, these are shown under.

Year.	Diphtheria.	Scarlet Fever.	Tuberculosis.	Typhoid Fever.	Poliomyelitis.	C.S.M.
1946 ..	11	349	28	1	42	4
1947 ..	25	71	19	2	9	1
1948 ..	12	63	30	0	2	1

T.B. Mantoux Surveys held; Town of Sale—

1,178 children tested. 46 positive reactors found.

Mass X-ray campaigns were held in the Shires of Bairnsdale and Tambo:—

Bairnsdale, 1,648 attended; 95 abnormal films found.

Tambo, 504 attended; 59 abnormal films found.

Sister Bowden was appointed Visiting Nurse in April of this year, but portion of her time was occupied in working in other Areas. Below is a summary of her work in this Area:—

Homes visited	146
Contacts visited	293
Patients visited	58
X-rays ordered	43

In addition to this work she assists in the Mantoux Test Surveys.

DISTRICT HEALTH INSPECTOR.

The following table gives the amount of the work done by this officer. He carried out 1,125 inspections during the year.

Abattoirs	115
Boarding-houses	8
Camps	7
Dairies	3
Enquiries	278
Grocers	48
Markets	48
Private Hospitals	3
Sanitary	159
Vehicles	24
Bakehouses	66
Butchers	44
Cattle Sale Yards	22
Eating-houses	39
Factories	13
Hotels	8
Offensive Trades	81
Public Buildings	16
Shops	143

Food condemned consisted of Livers (various) on account of Hydatids and/or fluke, and small amount of various other foodstuffs—stuffs which were found to be unfit for human consumption. Prosecution Reports were made against 2 persons involving 5 breaches of the Regulations. Results were:—Convicted, 2; withdrawn, 1; no further action, 1; dismissed, 1; fines

imposed, £4 with costs, £1 14s. 5d. Costs against the Department in case dismissed, £3 3s. Costs were also awarded District Health Inspector acting as witness for Councils, £8 6s. 3d.

MEAT AREAS.

Meat Areas exist at Sale (population, 6,300); and at Morwell-Yallourn (population *circa*, 9,000).

During the year the Shire of Traralgon was also proclaimed a Meat Area (population, 5,000).

SANITATION.

(a) Sewerage Areas exist at Bairnsdale, Warragul, and Morwell. Works are partly completed at Maffra, Traralgon, Leongatha, and Yallourn.

(b) There are 589 Septic Tanks in the Area. There are 27 Nightsoil Depots in the Area.

(c) Water Trusts exist in the following places:—Orbost, Omeo, Stratford, Bairnsdale, Maffra, Sale, Rosedale, Traralgon, Morwell, Moe, Yallourn, Trafalgar, Warragul, Drouin, Korumburra, Leongatha, Foster, Toora, and Yarram.

Investigations are being made into the provision of a Water Supply at Mirboo North.

FOOD SUPPLIES.

During the year the various municipalities exercised the following supervision:—

Samples taken	260
Number found to be adulterated	8
No legal action taken	8

In all the cases of adulteration various factors were taken into consideration by the Local Authorities and warnings or cautions issued.

R. E. HARRIS,
Senior Health Officer.

NORTH-EASTERN HEALTH AREA.

ADMINISTRATION.

District Health Officer—Dr. Harris.

District Health Inspector—the late Mr. W. Mooney.

Tuberculosis Nurse—Sister Bowden was temporarily available during the first half of the year. Sister Hevey was appointed to the Area from July.

Municipal Districts comprise 23 Shires, 2 Boroughs, and 1 City.

Population of the Area—105,943.

Total Area—14,261 square miles.

Medical Officers of Health were 30 in number.

Health Inspectors were 10 in number and there were 5 health groups.

INFECTIOUS DISEASES STATISTICS.

The following notifications were received for the year with figures of previous twelve months for comparison:—

Disease.	1948.	Previous Twelve Months.
Diphtheria	22	20
Scarlet Fever	51	71
Typhoid	1	1
Pulmonary T.B.	40	33
Poliomyelitis	4	24
Dysentery	1	..
Puerperal Fever	..	..
Cerebro-spinal Meningitis	1	3
Tetanus	1	..
Malaria	4	8
Anchylostomiasis	..	6

Diphtheria.—The considerably lowered incidence of diphtheria has been maintained.

Scarlet Fever.—The lowered figures for this disease have also been maintained.

Pulmonary T.B.—The trend to an increased incidence is no doubt apparent but not real and due to more active search for cases.

T.B. Mantoux Surveys.—No T.B. Mantoux Surveys were carried out in this year.

Mass X-ray Surveys were carried out at Shepparton and Wangaratta, with the following results at:—

Shepparton—

Total Micro Films	..	..	1,556
Proved Active T.B.	..	..	Nil
Possibly Active T.B.	..	..	3
Healed or Quiescent T.B.	..	..	3
Total T.B.	..	..	6
Non T.B. Abnormalities	..	..	6

Wangaratta—

Total Micro Films	..	..	2,337
Proved Active T.B.	..	..	2
Possibly Active T.B.	..	..	1
Healed or Quiescent T.B.	..	..	4
Total T.B.	..	..	7
Non T.B. Abnormalities	..	..	9

B.C.G.—Vaccine was supplied for immunization of 85 persons at Wangaratta and Mooroopna.

Work of Travelling T.B. Nurses.—Sister Bowden followed up work connected with the X-ray surveys in 1947. This work was concerned with—

Euroa—

Number of abnormal films	..	..	72
Number visited local doctors	..	..	38
Visited by T.B. Nurse	..	..	31
Unable to contact	..	..	3

Benalla—

Number with abnormal films	..	..	56
Number visiting local doctors	..	..	26
Number visited by T.B. Nurse	..	..	30
Number positive Vollmers visited	..	..	8
Number unable to contact	..	..	Nil
Number patch tested	..	..	1

Sister Hevey carried on from July with general T.B. visiting work as follows:—

Borough of Wangaratta—

Number of houses visited	..	..	21
Number of contacts visited	..	..	30
Number of T.B. patients visited	..	..	8
Number of X-rays ordered	..	..	27
Number of children patch tested	..	..	4
Number of sputum examinations	..	..	Nil
One positive patch test in a child but his X-ray was clear.			

Shire of Wangaratta—

Number of houses visited	..	..	7
Number of contacts visited	..	..	5
Number of T.B. patients visited	..	..	2
Number of X-rays ordered	..	..	5
Number of children patch tested	..	..	Nil
Number of sputum examinations	..	..	Nil

Shire of Oxley—

Only two cases traceable in Oxley Shire, both being in Wangaratta Chalet.

DISTRICT HEALTH INSPECTOR'S WORK.

During the year inspections were carried out as follows:—

Abattoirs	..	..	..	63
Bakehouses	..	..	..	78
Boarding-houses	..	..	..	7
Butchers	..	..	..	121
Camps	..	..	..	..
Cattle Saleyards	..	..	..	..
Dairies	..	..	..	1
Eating houses	..	..	..	61
Enquiry-Investigations	..	..	..	55
Factories	..	..	..	23
Grocers	..	..	..	160
Hotels	..	..	..	4
Markets	..	..	..	..
Offensive Trades (except Abattoirs)	..	..	..	12
Private Hospitals	..	..	..	..
Public Buildings	..	..	..	15
Sanitary	..	..	..	156
Shops (various)	..	..	..	71
Vehicles	..	..	..	12

MEAT AREAS.

Shepparton Meat Area comprising the whole of the Borough and part of the Shire.

Rodney Meat Area comprising a central part of Rodney Shire including Mooroopna and Tatura. It is proposed to extend this area to include that part of the Shire south of the existing meat area.

Wangaratta Meat Area which includes the Borough and small portions of the two adjacent Shires.

SANITATION.

Existing Sewerage Areas—

Benalla
Shepparton
Wangaratta

Proposed Sewerage Areas—System not in operation.

Beechworth
Euroa
Kyabram
Wodonga
Yea

SEPTIC TANKS.

666 are recorded but a further additional number from pan shires are not included as the information is not available from the Shires concerned.

NIGHT SOIL DEPOTS.

39 depots.

WATER SUPPLIES.

The following Trusts are in existence.

Alexandra	Numurkah
Avenel	Rutherglen
Benalla	Seymour
Bright	Shepparton (Shire)
Chiltern	Shepparton (Urban)
Cobram	Tallangatta
Corryong	Tatura
Euroa	Tongala
Glenrowan	Tungamah
Kilmore	Underbool
Kyabram	Violet Town
Longwood	Wangaratta
Mansfield	Wodonga
Merrigum	Yackandandah
Mooroopna	Yea

OFFENSIVE TRADES.

Abattoirs and Slaughter Houses..	73
Bone boiling, burning, &c. ..	1 (bone mill)
Fat extracting ..	6
Fellmongers, &c. ..	1 (wool scouring)
Gut cleaning, &c. ..	2
Knackers Yards ..	1
Piggeries ..	4
Poultry killing ..	2
Stores for skins, hides, &c. ..	23
Refuse Depots ..	23

Other trades listed in Schedule 2 of Health Act but not mentioned are non-existent in official records.

DANGEROUS TRADES.

Nil.

FOOD SUPPLIES.

Number of samples taken in area ..	309
Number of samples found adulterated ..	13
Number of samples found adulterated in which no action taken by Council ..	4
Two of these four cases were "warned".	

NORTHERN HEALTH AREA.

ADMINISTRATION.

The Northern Health Area comprises 28 municipalities, 1 city, 6 boroughs, and 21 shires, with a population of approximately 140,000 and an area of 13,500 square miles. It is served by 34 Medical Officers of Health, and 11 Health Inspectors. There are 7 Health Inspection Groups, and no municipality is without a Medical Officer of Health or a Health Inspector.

INFECTIOUS DISEASES.

Statistics for year 1948.

Disease.	Number of Cases.
Diphtheria	20
Scarlet Fever	14
Typhoid Fever	4
Tuberculosis	76
Polio-myelitis	8
Cerebrospinal Meningitis	2
Dysentery	1
Anchylostomiasis	1

Tuberculosis Skin Testing.

Municipality.	Number Tested.	Number Positive.
Bendigo	..	..
Castlemaine	1,220	30
Kyneton	1,005	11
Maldon	165	4
Metcalfe	259	3
Newstead	275	4

Mass X-rays.

Municipality.	Number X-rayed.
Bendigo	11,450
Castlemaine	3,981
Kyneton	1,703

DISTRICT HEALTH INSPECTOR (MR. J. LEFFERS.)

Inspections carried out are tabulated below:—

Abattoirs	120
Bakehouses	79
Boarding houses	25
Butchers	120
Camps	..
Dairies	33
Eating houses	125
Enquiries	46
Factories	16
Grocers	146
Hairdressers	9
Hotels	23
Markets	..
Offensive trades	103
Private Hospitals	16
Public buildings	40
Sanitary inspections	61
Shops	89
Vehicles	49

MEAT AREAS.

Meat Area.	Population Served.
Bendigo	30,000
Castlemaine	6,000
Daylesford	5,000
Echuca	5,000
Kyneton	To operate from September, 1950

SANITATION.

Sewerage Areas.

Bendigo Sewerage Authority.
Castlemaine Sewerage Authority.
Echuca Sewerage Authority.
Kerang Sewerage Authority.
Kyneton Sewerage Authority.
Swan Hill Sewerage Authority.

Proposed Area.

Charlton Sewerage Authority.

Septic Tanks.

Number in area—684.

Nightsoil Depots.

Number in area—33.

Offensive Trades.

Offensive Trade.	Number in Area.
Abattoirs	53
Fat rendering	11
Gut cleaning	2
Knackers	..
Marine stores	5
Piggeries	21
Poultry killing	8
Rag sorting	..
Skin stores	19
Boiling down	4
Night soil depots	33
Garbage depots	14
Cattle saleyards	29
Bone Mills	5

Dangerous Trades.

Number in area—1.

Food Supplies.

Number of samples taken—312 (20 municipalities).
Number of samples adulterated—9.
Number of samples in which no action was taken—4.

NORTH-WESTERN HEALTH AREA.

ADMINISTRATION.

The North-Western Health Area comprises 36 municipalities, which include 2 cities, 2 towns, 5 boroughs, and 27 shires. The area is approximately 27,000 square miles and has a population of about 170,000. There are 43 Medical Officers of Health, and 11 full time or part time Health Inspectors. There are four health groups comprising 22 municipalities, and at the present time 5 municipalities are without an Inspector. However, negotiations are now proceeding with a view to forming a new group comprising these municipalities, and it is hoped that this vacancy will be filled in the near future.

INFECTIOUS DISEASES.

In 1948, the following infectious diseases were notified:—

Disease.	Notifications.
Diphtheria	20
Scarlet Fever	150
Typhoid Fever	3
Tuberculosis	67
Poliomyelitis	1
Puerperal Fever	2
Hydatids	5
Tetanus	1
Cerebrospinal Meningitis	7
Encephalitis Lethargica	1
Dysentery	..
Helminthiasis	..
Malaria	3
Anchylostomiasis	25

Immunization against Diphtheria was carried out in ten municipalities and approximately 2,100 children received the full course of treatment.

Tuberculosis Skin Testing.

Skin testing was carried out in 1948 in the following municipalities:—

Municipality.	Number Tested.	Number Positive.
Ararat Town and Shire	1,537	17
Donald	358	8
Horsham	1,284	26
Kara Kara	185	1
Mildura City	1,512	69
Mildura Shire	2,958	84
Stawell Borough and Shire	938	10
Warracknabeal	787	10

Mass X-ray Surveys.

X-ray surveys were carried out in eight municipalities as follows:—

Municipality.	Number X-Rayed.
Ararat	3,212
Beaufort	715
Horsham	3,386
Stawell	1,737
St. Arnaud	982
Mildura	4,881
Mildura Shire	2,910
Warracknabeal	1,493

Travelling T.B. Nurse. (Miss D. M. Cotton.)

Municipalities visited	26
Homes visited	608
T.B. cases visited	54
Contacts visited	564
X-rays ordered	200
Skin tests	288
Skin tests at schools	3,428

DISTRICT HEALTH INSPECTOR.

(Mr. K. Holland.)

The District Health Inspector was on loan to the Central Area for a considerable period, and also assisted with immunizing and the skin testing throughout the year.

Inspections carried out are as follows:—

Abattoirs	26
Bakehouses	24
Boarding Houses	3
Butchers' Shops	32
Camps	6
Cattle Sale Yards	14
Dairies	16
Eating Houses	12
Inquiries	48
Factories	6
Grocers	20
Hotels	4
Markets	10
Offensive Trades (including Tips, Nightsoil Depots)	79
Public Buildings	16
Sanitary Inspections	40
Shops	16
Vehicles	16

MEAT AREAS.

The meat areas at present in existence are listed below. No new areas are proposed, but it is intended to increase the Maryborough area when municipal abattoirs are built.

Meat Area.	Population (approximate).
Ararat Meat Area	6,000
Ballarat	40,000
Horsham	6,500
Maryborough	8,000
Mildura	10,000

SANITATION.

Sewerage Areas.

The following authorities are now operating:—

Ararat Sewerage Authority.
Ballarat Sewerage Authority.
Dimboola Sewerage Authority.
Murtoa Sewerage Authority.
Horsham Sewerage Authority.
Nhill Sewerage Authority.
Mildura Sewerage Authority.
Warracknabeal Sewerage Authority.

Areas proclaimed but not yet operating:—

Maryborough Sewerage Authority.
St. Arnaud Sewerage Authority.
Stawell Sewerage Authority.

Septic Tanks.

Number in Area 830

Night Soil Depots.

Number in Area 44

Water Supplies.

Most of the populated districts throughout the area have some form of reticulated water supply, only two shires having no piped supply in their municipality.

Offensive Trades.

The following offensive trades are registered:—

	Private.	Municipal.
Abattoirs	41	4
Fat Rendering	4	..
Gut Cleaning	2	..
Knackers	2	..
Marine Stores	10	..
Piggeries	31	..
Poultry Killing	4	..
Rag Sorting	1	..
Skin Stores	29	..
Boiling Down	4	..
Night Soil Depots	44	..
Garbage Depots	14	..
Cattle Saleyards	30	..
Wool Scouring	3	..
Bone Mills	1	..
Fellmongering	3	..

Dangerous Trades.

Nil.

Food Supplies.

Number of samples taken (from 27 municipalities)	417
Number of samples adulterated	21
Number of samples adulterated in which no legal action was taken	10

A study of food sampling shows that in 10 cases out of 21 in which adulteration was found, no action was taken. In my opinion it is the function of a magistrate, and not of a council, to decide whether an offender has a satisfactory explanation for breaking the law.

In taking samples, also, too often the locally produced product was neglected. In one instance in a small country shire the inspector took twelve samples of cocoa, nothing else. It is quite obvious that more attention should be given to the foods such as milk and meat which are produced locally for consumption within that area.

R. J. FARNBACH, M.B., B.S., D.P.H.
District Health Officer.

WESTERN HEALTH AREA.

DISTRICT HEALTH OFFICER.—Dr. E. Forbes Mackenzie.
CHEST CLINIC MEDICAL OFFICER.—Dr. D. N. L. SEWARD.
CHEST CLINIC SISTER.—Miss J. Brown.
CHEST CLINIC ASSISTANT.—Mrs. M. Austen.
DISTRICT HEALTH INSPECTOR.—Mr. L. N. Strahle.
DISTRICT TUBERCULOSIS VISITING SISTER.—Miss M. Stenborg.

COMPOSITION OF HEALTH AREA—3 cities, 3 towns, 4 boroughs, 20 shires.

Area of 30 municipalities in Western Health Area ..	12,766.3 sq. miles
Population in Western Health Area	167,074
Dwellings in Western Health Area	43,928

MEDICAL OFFICERS OF HEALTH.

The above municipalities are served by some 28 part-time medical practitioners.

HEALTH INSPECTORS.

By grouping some areas it has been possible to carry on health inspection with the services of sixteen qualified inspectors. Several groups are too large for one man to cover. It is hoped to re-arrange these areas.

INFECTIOUS DISEASES.

All infectious diseases have been at a low level. Two cases of typhoid were reported. One of these was associated with a minor outbreak investigated in the Central Health Area.

MASS X-RAY SURVEYS AND TUBERCULIN TESTS.

These surveys have been conducted in the following areas:—

Area.	X-rayed.
Camperdown	1,698
Terang	1,742
Colac	5,099

Full reports concerning abnormalities discovered are not yet to hand.

Tuberculin testing mainly by the Vollmer patch method has been carried out.

Municipality.	Tested.	Positive.
Hampden	2,270	121
Mortlake	409	2
Colac	2,808	69

The higher incidence of tuberculin reactors in Hampden Shire is due to two factors—

- A number of older children attending a High School were treated; children of this age group provided a large proportion of the reactors;
- There is some evidence that the cows in one area contained in the past a large number of tuberculin reactors. This may mean that many of the children are reacting because of bovine tuberculosis injections.

This matter has been brought to the notice of the Department of Agriculture.

Contacts of tuberculin reactors have been skin-tested by the District Tuberculosis Nurse. X-rays have been arranged where necessary.

Anti-tuberculosis survey work is to be extended in the next year.

NOTIFIABLE INFECTIOUS DISEASES—YEAR 1948. FROM WEEKLY RETURNS SUPPLIED TO THIS OFFICE.

	Diph.	S.F.	Ty.	T.B.	Polio.	C.S.M.	Tet.	Hyd.	Mal.	Anchy.	Und. F.
First Quarter—January to March	3	11	1	12	8	1	..	3	4	6	1
Second Quarter—April to June	2	33	..	9	5	..	1	..	8	3	..
Third Quarter—July to September	2	26	..	18	3	1	..	..	5	1	1
Fourth Quarter—October to December	2	9	1	12	1	..	..	1	..	1	1
Year 1948	9	79	2	51	17	2	1	4	17	11	3

TUBERCULOSIS VISITING NURSE.

Sister M. Stenborg again carried out valuable work in visiting tuberculosis cases in this area. Contacts have been interviewed and X-rayed. Additional work in assisting with the Department's Anti-tuberculosis campaign has been carried out by Sister Stenborg.

VISITING WORK.

Return visits were made during 1948 to cases visited the previous year; because of the large size of the Western Health Area it seems that only one visit can be paid each old case per annum. It will be necessary to supplement this visiting service in the future.

DISTRICT HEALTH INSPECTOR.

During the year the District Health Inspector attended several conferences, helped in the organization of Anti-tuberculosis Campaigns and assisted in their conduct, also similar activities in regard to Diphtheria Immunization, supervised the work of Health Inspectors and assisted them at many inspections throughout the Health Area, and carried out all inspections and enquiries referred from Head Office or the District Health Officer.

Work carried out in addition to the above duties were—

Investigations and enquiries	84
Camping area inspections	22
Private hospital	10
Public building	26
Sanitary inspections	86
Trade premises inspections	174

MEAT AREAS.

The following are established and have been in operation for many years—

- Geelong.—Composed of the Cities of Geelong and Geelong West, Town of Newtown and Chilwell, parts of the Shires of Corio and South Barwon, and the Borough of Queenscliffe.
Population served—approximately 50,000.
- Warrnambool.—City of Warrnambool and part of Shire of Warrnambool.
Population served—approximately 12,000.
- Hamilton.—Town of Hamilton.
Population served—approximately 7,000.
- Colac.—Town and part of Shire of Colac.
Population served—approximately 7,000.
- Portland.—Borough and part of Shire of Portland.
Population served—approximately 4,000.

PROPOSED MEAT AREA.

The Shires or portions of Hampden, Heytesbury, and Mortlake have been constituted a Meat Area but site and the erection of abattoirs has so far not been proceeded with.

Population to be served—approximately 15,000 to 20,000.

SANITATION—SEWERAGE.

Geelong Waterworks and Sewerage Trust—

Drainage area embraces 9,471 acres including the Cities of Geelong and Geelong West, the Town of Newtown and Chilwell, and the suburban areas of the Shires of Corio, South Barwon and Bellarine. Sewer outfall to Bass Strait at Black Rock, about 9 miles from Geelong.

Warrnambool Sewerage Authority—

Area of District—860 acres.

Population 8,000. Tenements 1,947. Sewage conveyed to the Southern Ocean.

Colac Sewerage Authority—

Population 5,900. Tenements 1,500. Outfall Lake Colac.

Hamilton Sewerage Authority—

Population served—5,000.

Portland Sewerage Authority—

Area of District 426 acres.

Population 2,400. Tenements 600. Sewage outfall to sea.

Queenscliffe Sewerage Authority—

Population 2,700. Tenements 694. Installation of mains, &c., not yet started.

Lorne Sewerage Authority—

District Proclaimed and Authority Constituted, 1938. Installation of mains, &c., not yet commenced.

In addition to the above the following towns have opened negotiations for sewerage installations—

Port Fairy Borough; Portarlington and Ocean Grove in Bellarine Shire; Camperdown and Terang in Hampden Shire; and Torquay and Barwon Heads in South Barwon Shire.

Septic Tanks.	Chemical Closets.	Double Pans.
1,425	120	9,897

NIGHT SOIL DEPOTS.

All except three municipalities have established depots.

WATER SUPPLY.

Geelong Waterworks and Sewerage Trust—

Catchment Area 17,000 acres.

Population supplied 54,200.

Storage 2,738,120,000 gallons.

Supplementary supply from Bellarine Peninsula System of the State Rivers and Water Supply Commission of a minimum of 545,500,000 gallons per annum.

Supplies the Cities of Geelong and Geelong West, Town of Newtown and Chilwell, and suburban areas of the Shires of Corio, South Barwon, and Bellarine.

Warrnambool City Water Supply District—

Embracing an area of 1,400 acres. Population supplied, 8,500.

Pipe line from Otway Ranges to reservoir at Tank Hill, Panmure.

Colac Waterworks Trust—

Embracing an area of 2,879 acres. Population supplied, 6,400.

Source of supply, Glengolah River near Mt. Sabine in Otway Ranges.

Hamilton Waterworks Trust—

Embracing an area of 5,100 acres. Population supplied, 6,000.

Two service reservoirs of 14,000,000 gallons each and original storage reservoir of 30,000,000 gallons. Water brought from Grampians 24 miles distant.

Koroit Waterworks Trust—

Supplies portion of Koroit township.

Embracing an area of 1,000 acres. Population supplied, 950.

Gathering wells collecting water from springs near edge of Tower Hill and Koroit Lakes.

Port Fairy Waterworks Trust—

Embracing an area of 3,800 acres. Population supplied, 1,600.

Reservoir capacity 120,000,000 gallons at "Aringa," gravity main to low level basin, pumphouses, and standpipe on Princess Highway.

Low level basin capacity, 500,000 gallons. Standpipe capacity, 150,000 gallons.

Portland Waterworks Trust—

Embracing an area of 2,860 acres.

Bores, pumping plant, pipe main, standpipe, and reticulation to Town of Portland.

State Rivers and Water Supply Commission—Waterworks Districts—

Bellarine Peninsula.—Comprising portions of Otway, Winchelsea, Barrabool, South Barwon, and Bellarine Shires, and Borough of Queenscliffe.

Source of supply, Upper Barwon River and tributaries.

Works.—Inlet Channel, Wurdee Boluc. Reservoir capacity, 2,700,000,000 gallons. Outlet channel to Waurm Ponds Pipe Head Basin, capacity 70,000,000 gallons, Waurm Ponds Auxiliary Basin, capacity 26,000,000 gallons, thence mains to Bellarine Reservoir, capacity 97,000,000 gallons. Supplementary supply to Geelong. Pipe reticulation supplies Townships of Drysdale, Portarlington, Queenscliffe, Point Lonsdale, Barwon Heads, Ocean Grove, Torquay, and Anglesea.

Drysdale.—Twin earthen basins, 6,806,000 gallons.

Portarlington.—Concrete service basin, capacity 208,000 gallons.

Queenscliffe and Point Lonsdale.—Earthen storage basin, capacity 6,806,000 gallons.

Barwon Heads and Ocean Grove.—Concrete service basin, capacity 270,000 gallons.

Torquay.—Service basin, capacity 5,445,000 gallons.

Anglesea.—Service basin, capacity 3,210,000 gallons.

Otway.—Comprising portions of Hampden, Heytesbury, Mortlake, Otway, and Warrnambool Shires.

Source of Supply Arkins Creek.

Works.—Three concrete diversion weirs on Arkins Creek, 79 miles of main pipe line extending from Arkins Creek to Warrnambool; Tank Hill storage, capacity 150,600,000 gallons; Mt. Ewen storage, capacity 105,450,000 gallons; Camperdown storage, capacity 30,000,000 gallons. Pipe reticulation supplies townships of Allansford, Camperdown, Cobden, and Terang. Supply to Warrnambool.

Allansford.—Source of supply Arkins Creek.

Camperdown.—Earthen storage 30,000,000 gallons; concrete lined basin, capacity 716,000 gallons.

Cobden.—Earthen storage, capacity 5,860,000 gallons.

Terang.—Circular concrete tank, capacity 677,000 gallons.

Birregurra.—Source of supply—Upper Barwon River and tributaries and the works of the Bellarine Peninsula Waterworks District. Local works—Earthen storage reservoir, capacity 17,000,000 gallons.

Winchelsea Waterworks Trust—

Embracing area of 500 acres. Population supplied, 525.

Connected to Wurdee Boluc Reservoir.

Lorne Waterworks Trust—

Embracing area of 5,120 acres. Population supplied, 900.

Supply from Erskine River, Rubble Dam $3\frac{1}{2}$ miles above Lorne at an elevation of 650 feet.

Supplementary scheme, concrete weir at Phantom Falls on the George River.

Coleraine and Casterton Waterworks Trust—

Comprising portions of Shire of Glenelg and Shire of Wannon.

Embracing an area of 1,800 acres. Population supplied, 3,000.

Works.—Storage reservoir of 420,000,000 gallons capacity.

Supplies Casterton and Coleraine townships.

Apollo Bay Waterworks Trust—

Comprising portion of Otway Shire.

Embracing an area of 360 acres. Population supplied, 350.

Works.—Masonry Weir on Anderson's Creek.

Lismore Waterworks Trust—

Population supplied, 400.

Supplies Township of Lismore in Hampden Shire.

Mortlake Waterworks Trust—

Embracing an area of 1,069 acres. Population supplied, 1,000.

Source of Supply.—Water pumped by electric power from a spring in the Township of Mortlake.

Works.—Pitcher lined storage reservoir, springs, pumping plant rising main, water tower, and pipe mains.

Mount Rouse (Shire of) Waterworks Trust—

No details available.

OFFENSIVE TRADES.

All Under Municipal Control.

Night soil depots—22. Refuse depots—32.

Other Offensive Trades Municipal and Private.

Abattoirs.	Municipal.	Private.
	3	61
Fat rendering	..	45
Fellmongery	..	25
Skin stores	..	50
*Piggeries (proclaimed in 4 municipalities)	..	13

Other Offensive Trades.

Marine stores	..	10
Tanneries	..	1
Poultry dressing	..	4
Casing works	..	2
Soap works	..	1
Knackery	..	1

Cattle Sale Yards.

Municipal—5. Private—76.

Dangerous Trades.

None listed.

FOOD SUPPLIES.

The requisite number of food samples has been taken throughout the Health Area. Appropriate action has been taken concerning breaches of the Regulations.

E. FORBES MACKENZIE,

District Health Officer.

REPORT OF THE POLIOMYELITIS MEDICAL OFFICER FOR THE YEAR ENDING 30th JUNE, 1949.

This Report will be presented under the following headings :—

- A. Incidence.
- B. Epidemiology.
- C. After-care.
- D. Research.
- E. Charter.

Quarterly Incidence in 1945-46.

Year.					Number of Cases.
1945—					
3rd quarter ..	..	..	..	..	77
4th quarter ..	..	..	..	..	155
1946—					
1st quarter ..	..	..	..	..	194
2nd quarter ..	..	..	..	..	41
Total	..	..	..	..	367

A. INCIDENCE.

STATISTICS.

During the last quarters of 1948, only ten cases of poliomyelitis were reported to this Department, five being in each quarter. Of these ten cases only two were from the metropolitan area, the other eight being from scattered country districts.

During the first quarter of 1949 the incidence was considerably higher; approximately two cases per week being reported. During the last week of March in this year, the incidence of poliomyelitis increased, fifteen cases being reported this week. Since then the weekly incidence has averaged approximately twenty cases per week. These cases were originally confined largely to the metropolitan area affecting all municipalities. The widespread distribution of cases in the metropolitan area has continued since and has been a feature of this present epidemic.

Monthly Incidence in 1949.

Month.					Number of Cases.
January ..	..	..	..	..	15
February ..	..	..	..	..	10
March ..	..	..	..	..	9
April ..	..	..	..	..	67
May ..	..	..	..	..	52
June ..	..	..	..	..	45
Total	..	..	..	..	198

Weekly Incidence of Poliomyelitis (based on date of onset).

Monthly Incidence in 1937-38.

Month.					Number of Cases.
July ..	..	..	..	..	36
August ..	..	..	..	..	184
September ..	..	..	..	..	187
October ..	..	..	..	..	249
November ..	..	..	..	..	353
December ..	..	..	..	..	395
January ..	..	..	..	..	356
February ..	..	..	..	..	187
March ..	..	..	..	..	76
April ..	..	..	..	..	37
May ..	..	..	..	..	24
June ..	..	..	..	..	10
Total	..	..	..	..	2,096

—		Number of Cases.	—		Number of Cases.
Week ending—			Brought forward		75
8.1.49 ..	1		Week ending—		
15.1.49 ..	1		16.4.49 ..		13
22.1.49 ..	1		23.4.49 ..		9
29.1.49 ..	2		30.4.49 ..		21
5.2.49 ..	4		7.5.49 ..		10
12.2.49 ..	5		14.5.49 ..		15
19.2.49 ..	1		21.5.49 ..		14
26.2.49 ..	2		28.5.49 ..		12
5.3.49 ..	3		5.6.49 ..		13
12.3.49 ..	3		12.6.49 ..		4
19.3.49 ..	2		19.6.49 ..		20
26.3.49 ..	15		26.6.49 ..		19
2.4.49 ..	19		2.7.49 ..		18
9.4.49 ..	16				
Carried forward	75		Total	..	243

Poliomyelitis Statistics.

Year.	Number of Cases.		
	Metropolitan.	Country.	Total.
1925—			
1st quarter	8	4	12
2nd quarter	54	26	80
3rd quarter	31	7	38
4th quarter	4	6	10
1926—			
1st quarter	4	17	21
2nd quarter	3	2	5
3rd quarter	1	1	2
4th quarter	..	1	1
1927—			
1st quarter	2	2	4
2nd quarter	2	..	2
3rd quarter	1	..	1
4th quarter	5	4	9
1928—			
1st quarter	41	47	88
2nd quarter	12	36	48
3rd quarter	7	6	13
4th quarter	12	8	20
1929—			
1st quarter	51	9	60
2nd quarter	25	33	58
3rd quarter	2	10	12
4th quarter	5	7	12
1930—			
1st quarter	12	8	20
2nd quarter	7	20	27
3rd quarter	8	8	16
4th quarter	10	12	22
1931*—			
1st quarter	54	27	81
2nd quarter	106	60	166
3rd quarter	10	15	25
4th quarter	3	6	9
1932—			
1st quarter	2	8	10
2nd quarter	3	6	9
3rd quarter	2	3	5
4th quarter	1	2	3
1933—			
1st quarter	3	4	7
2nd quarter	1	1	2
3rd quarter	..	..	..
4th quarter	2	5	7
1934—			
1st quarter	16	7	23
2nd quarter	78	47	125
3rd quarter	19	5	24
4th quarter	2	9	11
1935—			
1st quarter	7	32	39
2nd quarter	6	15	21
3rd quarter	1	3	4
4th quarter	..	2	2
1936—			
1st quarter	1	1	2
2nd quarter	..	..	..
3rd quarter	2	2	4
4th quarter	..	1	1
1937—			
1st quarter	..	2	2
2nd quarter	2	3	5
3rd quarter	359	27	386
4th quarter	645	329	974
1938—			
1st quarter	319	381	700
2nd quarter	15	59	73
3rd quarter	3	9	12
4th quarter	3	6	9
1939—			
1st quarter	10	7	17
2nd quarter	3	10	13
3rd quarter	..	3	3
4th quarter	2	7	9
1940—			
1st quarter	2	2	4
2nd quarter	1	5	6
3rd quarter	3	3	6
4th quarter	1	2	3
1941—			
1st quarter	1	5	6
2nd quarter	5	2	7
3rd quarter	21	..	21
4th quarter	8	14	22

Year.	Number of Cases.		
	Metropolitan.	Country.	Total.
1942—			
1st quarter	1	10	11
2nd quarter	3	..	3
3rd quarter	21	..	21
4th quarter	..	4	4
1943—			
1st quarter	1	1	2
2nd quarter	1	1	2
3rd quarter	1	..	1
4th quarter	2	3	5
1944—			
1st quarter	2	2	4
2nd quarter	..	3	3
3rd quarter	..	2	2
4th quarter	..	..	..
1945—			
1st quarter	3	..	3
2nd quarter	..	3	3
3rd quarter	43	34	77
4th quarter	75	80	155
1946—			
1st quarter	91	103	194
2nd quarter	13	28	41
3rd quarter	..	9	9
4th quarter	..	3	3
1947—			
1st quarter	1	3	4
2nd quarter	11	7	18
3rd quarter	35	19	54
4th quarter	12	36	48
1948—			
1st quarter	9	18	27
2nd quarter	..	..	..
3rd quarter	..	..	..
4th quarter	..	5	5
1949—			
1st quarter	28	9	37
2nd quarter	122	36	158

* Incidence in this epidemic previously exceeded only in 1916.

THE SIGNIFICANCE OF THESE STATISTICS.

Any attempt to assess the significance of the present incidence of poliomyelitis should be made against a background of both previous local experience and present world distribution.

At the time of writing it is already apparent that the present epidemic of poliomyelitis promises to be the second largest that Victoria has experienced since poliomyelitis became a notifiable disease. The worst epidemic of poliomyelitis which this State had experienced was in 1937. Although the present outlook is not nearly of the same order of magnitude, nevertheless, on the population basis it is worse than the current American epidemic. In fact the present epidemic promises to exceed the cases per 100,000 of population of the worst American epidemic.

The present incidence of Poliomyelitis throughout the world is such as to cause grave concern and to lead us to attribute more than a passing significance to the present Victorian epidemic. The United States of America are at present experiencing one of their worst years as far as incidence of poliomyelitis is concerned; but it must be remembered that since 1944 the U.S.A. have been experiencing a more or less continuous series of epidemics of poliomyelitis. Similarly in Europe since the end of the Second World War.

Also the United Kingdom in 1947 experienced the worst epidemic ever recorded in that country. It is interesting and disheartening to notice that already there are signs of a repetition of that epidemic in the United Kingdom this year.

From this it would appear that we have no grounds for complacency in regard to the present epidemic in Victoria—although it may merely be part of a cycle, nevertheless this cycle is recurring more frequently and is increasing in magnitude. Consequently all our planning must keep in mind the possibility of an early recurrence of this epidemic; a recurrence of the same order of magnitude as the present outbreak.

B. EPIDEMIOLOGY.

1. Since the present outbreak commenced an attempt has been made to investigate thoroughly every case of poliomyelitis occurring in this State and to ascertain the features of the epidemiology of this disease as it occurs in this State. It is hoped to incorporate these findings in a special report later.

2. The Departmental procedure regarding methods to prevent the spread of this disease has been:—

- (a)
 - (i) an arrangement has been reached, whereby as soon as a case is definitely diagnosed as suffering from poliomyelitis at the Q.M.I.D.H. the Department is notified. Likewise where a doubtful case of poliomyelitis is admitted to the Q.M.I.D.H. this Department is notified; subsequently when a definite diagnosis has been made the report is confirmed or otherwise.
 - (ii) Cases diagnosed as poliomyelitis cases by any of the four diagnostic consultants are notified immediately directly to this Department.
 - (iii) Other cases not admitted to the Q.M.I.D.H. or seen by the diagnostic consultants are notified to this Department by the Town Clerk or the Shire Secretary of the Municipality concerned. Here, unfortunately, there is a considerable time interval between the time the case is diagnosed and the Department notified, but for the present there seems to be no readily practicable short cut.
 - (iv) Cases reported to the registrar of births and deaths as dying from poliomyelitis are eventually notified to this Department. Here, however, the delay is usually in the vicinity of one month; some solution will have to be found soon to correct this.
- (b) As soon as this Department is notified that a patient is suffering from poliomyelitis—
 - (i) the medical officer of health is immediately informed of this fact and is requested to put into effect the infectious diseases regulations in so far as they pertain to poliomyelitis;
 - (ii) a medical officer from the Department personally investigates the epidemiology of the case; any anomalies discovered are immediately referred to the proper authorities for rectification.
- (c) Regarding the isolation of patients themselves the policy of this Department has been to encourage their isolation in infectious diseases hospitals as far as possible; where this is not practicable the M.O.H. for the area concerned has the power to isolate the case at home.
- (d) The policy of this Department regarding general measures to be taken in addition to the specific measures outlined above, has been based on the recommendations of the Consultative Council for Poliomyelitis. These recommendations include:—
 - (i) Advice to the medical profession to limit the performance of tonsillectomies to urgent cases. This recommendation was made by the Consultative Council on 28th April, 1948, and was immediately circulated

to all medical practitioners by this Department. Following the issuing of this advice many requests have been made to the Department asking whether the advice still holds and the advice given has been that of the Chairman of the Consultative Council.

"The Consultative Council considers that caution should be exercised while the incidence of poliomyelitis was increased. Although the Council has no power to prohibit the performance of tonsillectomies it felt it incumbent on it to warn practitioners of the possible risk of operation in times when poliomyelitis was prevalent. It was considered that in any particular case, it was the duty of the doctor advising tonsillectomy to weigh the possibility of detriment to the patient's health by postponing the operation against the possibility of a tonsillectomised patient developing poliomyelitis.

The parent or responsible relation of the patient should in every case be informed of the arguments for and against operation. As soon as the incidence of poliomyelitis is reduced to the ordinary endemic level the Consultative Council will inform the medical profession accordingly."

- (ii) Publicity.—The following advice was prepared by the Consultative Council for release by the Minister to the Press.

"Some anxiety has been caused to parents by an increase in the number of cases of poliomyelitis this year.

The increase is not great; there have been 183 cases over a period of six months. An incidence such as this is expected to occur every four or five years and is, consequently, not unusual. "Infantile Paralysis" is not a good term for the disease known as Poliomyelitis. In the first place it is a disease affecting mature adults and adolescents as well as children and infants, and in the second place only a small proportion of patients affected by the virus of poliomyelitis develop paralysis.

It is known that the disease is caused by a virus but it is not known for certain how the virus is spread and consequently no advice can be given on how infection can be avoided *with certainty*.

As a result of past experience and in view of what appear to be factors in the spread of the disease, the following precautions are recommended:—

Take notice of vague illness characterized by headache, lassitude, and aching in limbs and back. Of course such symptoms may occur in the early stage of many illnesses but it is important that there should be *no great physical activity nor muscular fatigue during the time these symptoms last*.

Time and again it has been shown that if a patient fatigues himself or herself in the early stages of poliomyelitis infection, the following paralytic stage is rendered thereby much more dangerous.

Adults with these symptoms must be cautious about "keeping going" when they should be avoiding physical fatigue.

Children and young people with such vague symptoms and muscle discomfort should *not be allowed to indulge in competitive sport*. A mistaken sense of loyalty to school-mates in an endeavour "not to let the team down" by playing in a match when suffering from headache and malaise may result in disaster and tragedy.

Young and old should be warned about the possible ill effects of physical fatigue during these early general symptoms. The fatigue may be produced by household duties as in the case of mothers, occupational fatigue as in farmers, and recreational fatigue as in dancing and sport competition and long hikes.

Be cautious about contamination of food and drink. This caution specially applies to milk and milk products.

If you cannot be sure that the milk or milk product is properly pasteurized, *boil the milk* or use tinned or powdered milk.

Freezing does not kill the virus and frozen food is not safe food in this respect. Although most commercial ice cream is made with pasteurized milk, can you be sure that it is not contaminated by virus after leaving the factory by someone harbouring the virus handling the product in serving, wrapping, or transporting it.

Take every care to avoid contamination of food, especially milk products, by flies. Keep protective covers over the food and endeavour to keep down flies by sprays and general cleanliness.

In *uncovered areas* be particularly aware of the risk of the virus being conveyed by flies or other means from nightsoil.

When camping in unsupervised camping areas, whether at the seaside or inland, do not forget that the ground may have been fouled by intestinal excreta of previous campers, so pay particular attention to general cleanliness and the protection of food from flies.

Most Victorian towns have pure water supplies, but if you are not on a supply and are using water which may be polluted by excrement washed down by rain, or a stream from higher ground or infected by seepage into walls, boil the drinking water and also the water used for washing-up.

Using a common towel after hand-washing, especially by children, is a dirty practice. It is known to be a source of spreading boils and skin affections. On general grounds it would be better to bring the dirty hands home and have them washed and dried at home with the individual's own towel, rather than have a half-wash and a dirty, contaminating dry on a communal towel away from home.

Children should be kept as much as practicable *away from crowded assemblages of people*. There is no sense in keeping them away from school if you send them to the pictures, or take them to parties.

There is no reason to fear that a child will catch the infection from a patient who has recovered from an attack of poliomyelitis and who returns home after the quarantine period."

Also since then on several specific occasions, functions which involved the gathering together of large numbers of children from many areas have been cancelled on the advice of this Department.

3. The formation of a diagnostic panel.

The Consultative Council for Poliomyelitis on the 7th April, 1949, recommended to the Honorable the Minister that a panel of physicians be formed to aid in the diagnosis of early cases of poliomyelitis. The Minister agreed to this and a panel of four doctors was formed. After consultation with the British Medical Association the fee for such consultations was agreed upon and this service is now operating very efficiently and effectively. The fees for the consultations are being paid directly to the doctors concerned by the State Health Department. The service of these doctors has been available at any time since their appointment to the panel to any medical practitioner requesting an expert opinion.

C. AFTER-CARE.

The after-care treatment of sufferers from poliomyelitis has occupied much of the attention of this Department and our activities in the field have greatly increased.

We shall consider this section under the following headings:—

1. Medical.
2. Physiotherapy.
3. Accommodation.
4. Splints and appliances.
5. Transport.
6. Education.

1. MEDICAL.

Visits by consultant orthopaedists to the following country centres have been continued during the past year:—Hamilton, Horsham, Stawell, Ararat, Geelong, Ballarat, Mooroopna, Sale, and Dandenong. The Department medical officer has accompanied the consultant orthopaedists on their visits. Further expansion of this work in the near future is envisaged.

Medical Officer for Poliomyelitis.—This position was created towards the end of 1948 and the appointment filled in December, 1948. With the increase in the scope of the work of the Department during the last few months the need has arisen for an additional medical officer. On the recommendation of the Consultative Council for Poliomyelitis on 13th May, 1949, the position of Assistant Poliomyelitis Medical Officer has been created. As yet it has not been filled.

2. PHYSIOTHERAPY.

The policy of this Department of providing five Post-graduate Scholarships each of three months duration to suitable physiotherapists has been continued. However, in this regard it should be noted that this policy has been subjected to review during the past few months and it is now felt that—

- (a) although the provision of these scholarships has filled an urgent need in the community;
- (b) the terms of appointment should be more elastic in that the money allotted for one or two of these scholarships should be available to give a larger number of physiotherapists the opportunity of doing a shorter refresher course—say of three weeks;
- (c) that although the three months' training is inadequate either as an introductory course to work under close supervision or as finishing course to physiotherapists already with considerable experience in poliomyelitis work, it is not in itself a complete course. A limiting factor in connection with these post-graduate scholarships at present is the shortage of sufficient training centres for these physiotherapists. With the appointment of a physiotherapist in charge of this department, this training course could be considerably amplified.

During the past year the number of positions for physiotherapists in the Department, has been increased from four to ten. It is considered that ten full time highly-trained physiotherapists are required to carry out poliomyelitis after-care treatment throughout the State of Victoria. One of these positions is that of a senior physiotherapist who, when appointed, will act as a teacher of the physiotherapy methods to be used in cases of poliomyelitis to the less experienced physiotherapists. As difficulty has been experienced in filling these positions the conditions under which physiotherapists are employed in the State Public Service have been reviewed and the conditions improved.

However, even so, difficulty is being experienced in filling these positions because of a shortage of trained physiotherapists in the community. As the need for physiotherapists is urgent and many persons are losing their chance of eventual full return of function because of the lack of available trained personnel it is essential that this shortage be relieved immediately. This could be done if persons trained in the United Kingdom were permitted to register in this State. The present Physiotherapy and Masseurs Registration Act only permits registration of physiotherapists who are both trained and registered in the State in which they have trained. As registration is not practiced in the United Kingdom no physiotherapist from the United Kingdom, no matter how experienced, can be registered in Victoria unless he or she does another full course of training in Victoria. As the Chartered Society of Physiotherapists in England is recognized as the leading body in the British Empire for Physiotherapists, it is very anomalous that its members are not eligible for registration in Victoria. To correct this anomaly the Masseurs and Physiotherapy Registration Board have recommended to the Honorable the Minister that the Masseurs and Physiotherapists Registration Act be amended to permit registration of persons who can produce evidence of sufficient qualification irrespective of whether they are registered elsewhere or not.

This matter is one of extreme urgency.

During the past year the question of provision of transport for physiotherapists employed by the Department was considered and the Honorable the Minister agreed that physiotherapists on joining the Department be supplied with cars for use on Departmental business. This provision makes for greater efficiency and less fatigue and thus renders the service of the available physiotherapists more valuable.

3. ACCOMMODATION.

The problem of finding accommodation for patients suffering from post-poliomyelitis paralysis has been in the past one for the Hospitals and Charities Commission. However, the position regarding accommodation for these patients has been far from satisfactory in the case of young adults. Consequently other bodies have had to enter this field.

During the acute stage of the disease there is no difficulty in providing accommodation if the patient can be discharged from hospital as soon as their acute stage is over. In the metropolitan area the position with regard to children has so far been satisfactory, as the Children's Hospital has been able to cope with the patients discharged from Fairfield—

- (a) in their own homes by their itinerant physiotherapy service;
- (b) at their convalescent home at Hampton; or
- (c) at the Orthopaedic Section at Frankston.

Also the Yooralla Residential Hostel at Balwyn has been able to help considerably in the institutional treatment of these cases. Yooralla is run by its own special committee of management, who raise their own funds. In its make-up, there is very close co-operation between the Education Department and the Children's Hospital and thus while in the Hostel, children are able to continue their schooling while receiving specialized treatment for their condition.

During the past few months, however, with the increased incidence of poliomyelitis, the Children's Hospital and Yooralla are both approaching saturation point. In the case of Yooralla expansion of their activities is being held up pending completion of some new buildings on their site at Balwyn. When these buildings are completed an additional 30 children will be able to be accommodated.

The position in regard to adults is not nearly so satisfactory and has been giving us great concern ever since the present epidemic commenced. On the 13th May, 1949, the Consultative Council directed the Honorable the Minister's attention to the need for additional after-care

beds for young adults. On the 17th June 1949, the matter was again brought to the Honorable the Minister's attention with the added information that it was considered that approximately 40 beds would be required for city cases and approximately 40 beds for country cases. The problem is not one peculiar to this epidemic but is one being continually encountered because there is no institution in Melbourne for the after-care treatment of adult cases of poliomyelitis. Until there is such an institution difficulty will always be experienced in treating young adults with poliomyelitis.

There is an immediate urgent need for a permanent institution in Melbourne for the treatment of adult cases of poliomyelitis.

The position regarding country cases is much more difficult even than for city cases as here the children also present a problem. In the past Country Base Hospitals have been encouraged to treat the cases of poliomyelitis which occur in their district. In the case of hospitals with a trained physiotherapist on the staff and which are visited regularly by a consultant, this is both desirable and practicable in the later stages. In the initial stages, however, it is considered essential to bring these cases to Melbourne so that proper splinting and treatment can be promptly commenced. When the case has been properly assessed and been equipped with the necessary appliances, then further treatment can be continued in the Base Hospital of the district in which he lives. The Red Cross Hostels have been providing for a few adult country cases being brought to Melbourne for treatment, but the number so provided for is pitifully small. As stated above, there is an immediate urgent need for an after-care institution in Melbourne to provide treatment for adult city and metropolitan cases and also for some country children.

4. SPLINTS AND APPLIANCES.

On the 23rd July, 1947, the Consultative Council for Poliomyelitis sent a representative to discuss with a representative of the Royal Melbourne Hospital a request from the Chairman of the Consultative Council for Poliomyelitis that the Royal Melbourne Hospital should provide splints and other facilities for the Council.

It was considered that the hospital should supply splints, materials, &c., to the Council at cost, i.e., the cost of materials, labour, and overhead. The Committee of Management of the hospital would, however, require assurance from the Consultative Council that the increased cost of maintaining the enlarged Splint Department would be met from Council Funds. Normally these funds would be paid to the hospital for the work done by the Department. It was estimated that the increased maintenance costs would amount to approximately £1,500 per annum, comprising labour, material, and overhead costs, so that the Committee would expect assurance that this amount of work would be provided by the Council each year.

This arrangement was confirmed at a meeting of the Consultative Council for Poliomyelitis on 25th July, 1947, and discussed again with the Hospital Board of Management on 4th September, 1947.

Subsequently the splint shop at the Royal Melbourne Hospital was expanded and supplied splints on orders from the Secretary of the Consultative Council. This arrangement worked smoothly until the present epidemic occurred. During the past three months the Royal Melbourne Hospital splint shop has proved to be an inadequate source of splints and the time interval between ordering and receipt of the splint is now six weeks. The matter has been brought to the attention of the Committee of Management of the Royal Melbourne Hospital, but it is anticipated that it will be necessary to explore other avenues in order to arrange for an adequate supply of splints during the present epidemic.

To meet the need in times such as this a splint had been designed by Mr. Foster of the C.S.I.R. aeronautical division. On 7th April, 1949, it was decided to call for

tenders for the manufacture of 200 such splints. However, considerable difficulty was encountered in obtaining a satisfactory tender and these splints will not be available in time for use in this epidemic.

On 27th May it was decided to call for tenders for the manufacture of 100 long prams for use by sufferers from poliomyelitis. Disher and McBrien Pty. Ltd. are interested in the manufacture of these and particulars have been sent to them concerning these prams.

Also, on the 27th May, the Consultative Council recommended permission be sought to obtain two jacket respirators, estimated to cost between ten and eleven hundred dollars. The question of allotment of dollars for this purpose has been taken up with the Commonwealth Government.

The Consultative Council has also been actively investigating the question of the need for, and availability of surgical bootmakers. No decision has yet been reached as to what line of action should be taken.

5. TRANSPORT.

Some patients from country districts being transported to town require ambulance transport. As the payment of these ambulance fees imposes undue hardship in many cases, the question of the payment of these fees by the Treasury has arisen. In the case of a patient requiring transport from Horsham to Melbourne it was recommended on the 28th April, 1949, by the Consultative Council that the ambulance fee be paid by the Treasury. The Honorable the Minister agreed to this. The wider question as to whether the Consultative Council should be given the power to approve of the payment of these ambulance fees in necessitous cases is being investigated at present.

6. EDUCATION.

This falls under three headings:—

- (a) Postgraduate instruction of medical practitioners in the diagnosis and treatment of poliomyelitis cases. A report on this is being prepared by the medical members of the Consultative Council, and a pamphlet is being drawn up for distribution to the profession.
- (b) Education of the public in preventive measures and the necessity for avoiding over-exertion and the immediate necessity of rest in bed in all doubtful illness. This has been done through the Press but needs constant repetition.
- (c) Education of children suffering from poliomyelitis. This is available for city cases but not for country cases.

D. RESEARCH.

No research activities in connection with poliomyelitis have been carried out during the past year in Victoria, but it is hoped that some will be carried out during the next year.

Finally, before reiterating the recommendations made in this report, it should be stated that on the administrative side the Health Department has provided the requisite clerical staff and assistance and that the services of the Department have been fully taxed by the present epidemic. The most urgent need in this regard is for a statistical expert to prepare and collate the vital statistics connected with poliomyelitis as manifest in Victoria. It is considered essential that such an expert be available at all times, not only for poliomyelitis but also for all the other common infectious diseases.

RECOMMENDATIONS.

1. Statistics.

A. There is an urgent need for a statistical expert to prepare and collate the vital statistics of the common infectious diseases.

B. That all planning be made with the possibility in mind of an early recurrence of this epidemic.

2. Epidemiology.

A. That some means be found of overcoming the delay between death of a case of poliomyelitis and the notification of this Department. An amendment of the infectious diseases regulations in this respect might be considered.

B. That considerable publicity be given to the statement prepared by Dr. Upjohn for the Press; that it be continually repeated not only in the press but also over the radio network.

3. After-Care.

A. That urgent consideration be given to the proposed amendment of the Masseurs and Physiotherapists Registration Act.

B. That the need for a permanent institute for the after-care of both city and country adults and some country children suffering from poliomyelitis be recognized.

4. Research.

That a certain sum of money be set aside next year for research purposes.

E. CHARTER.

CONSULTATIVE COUNCIL—POLIOMYELITIS POLICY,
5TH JULY, 1948.

Aim.

To reduce the amount of crippling in Victoria from the paralyzes of poliomyelitis.

Activities to Achieve this Aim.

- A. In the intervals between epidemics; and
- B. During epidemics.
- A.—(1) Promotion of research into the incidence, mode of spread, and treatment of poliomyelitis.
- (2) Promotion of study of the epidemiology of poliomyelitis and related diseases in Victoria.
- (3) Education—
 - (a) of medical students;
 - (b) of doctors by post-graduate teaching, and by the preparation of literature to be ready for distribution in times of epidemic;
 - (c) of parents, by preparation of literature on—
 - (i) precautionary methods, and
 - (ii) after-care of paralysed muscles;
 - (d) training of medical officers by experience in the intervals between epidemics;
 - (e) training of physiotherapists by—
 - (i) employment of sufficient physiotherapists to care for patients already paralysed, to provide a nucleus of teachers in times of epidemics;
 - (ii) scholarships to physiotherapists for post-graduate experience in poliomyelitis;
 - (f) training of splint-makers.
- (4) Information Service—to be aware of—
 - (a) the incidence of poliomyelitis in Victoria with epidemiological details;
 - (b) the incidence of other virus diseases of the central nervous system, in Victoria;
 - (c) the incidence of poliomyelitis and encephalitis in other States and countries;
 - (d) the number of beds available in hospitals in Victoria at any time for—
 - (i) reception of acute cases, and
 - (ii) for after-care.

(5) To provide that adequate accommodation for after-care be available in institutions during, and following, an epidemic.

(6) To make provision for adequate care of persons paralysed in past epidemics—

(a) to keep a register of patients notified as from 1st July, 1945, and by a follow-up service to see that necessary care is provided;

(b) to arrange for after-care in—

- (i) the home of the patient;
- (ii) a country base hospital;
- (iii) the Austin Hospital;
- (iv) a Red Cross hostel;

(v) the Children's Hospital either by its itinerant service or in one of its branches, or at Yooralla Hospital School;

(vi) in any other institutions which will undertake after-care;

(c) to assist with financial help an organization providing after-care, such as the Children's Hospital, Yooralla, Austin, Australian Red Cross (Victorian Division), or Melbourne District Nursing Society;

(d) to provide financial help for orthopaedic supervision, physiotherapy, and necessary appliances if the patient is to be cared for at home and if the finances of the family justify help;

(e) if the patient is parent—to provide domestic help sufficient for his or her physical care at home;

(f) employment of physiotherapists to care for adults in the city;

(g) the provision of cars to physiotherapists prepared to undertake full time work in city or country;

(h) the employment of full-time and part-time physiotherapists, or nurses experienced in orthopaedic work, in country districts; one at least to each area controlled by a District Health Officer;

(i) to provide for the immediate engagement of physiotherapists and other officers, required for treatment and after-care work, in a manner which will overcome the delay at present being experienced;

(j) the provision of appliances for paralysed persons at reasonable cost, or with financial help if necessary;

(k) to arrange for visits of Consultants to country districts to supervise patients already paralysed;

(l) to collaborate with other agencies working to prevent crippling, such as Division of Maternal and Child Welfare, Department of Health, and the Victorian Society for Crippled Children;

(m) the provision of transport.

(7) To provide for a store of splints to be ready for the next epidemic.

(8) To develop and arrange for the manufacture of a frame of splint capable of mass production at short notice.

B. (During epidemics).—(1) Encourage investigation of cause and advise on measures to control.

(2) Provide a consultant service to encourage early diagnosis.

(3) Distribute literature to doctors and parents, statements to the Press.

(4) Arrange for accommodation of acute cases and after-care in homes or institutions.

(5) Arrange for orthopaedic supervision, physiotherapy, and appliances.

(6) Provide necessary transport.

(7) To take any steps which may be deemed necessary.

The Council considers that the work of after-care for poliomyelitis should, in the intervals between epidemics, in country districts, be expanded to include other crippling conditions.

B. P. McCLOSKEY, M.B., B.S.,
Poliomyelitis Medical Officer.

APPENDIX A.

LEGISLATION, ETC., 1948-49.

REGULATIONS.

The Infectious Diseases Regulations were amended to relax the requirements relating to puerperal fever when the patient is non-infective.

The Meat Transport Vehicles Regulations were amended to extend the exemption from full compliance until 30th September, 1949.

The Building Regulations were amended to give the Commission power to grant exemptions from compliance with specified regulations in certain cases.

The Patent Medicines Regulations were amended to increase the maximum attendance fees payable to members of the Advisory Committee for the current year.

The Meat Supervision Regulations were amended to promote more humane methods of slaughtering.

The Offensive Trades Regulations were amended to require provision of sanitary and laundry facilities for employees at abattoirs.

PROCLAMATIONS RELATING TO MEAT AREAS.

The commencement of operation of the following Meat Areas was deferred:—

Kyneton Meat Area—to 1st September, 1949.

Corangamite Meat Area—to 1st March, 1950.

The following Meat Areas were constituted:—

Mornington Meat Area, comprising the whole Shire of Mornington.

Keilor Meat Area, comprising the whole Shire of Keilor.

Kilmore Meat Area, comprising the premises of two bacon factories in the Kilmore district.

ORDERS IN COUNCIL.

The provisions of Division 1 of Part V. of the Health Act, as they apply to piggeries, were extended to that portion of the Shire of Shepparton within 5 miles of the Shepparton Post Office.

APPENDIX B.

PRIVATE HOSPITALS YEARLY REPORT.

30th June, 1948.

Total hospitals numbered 262.

Total beds numbered 4,119 and 356 temporary beds.
1st July, 1948, to 30th June, 1949.*Closures.—*

<i>figures.</i> —	<i>Hospitals.</i>		<i>Beds.</i>	
Metropolitan ..	9	with	84 +	5
Country ..	4	„	27 +	6
Transfer to Hospital and Charities Com- mission ..	1	„	16 +	2
Total loss to Register	14	„	127 +	13

New Registrations.—

	<i>Hospitals.</i>		<i>Beds.</i>	
Metropolitan ..	11	with	105	
Country ..	7	"	44	
Total ..	18	"	149	

Total Hospitals.—

<i>Hospitals.</i>		<i>Hospitals.</i>		<i>Beds.</i>	
Metropolitan	..	153	with	3,001	+ 223
Country	..	113	„	1,143	+ 132
Total	..	266	„	4,144	+ 355
Total available beds		..	..	4,499	

Hospitals.—

5 beds and over ..	244
Under 5 beds ..	22

Transfers for Year.—

Metropolitan ..	21
Country ..	9
Total ..	30

*Reclassifications for Year.—7.**Cases Admitted for a Year.—*

Metropolitan ..	48,737 (approx.)
Country ..	28,619 "
Total ..	77,356 "

Inspections.—

Private Hospital Inspections ..	193
Private Hospital Investigations, &c. ..	34
Private Hospital Inspections (unregistered) ..	4
General Inspections ..	17
Immunizing and Mantoux Testing Attendances	44
Hospital Benefits Inspections ..	35
Hospital Benefits Investigations ..	4
Grand Total ..	331

Prosecution.—(1) Conviction on one charge under Health Act, Section 362—£5; Costs, £3 3s.

APPENDIX C.

POPULATION AT 31st DECEMBER, 1948.

Victoria	2,106,315
Metropolitan Area	1,259,000

SUMMARY OF VITAL STATISTICS, VICTORIA, 1948.

Division.	Number of—				Rate per 1,000 of Population.*			Infantile Mortality. Deaths under One Year per 1,000 Births.
	Marriages.	Births.	Deaths.	Deaths under One Year.	Marriages.	Births.	Deaths.	
Greater Melbourne	..	25,452	13,593	605	..	20·44	10·91	23·77
Remainder of the State	..	20,647	8,232	498	..	24·45	9·75	24·12
Victoria	20,035	46,099	21,825	1,103	9·59	22·06	10·44	23·95

* Subject to revision.

BIRTHS.

The following table shows the birth rates from 1855 to 1948 :—

Period.	Average Annual Births.	Rate per 1,000 of Population.	Period.	Average Annual Births.	Rate per 1,000 of Population.
1855-59	17,154	38·49	1935	27,884	15·16
1860-64	24,060	43·29	1936	28,883	15·63
1865-69	25,963	39·77	1937	29,731	16·02
1870-79	26,971	34·60	1938	30,344	16·25
1880-89	30,113	31·45	1939	30,493	16·20
1890-99	34,310	29·37	1940	31,962	16·86
1900-09	30,655	24·92	1941	34,406	17·76
1910-19	33,800	24·27	1942	35,927	18·27
1920-29	35,457	21·77	1943	39,117	19·74
1930	33,127	18·55	1944	39,358	19·70
1931	30,332	16·86	1945	41,200	20·46
1932	27,464	15·18	1946	46,603	22·99
1933	28,392	15·59	1947	47,366	23·06
1934	27,828	15·20	1948	46,099	22·06

MARRIAGES.

Marriages in Victoria in 1948 numbered 20,035.

Period.	Marriage Rate per 1,000 of Population.	Period.	Marriage Rate per 1,000 of Population.
1931	5·66	1940	11·76
1932	6·49	1941	10·79
1933	6·96	1942	12·02
1934	7·57	1943	9·26
1935	8·38	1944	8·94
1936	8·61	1945	8·20
1937	8·74	1946	10·54
1938	9·16	1947	9·95
1939	9·23	1948	9·59

The 1931 figure is the lowest recorded in the history of the State.

The marriage rate of 12·02 per 1,000 of population in 1942 was the highest on record.

MATERNAL DEATHS.

Period.	Average Annual Number of Deaths from—						Rate per 10,000 Live Births from—					
	Puerperal Infection.			Other Diseases of Pregnancy, Childbirth, and the Puerperium. (Detailed List No. 141-146, 148-150.)	Total.		Puerperal Infection.			Other Diseases of Pregnancy, Childbirth, and the Puerperium.	Total.	
	Infection during Childbirth and the Puerperium. (Detailed List No. 147.)	Post-abortion Infection. (Detailed list No. 140.)			Including Criminal Abortion.	Excluding Criminal Abortion.	Infection during Childbirth and the Puerperium. (Detailed List No. 147.)	Post-abortion Infection. (Detailed list No. 140.)			Including Criminal Abortion.	Excluding Criminal Abortion.
		Spontaneous, Therapeutic, or Unspecified.	Criminal Abortion.					Spontaneous, Therapeutic, or Unspecified.	Criminal Abortion.			
1926-29	44	12	21	121	198	177	12.78	3.46	5.92	34.66	57.02	51.10
1930-34	33	9	27	91	160	133	11.08	3.13	9.17	30.99	54.37	45.20
1935-39	18	6	41	74	139	98	5.97	1.90	14.05	25.25	37.17	33.12
1940	19	1	50	58	128	72	5.95	0.31	15.64	18.15	40.05	22.53
1941	23	1	44	57	125	79	6.68	0.29	12.79	16.57	36.33	22.96
1942	20	1	29	59	109	77	5.57	0.28	8.07	16.42	30.34	21.43
1943	23	5	39	69	136	93	5.88	1.28	9.97	17.64	34.77	23.77
1944	11	4	17	69	101	81	2.79	1.02	4.32	17.53	25.66	20.58
1945	14	2	12	50	78	63	3.40	0.48	2.91	12.14	18.93	15.29
1946	18	4	9	41	72	59	3.85	0.86	1.93	8.78	15.42	12.64
1947	14	3	18	56	91	71	2.96	0.63	3.80	11.82	19.21	14.99
1948	9	1	6	47	63	53	1.95	0.22	1.30	10.20	13.67	11.50

NOTE.—Owing to changes in classification the maternal death rates given for years prior to 1940 are not strictly comparable with those for subsequent years.

INFANT MORTALITY.
(Deaths under One Year.)

Period.	Mortality Rate per 1,000 Births.			Period.	Mortality Rate per 1,000 Births.		
	Metropolitan Area.	Rest of State.	Victoria.		Metropolitan Area.	Rest of State.	Victoria.
1880-84	170.1	92.3	120.0	1935	43.0	39.5	41.2
1885-89	178.5	97.9	133.3	1936	44.1	40.7	42.3
1890-94	140.4	94.9	114.7	1937	37.1	36.3	36.7
1895-99	131.5	100.0	112.5	1938	34.1	34.3	34.2
1900-04	116.5	86.2	98.2	1939	32.3	38.9	35.6
1905-09	96.5	71.5	81.2	1940	39.7	39.2	39.5
1910-14	84.2	64.9	73.8	1941	34.6	38.1	36.2
1915-19	76.2	55.4	66.1	1942	43.8	38.9	41.6*
1920-24	71.6	58.6	65.3	1943	34.1	38.2	35.8
1925-29	58.3	50.2	54.3	1944	31.0	33.3	32.0
1930	50.7	42.3	46.5	1945	26.9	29.6	28.0
1931	48.0	41.1	44.7	1946	27.0	27.3	27.2
1932	47.7	38.9	43.0	1947	26.8	25.6	26.3
1933	40.9	40.0	40.4	1948	23.8	24.1	23.9
1934	48.2	41.4	44.6				

* The high infant mortality rate for 1942 can be ascribed to whooping cough. Details will be found in the report of the Maternal and Child Hygiene Branch.

DEATHS.

The number of deaths in 1948 was 21,825 and the death rate per 1,000 of population in 1948 was 10.44.

Period.	Average Annual Number of Deaths.	Rate per 1,000 of Mean Population.	Period.	Average Annual Number of Deaths.	Rate per 1,000 of Mean Population.
1870-79	12,133	15.50	1937	18,613	10.03
1880-89	14,510	15.13	1938	18,955	10.15
1890-99	16,618	14.21	1939	20,169	10.72
1900-09	15,194	12.38	1940	20,293	10.70
1910-19	15,994	11.47	1941	20,416*	10.54
1920-29	16,524	10.03	1942	21,973*	11.18
1930	15,959	8.93	1943	21,327*	10.76
1931	17,033	9.47	1944	20,502*	10.26
1932	16,805	9.29	1945	20,496*	10.18
1933	17,456	9.59	1946	21,534*	10.60
1934	18,648	10.18	1947	21,442*	10.44
1935	18,456	10.03	1948	21,825	10.44
1936	18,778	10.16			

* Excludes deaths of Defence personnel and of Internees and Prisoners of War from overseas.

DEATH RATES FROM CERTAIN CAUSES.

Cause of Death.	Deaths per Million of Population.*									
	1908-12.	1940.	1941.	1942.	1943.	1944.	1945.	1946.	1947.	1948.
Heart diseases (including the conditions producing diseases of the heart)†	1,141	2,720	2,766	2,107	3,069	3,020	3,151	3,293	3,275	3,394
Cancer	838	1,332	1,379	1,355	1,378	1,331	1,366	1,396	1,416	1,385
Nephritis, acute and chronic .. .	576	703	680	687	676	639	646	640	573	547
Pneumonia and broncho-pneumonia ..	834	726	678	730	697	576	558	613	555	594
Accidental violence	531	529	497	467	379	390	333	420	478	460
Tuberculosis (all forms)	1,037	428	449	442	375	377	363	350	330	307
Diabetes	107	202	213	212	219	208	208	213	213	217
Enteritis and diarrhoeal diseases ..	833	73	58	84	85	66	53	58	42	53
Diphtheria	122	14	36	24	24	17	19	8	6	5

* Subject to revision.

† Increase due to form of certification of death having been changed in recent years.

NOTIFIABLE DISEASES—DISEASES DECLARED NOTIFIABLE.

Anchylostomiasis, Anthrax, Bilharziasis, Cholera, Cerebro-Spinal Meningitis, Diphtheria, Dysentery (bacillary), Dysentery (amoebic), Encephalitis (lethargic), Helminthiasis, Hydatids, Leprosy, Malaria, Plague, Poliomyelitis, Psittacosis, Puerperal Fever, Scarlet Fever, Smallpox, Tetanus, Trachoma, Tuberculosis, Typhoid Fever, Paratyphoid Fever, Typhus Fever, Undulant Fever, Yellow Fever.

RETURNS FROM MUNICIPAL DISTRICTS FOR THE YEAR ENDING 31ST DECEMBER, 1948.

Municipal District.	Population.*	Diphtheria.	Scarlet Fever.	Typhoid.	Tuberculosis.	Cerebro-Spinal Meningitis.	Anchylostomiasis.	Poliomyelitis.
METROPOLITAN AREA.								
Box Hill	27,200	1	7	..	5	..	6	..
Braybrook	10,700	4	18	..	7	..	..	..
Brighton	34,350	3	27	..	8	1	7	..
Broadmeadows	..	2	14	..	1	1	1	1
Brunswick	58,550	9	72	..	12	4	4	..
Camberwell	68,000	4	89	..	29	1	3	2
Caulfield	72,450	3	68	2	18	2	9	..
Chelsea	7,450	1	7	..	7	..	2	..
Coburg	41,900	9	49	..	15	2	7	1
Collingwood	30,050	8	23	..	5	1	3	1
Essendon	48,650	7	59	..	14	1	8	1
Fitzroy	30,800	46	45	..	12	..	5	..
Footscray	54,000	15	97	..	15	2	4	..
Hawthorn	36,550	3	32	1	18	1	4	3
Heidelberg	29,830	12	52	..	15	..	4	1
Keilor	..	3	4	..	3	..	1	..
Kew	27,800	5	18	16	16	1	5	..
Malvern	46,350	1	35	..	18	..	13	..
Melbourne	93,650	80	40	..	27	1	10	1
Moorabbin	21,900	13	31	1	10	..	1	..
Mordialloc	10,650	..	7	..	..	..	..	..
Mulgrave	..	..	3	..	1	..	..	..
Northcote	43,850	6	34	..	10	2	5	..
Nunawading	..	..	17	..	8	..	1	..
Oakleigh	13,100	..	10	..	2	..	6	..
Port Melbourne	13,600	7	10	..	10	2	2	..
Prahran	55,800	5	39	3	39	..	15	2
Preston	36,450	10	36	..	8	3	4	..
Richmond	40,000	9	25	1	5	1	13	..
Ringwood	..	..	3	..	2	..	1	1
Sandringham	20,100	7	29	..	10	..	5	..
South Melbourne	43,700	2	30	..	18	..	11	1
St. Kilda	52,150	2	40	..	16	1	12	3
Williamstown	23,650	1	34	..	11	..	2	2
REST OF STATE.								
<i>Cities.</i>								
Ballaarat	37,950	3	25	..	17	1	..	..
Bendigo	26,430	9	8	1	15	1	1	1
Geelong	17,480	..	4	1	3	..	4	..
Geelong West	14,400	..	4	..	4	..	..	..
Mildura	6,900	2	12	..	6	1	..	..
Warrnambool	9,300	1	9	..	4	2	..	..
<i>Towns.</i>								
Ararat	4,960	..	4	2	6	..	1	..
Colac	..	..	..	..	2	..	1	1
Hamilton	6,050	..	12	..	5	..	2	3
Horsham	5,570	1	19	..	2	..	1	..
Newtown and Chilwell	8,850	1	7	..	3	..	..	1
Sale	4,280	..	2	..	2	..	2	1
<i>Boroughs.</i>								
Castlemaine	5,350	..	..	..	5	..	1	..
Clunes	1,170	..	1	..	..	..	..	..
Daylesford	2,660	..	..	..	2	..	..	1
Eaglehawk	3,870	..	..	..	5	..	..	..
Echuca	4,460	..	..	..	3	..	..	..
Inglewood	1,020	..	..	..	1	..	..	..
Koroit	1,680	..	..	..	..	..	..	..
Maryborough	5,810	..	..	..	1	..	..	..
Port Fairy	1,880	..	..	..	2	..	..	..
Portland	2,600	..	3	..	..	..	..	..
Queenscliffe	2,010	..	..	..	..	..	..	..
Sebastopol	1,790	..	2	..	1	1	..	..
Shepparton	6,140	6	8	1	2	..	..	..
Stawell	4,860	5	5	..	2	..	..	..
St. Arnaud	3,210	..	2	..	1	..	..	..
Swan Hill	4,900	5	3	..	1	..	..	..
Wangaratta	4,990	2	1	..	8	..	1	..
Wonthaggi	6,500	3	2	..	3	..	..	..
Yallourn	..	..	4	..	1	..	..	..

* Population figures subject to revision.

RETURNS FROM MUNICIPAL DISTRICTS FOR THE YEAR ENDING 31ST DECEMBER, 1948—continued.

Municipal District.	Population.*	Diphtheria.	Scarlet Fever.	Typhoid.	Tuberculosis.	Cerebro-Spinal Meningitis.	Anchylor-tomiasis.	Polio-myelitis.
REST OF STATE—continued.								
Shires.								
Alberton	6,010	..	6	..	1	..	..	..
Alexandra	3,570	..	..	..	..	..	..	..
Arapiles	2,300	..	4	..	..	..	..	..
Ararat	5,620	..	..	..	1	..	..	..
Avoca	3,080	..	1	..	1	..	..	..
Avon	2,690	1	7	..	2	..	..	..
Bacchus Marsh	3,510	..	..	..	1	..	..	..
Barinsdale	8,120	..	1	..	3	..	..	..
Ballan	2,880	..	..	..	..	..	..	..
Ballarat	4,260	..	4	1	1	..	..	..
Bannockburn	2,370	..	..	..	1	..	..	..
Barrabool	1,970	1	..	..	..	..	..	1
Bass	4,560	..	1	..	..	..	..	..
Beechworth	4,770	..	..	..	1	..	..	..
Belfast	2,190	..	..	..	..	..	..	..
Bellarine	3,900	..	1	..	..	..	..	1
Benalla	8,260	..	3	..	2	..	..	..
Berwick	10,200	..	4	..	1	1	..	..
Bet Bet	3,500	..	..	..	..	..	1	..
Birchip	2,200	..	1	..	..	..	..	..
Bright	4,860	3	3	..	5	..	4	..
Broadford	1,600	..	..	..	..	..	..	..
Bulla	2,890	..	..	..	..	..	..	..
Buln Buln	6,290	1	5	..	1	1	..	..
Bungaree	2,280	..	1	..	..	..	..	..
Buninyong	4,470	..	2	..	2	..	..	..
Charlton	2,880	1	..	..	..	..	..	..
Chiltern	1,950	..	..	..	..	..	..	1
Cohuna	3,530	..	..	..	..	..	..	..
Colac	8,200	..	1	..	2	..	..	4
Corio	4,230	..	3	..	2	..	..	1
Cranbourne	7,060	..	4	..	5	..	2	3
Creswick	4,470	..	4	..	..	..	..	..
Dandenong	11,500	1	5	1	1	3	1	..
Deakin	4,590	..	1	..	1	..	..	..
Dimboola	6,990	..	1	..	3	2	..	1
Donald	3,670	..	6	..	2	..	..	..
Doncaster and Templestowe	3,040	..	1	..	..	..	1	2
Dundas	3,560	..	3	..	..	..	..	1
Dunmunkle	5,060	..	1	..	..	..	..	..
East Loddon	2,000	..	..	..	..	..	..	..
Eltham	5,070	..	8	..	8	..	4	..
Euroa	3,910	2	3	..	3	..	..	..
Ferntree Gully	9,200	..	20	1	5	1	5	1
Flinders	5,880	..	4	..	3	..	1	..
Frankston and Hastings	7,040	1	7	..	1	..	..	1
Gisborne	2,040	..	2	..	..	..	..	..
Glenelg	5,710	..	..	..	2	..	..	..
Glenlyon	2,750	..	..	..	..	..	..	..
Gordon	3,550	..	..	..	1	..	..	..
Goulburn	1,970	1	1	..	..	..	..	..
Grenville	2,650	..	..	..	..	..	..	..
Hampden	11,850	2	6	..	1	..	..	..
Healesville	2,700	1	..	..	2	..	..	..
Heytesbury	5,750	..	2	..	..	..	1	1
Huntly	2,980	..	..	..	1	..	1	..
Kaniva	2,550	..	..	..	1	..	..	..
Kara Kara	2,720	..	..	..	..	..	..	..
Karkaroc	6,750	1	6	..	..	1	..	..
Kerang	9,400	..	..	..	2	1	..	..
Kilmore	1,780	..	1	..	1	..	..	..
Korong	4,680	..	..	..	..	..	..	..
Korumburra	7,360	..	7	..	1	2	..	..
Kowree	3,670	..	6	..	1	..	..	..
Kyneton	6,720	1	10	..	1	..	..	..
Leigh	1,440	..	..	..	..	..	..	..
Lexton	1,610	..	..	..	..	..	..	..
Lillydale	9,940	..	5	..	2	..	..	..
Lowan	4,390	..	12	..	..	..	..	..
Maffra	6,240	..	1	..	1	..	1	..
Maldon	2,450	2	2	..	3	1	..	1
Mansfield	3,590	..	7	..	1	..	..	1
Marong	5,390	..	1	..	2	1	2	..
Melton	1,500	1	..	..	..	..	..	..
Metcalfe	2,700	..	1	..	2	..	..	..
Mildura	17,960	7	17	..	11	..	19	..
Minhamite	2,110	..	2	..	2	..	..	..
Mirboo	1,610	..	1	..	..	..	..	1
Mornington	2,370	7	..	..	2	..	..	..
Mortlake	3,540	..	5	..	..	..	..	1
Morwell	8,040	1	2	..	1	..	..	..
Mount Rouse	2,690	2	4	..	..	..	..	..
McIvor	2,900	..	2	..	1	..	..	..

* Population figures subject to revision.

RETURNS FROM MUNICIPAL DISTRICTS FOR THE YEAR ENDING 31ST DECEMBER, 1948—continued.

Municipal District.	Population.*	Diphtheria.	Scarlet Fever.	Typhoid.	Tuberculosis.	Cerebro-Spinal Meningitis.	Anchylostomiasis.	Polio-myelitis.
REST OF STATE—continued.								
Shires—continued.								
Narracan	8,500	2	5	..	1	1	3	..
Newham and Woodend	2,100	..	..	..	..	..	1	..
Newstead and Mount Alexander ..	2,400	..	..	..	2	..	..	..
Numurkah	6,050	..	..	..	2	..	..	..
Omeo	2,320	..	..	..	1	..	1	..
Orbost	5,050	..	..	..	..	..	..	..
Otway	3,830	..	1	..	..	..	..	..
Oxley	4,480	..	6	..	3	..	..	..
Phillip Island	1,020	..	..	..	..	1	..	..
Portland	5,500	2	2	..	1	..	..	1
Pyalong	710	..	..	..	..	..	..	..
Ripon	3,560	..	6	..	1	..	..	..
Rochester	6,630	1	..	..	..	..	..	..
Rodney	9,080	4	7	..	4	..	1	1
Romsey	2,990	1	..	..	..	..	..	..
Rosedale	4,170	..	3	..	2	..	1	..
Rutherglen	3,580	..	..	..	..	..	..	..
Seymour	4,120	..	..	..	1	..	..	..
Shepparton	5,600	1	5	..	1	..	..	..
South Barwon	4,250	..	1	..	3	..	2	1
South Gippsland	4,500	..	..	..	1	..	..	..
Stawell	3,830	..	..	..	1	..	..	..
Strathfieldsaye	3,530	1	3	..	2	..	..	..
Swan Hill	11,700	14	9	..	2	1	..	..
Talbot	1,270	..	..	..	3	..	..	..
Tambo	4,300	..	1	..	..	..	3	..
Towong	4,750	..	..	..	1	..	..	1
Traralgon	3,760	..	10	..	4	..	1	..
Tullaroop	2,190	..	..	..	1	..	..	..
Tungamah	5,200	1	..	..	1	..	..	..
Upper Murray	2,390	..	..	..	..	..	..	..
Upper Yarra	4,690	..	2	1	4	..	..	..
Violet Town	1,690	..	..	..	..	..	..	..
Walpeup	6,840	1	3	..	2	..	..	..
Wangaratta	2,440	..	..	..	1	..	..	..
Wannon	3,840	..	3	..	..	..	..	..
Waranga	5,330	..	..	..	2	..	..	..
Warracknabeal	5,300	2	1	..	..	..	..	..
Warragul	5,940	5	2	..	2	..	1	..
Warrnambool	8,630	..	4	..	4	..	1	..
Werribee	8,050	1	6	..	..	..	..	..
Whittlesea	3,260	2	2	..	3	..	1	..
Wimmera	4,330	..	..	..	1	..	..	1
Winchelsea	3,630	1	..	..	5	..	..	..
Wodonga	3,350	..	4	..	..	..	..	..
Woorayl	5,970	1	1	..	4	1	..	..
Wycheproof	6,030	..	..	..	..	..	..	..
Yackandandah	2,970	1	1	..	1	..	..	..
Yarrawonga	3,080	..	..	..	1	..	..	..
Yea	2,690	..	..	..	1	..	..	..

* Population figures subject to revision.

NOTE.—Institutional cases of infectious diseases are included in these returns. Incidence may thus appear unduly high in certain districts in which there are situated children's homes, infectious diseases hospitals, and similar institutions.

Dysentery (amoebic).—Coburg (1), Preston (1), Cranbourne (1), St. Kilda (3), Sandringham (1), Fitzroy (1), Bright (1), Warragul (1).

Dysentery (bacillary).—Kew (1).

Hydatids.—Arapiles (1), Dunmunkle (1), Karkaroc (1), Ararat Town (1), Glenelg (1), Hamilton (1), Portland Shire (1), Kowree (1), Port Melbourne (1), Mount Rouse (1), Dimboola (1).

Malaria.—Box Hill (3), Brunswick (6), Camberwell (1), Caulfield (3), Chelsea (1), Coburg (4), Collingwood (1), Essendon (3), Fitzroy (2), Hawthorn (1), Heidelberg (3), Kew (1), Malvern (2), Melbourne (4), Northcote (2), Preston (1), Richmond (1), Sandringham (1), South Melbourne (3), St. Kilda (2), Williamstown (1), Hamilton (4), Berwick (1),

Bright (4), Cranbourne (1), Dundas (2), Euroa (1), Frankston and Hastings (1), Mirboo (1), Mount Rouse (4), Portland (2), Rodney (1), Shepparton (1), Werribee (7).

Polioencephalitis.—Portland Borough (1).

Encephalitis (lethargic).—Upper Yarra (1), Grenville (1).

Puerperal Fever.—Camberwell (1), South Melbourne (1), Berwick (1).

Tetanus.—Essendon (1), Avoca (1), Ballaarat City (1), Mount Rouse (1), Wangaratta Borough (1), Warracknabeal (1), Shepparton Shire (1).

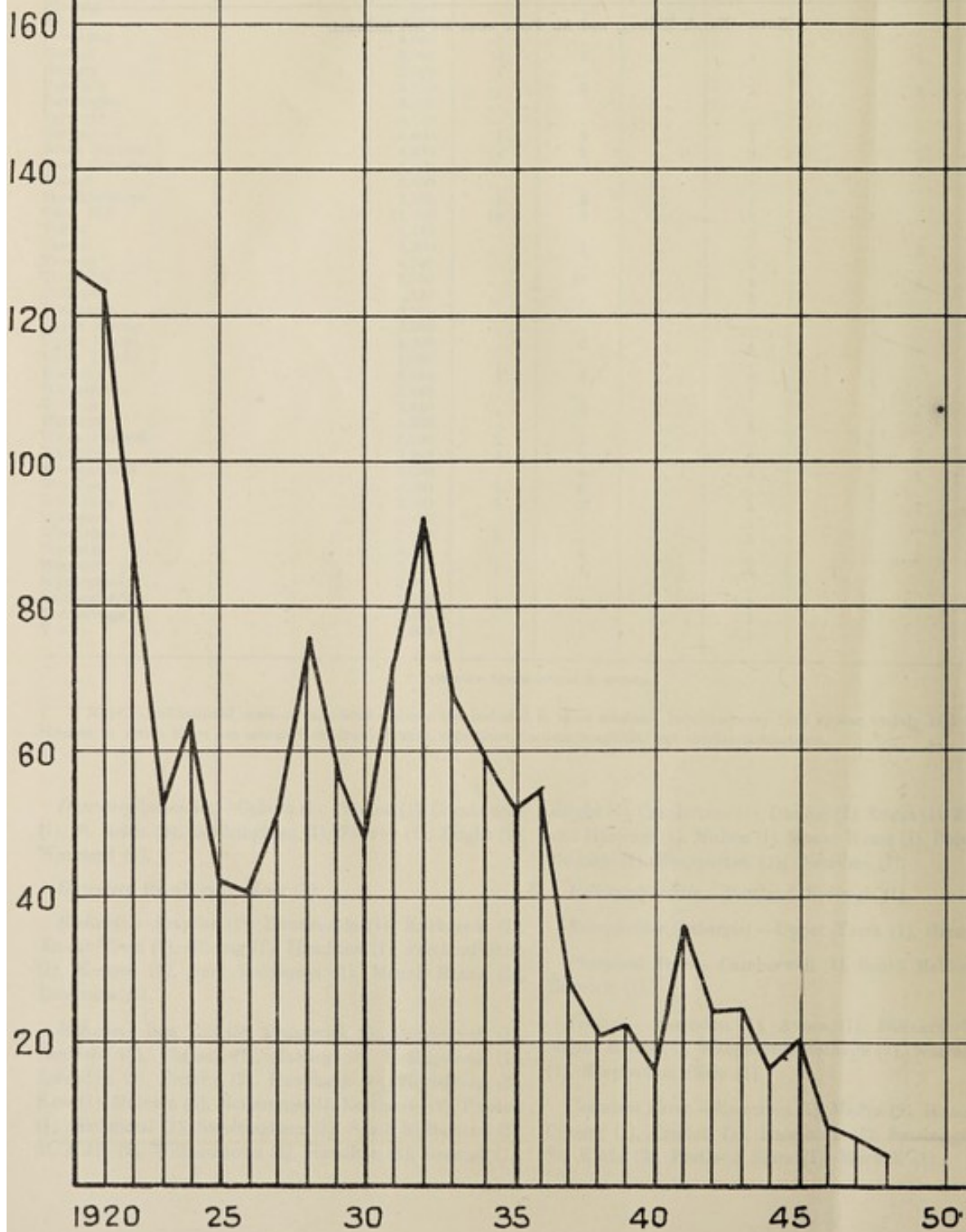
Undulant Fever.—Essendon (1), Maffra (2), Hamilton (2), Coburg (1), Preston (1), Hawthorn (1), Sandringham (1), St. Kilda (3), Portland Shire (1), Morwell (1).

SUMMARY.

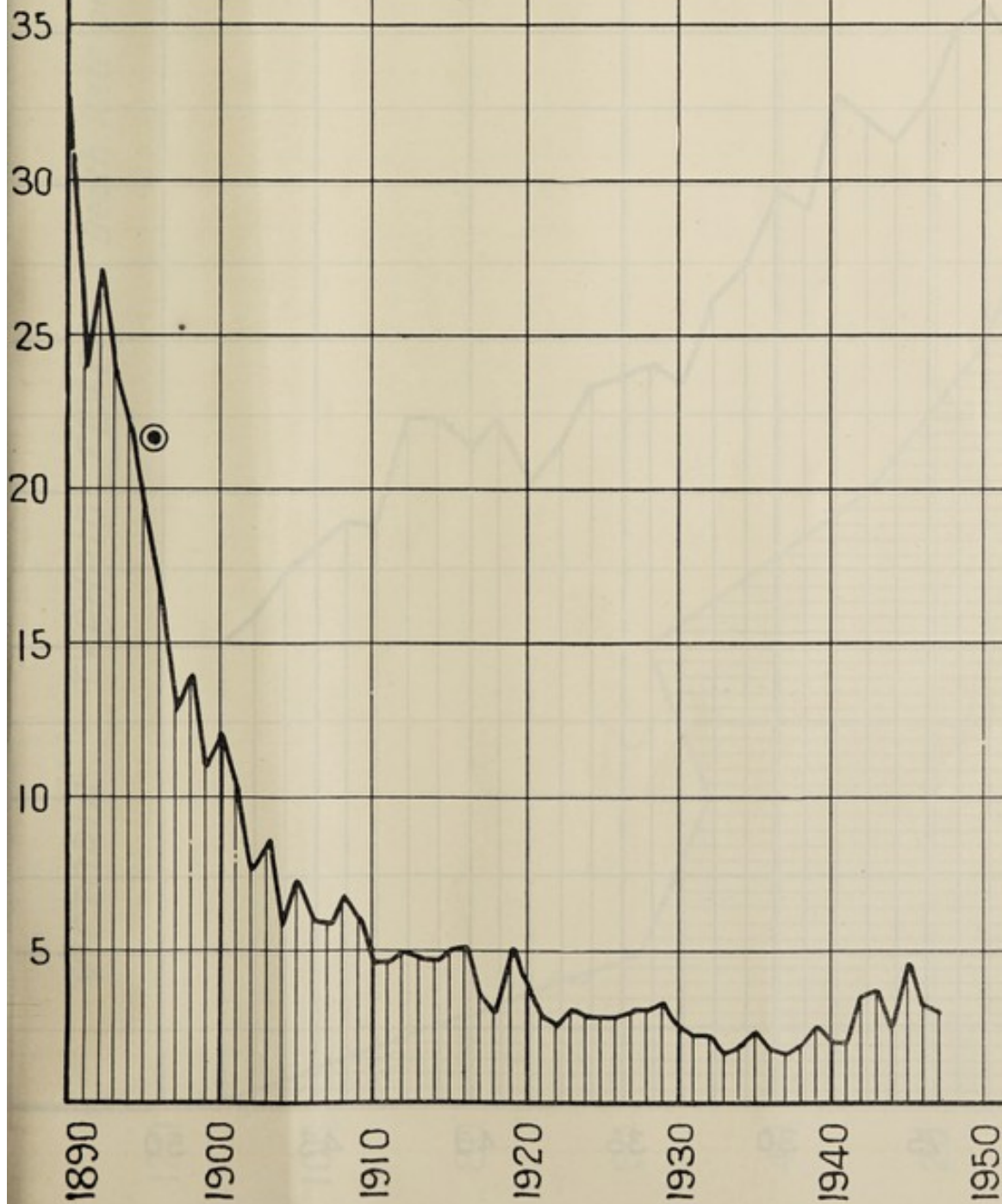
	Diphtheria.	Scarlet Fever.	Typhoid.	Tuberculosis.	Cerebro-Spinal Meningitis.	Pollomyelitis.	Polioccephalitis.	Dysentery (bacillary).	Encephalitis (vchaergic).	Hydatids.	Malaria.	Puerperal Fever.	Dysentery (amoebic).	Trachoma.	Paratyphoid Fever.	Undulant Fever.
Metropolitan Area ..	280	1,100	24	399	27	20	..	1	..	1	45	2	1	7	..	8
Rest of State ..	117	446	8	278	27	35	1	..	2	10	39	1	6	3	..	6
Grand Totals ..	397	1,546	32	677	54	55	1	1	2	11	84	3	7	10	..	14

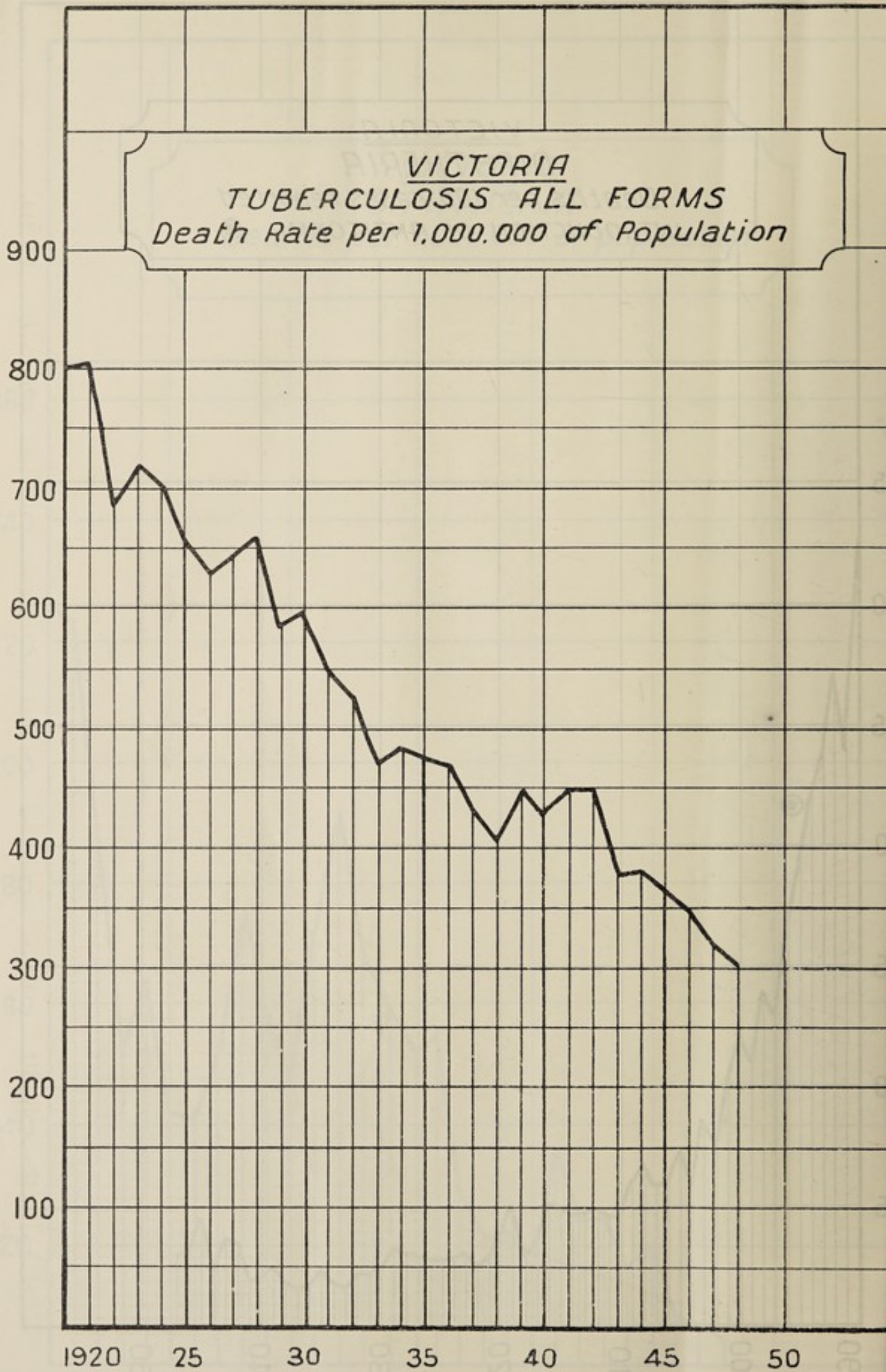
NOTE.—Naval, Military, and Air Force cases are not included.

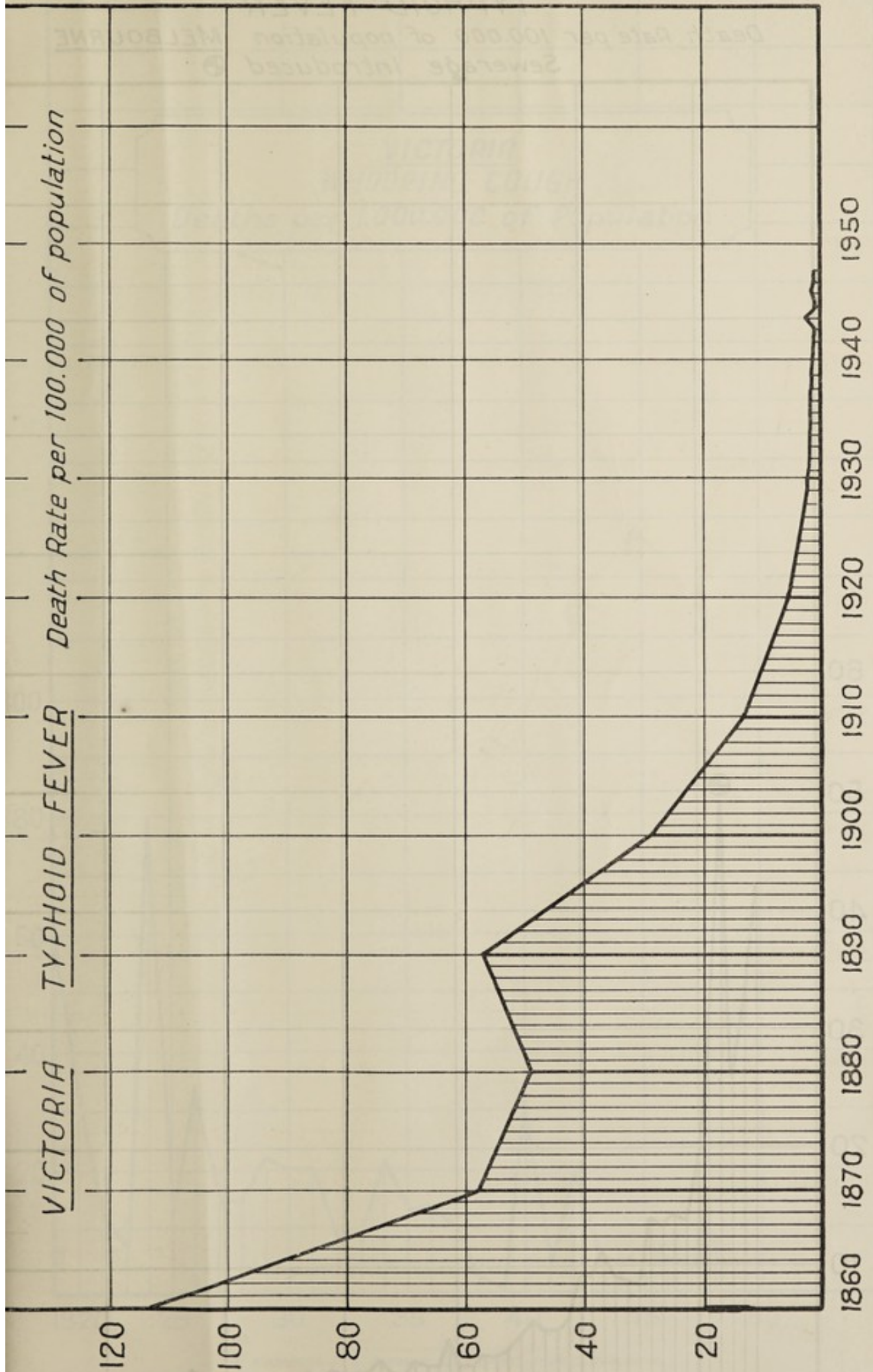
VICTORIA
DIPHTHERIA
Deaths per 1.000.000 of population



VICTORIA
DIPHTHERIA
Deaths per 100 cases reported
INTRODUCTION OF ANTITOXIN ●

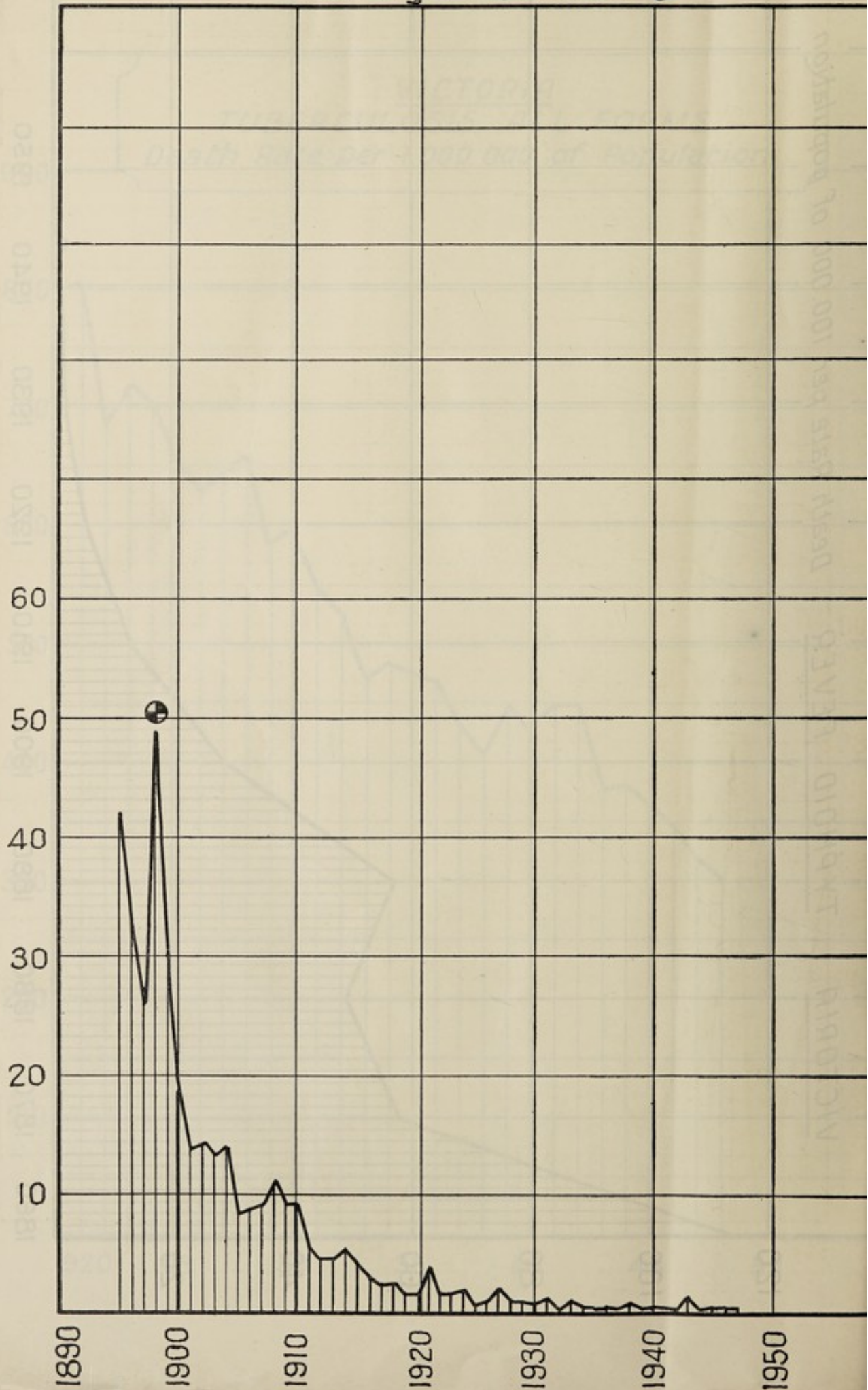




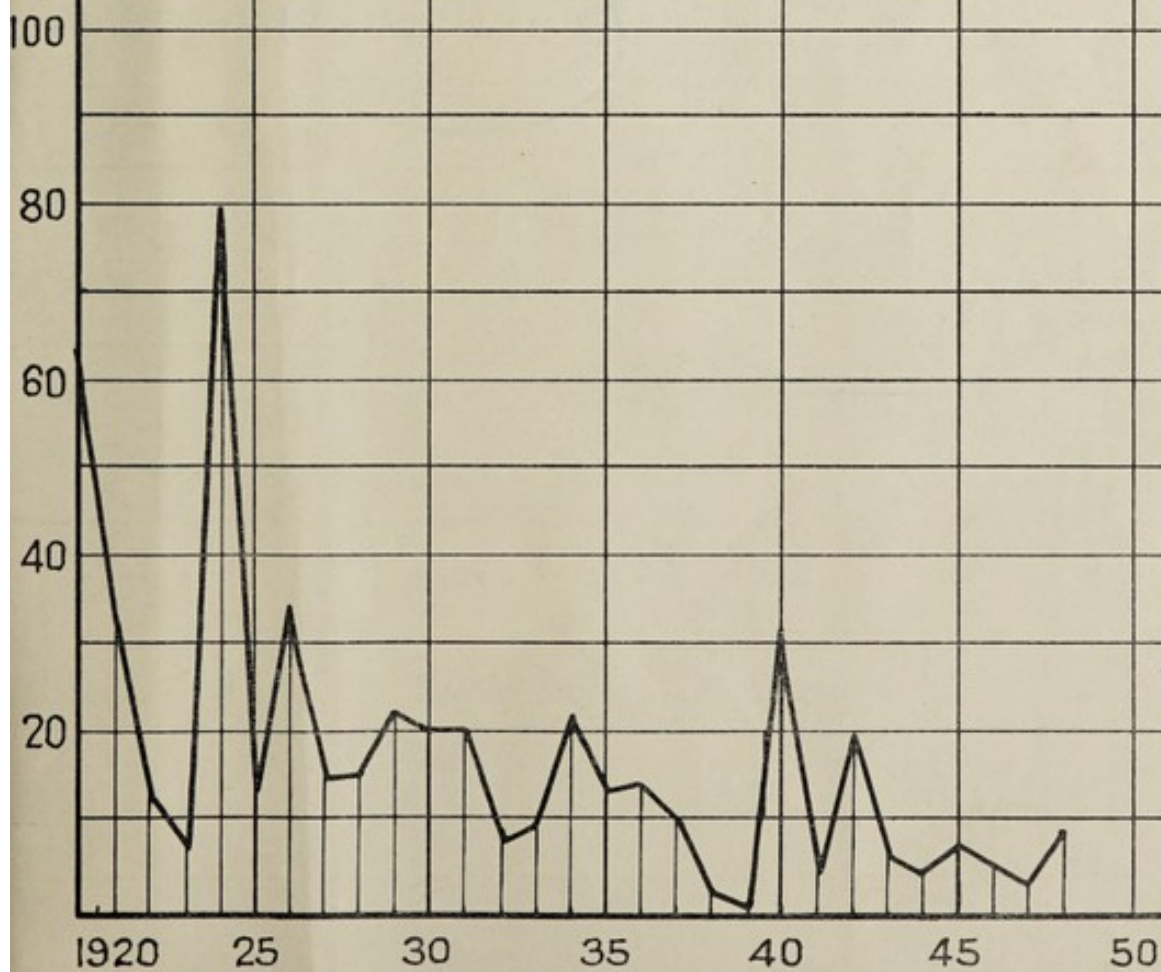


VICTORIA
TYPHOID FEVER

Death Rate per 100.000 of population MELBOURNE
Sewerage Introduced ⊕



VICTORIA
WHOOPIING COUGH
Deaths per 1.000.000 of Population



VICTORIA
WHOPPING COUGH
Deaths per 1,000,000 of Population

BUREAU OF HYGIENE & TROPICAL DISEASES
19 JUL 1951

