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Department of Public Health, Victoria.**

**Contributors**

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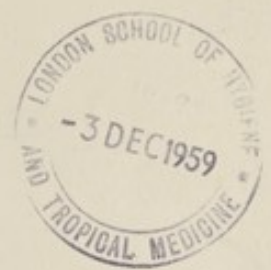


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VICTORIA  
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6 DEPARTMENT OF HEALTH

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THIRTYSEVENTH REPORT  
of the  
COMMISSION OF PUBLIC HEALTH  
to the  
MINISTER OF HEALTH.

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- Cr. ARTHUR SYDNEY THOMSON Representing Shires other than  
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- Cr. FRANCIS JOHN CUTTS, J.P.

\* (Appointed vice Cr. E. C. Rigby, who died on 16th September, 1958)

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Dr. ARTHUR WILBY THORNTON

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Dr. THOMAS RICHARD HODGE, M.B., B.S., D.P.H.

Dr. GEORGE JOHN DUTTS, M.B., B.S., D.P.H.

\* Elected vice Dr. E. C. Rigg, who died on 16th September, 1958

THIRTYSEVENTH REPORT OF THE  
COMMISSION OF PUBLIC HEALTH - 1958-59.

To the Honorable Ewen Paul Cameron, M.L.C.

Sir,

We have the honour to submit, in accordance with Section 23(3) of the Health Act, 1958, our report for the year ended the 30th June, 1959.

In the last report reference was made to an epidemic of influenza which first occurred in Australia in May, 1957, after having originated in South-East Asia early in that year.

The disease quickly reached epidemic proportions and spread rapidly throughout the State. It followed the usual pattern and after a brisk outbreak lasting about six weeks subsided rapidly.

The virus was isolated in Melbourne at the Walter and Eliza Hall Institute in July, 1957. In that month the disease was proclaimed a notifiable disease but shortly afterwards medical practitioners were relieved of the obligation of having to notify cases.

Another outbreak of influenza throughout the State which commenced in April, 1959, gained the immediate attention of the Commission. Throat swabs were obtained from various areas and submitted for identification of the virus. The epidemic was no doubt, at the commencement, of adeno virus origin but Asiatic influenza virus was then isolated. The epidemic spread more slowly than the 1957 epidemic and the number of cases was approximately half.

Representations were made to the Department by various bodies regarding the advisability of influenza immunisation and whether the vaccine should be made available.

The question as to the advisability of influenza immunisation and making immunisation material generally available was considered by the Commission. The subject was also discussed at a meeting of the National Health and Medical Research Council, and no suggestions were brought forward for measures other than those which had already been taken. The Council referred the matter of inoculation against influenza as a community measure to its Committee on Epidemiology and Infectious Disease. The findings of that Committee were in conformity with the measures which had already been adopted by the Commission, and are included as an appendix to this report.

RESPIRATORY VIRUS INFECTIONS.

During the year research workers at Fairfield Hospital isolated three different types of virus from groups of patients admitted to hospital with respiratory disease.

In the late autumn, several adeno viruses were recovered, followed in early winter by a return of the Asian strain of influenza A virus. As winter progressed the first of the HA (haemadsorption)

COMMISSION ON TUBERCULOSIS - 1952-53

To the Honorable Dean Paul C. ... M.D.C.

Sir,

I have the honor to acknowledge the receipt of your letter of the 11th inst. regarding the report of the Commission on Tuberculosis for the year 1952-53.

The report is a valuable contribution to the knowledge of the tuberculosis problem in this country and is a most interesting and comprehensive survey of the situation.

The Commission has done a great deal of work in the past few years and its report is a most impressive record of its activities.

I am sure that the report will be of great value to the public and to the medical profession.

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RESPIRATORY VIRUS INFECTIONS

During the year research workers at British Hospital ...

In the past several years ...

viruses became evident in persons with croup and other forms of upper respiratory tract infection. This is believed to be the first record of the HA viruses being found in Australia.

Although the number of influenza cases did not reach the proportions of the 1957 pandemic, nevertheless large numbers of the population were affected. As notification of this disease has been discontinued, comparative figures of case incidence are not available.

The immune responses in the community in these two epidemics are informative. In the initial stages of the 1957 epidemic, no immune bodies to the prevalent type of Asian influenza were found. A gradual increase in the number of individuals showing antibody in their sera levelled out at 43% of the population. In 1959, the number of individuals with demonstrable antibody was 40% at the beginning of the epidemic and 60% one month later.

#### EPIDEMIC POLYARTHRITIS.

An outbreak of polyarthrititis occurred in the Murray Valley area during last summer involving several hundred persons.

Investigations were initiated by the District Health Officer in collaboration with the Walter and Eliza Hall Institute and Fairfield Hospital. The epidemiological pattern was similar to a previous outbreak in this area during 1956. There is strong evidence that this is an arthropod-borne virus infection - probably by mosquitoes.

Attempts to isolate a virus from specimens collected during the epidemic have been unsuccessful to date, however there is serological evidence that this disease may be caused by the group A or closely related viruses. These particular viruses have been isolated from mosquitoes but not from man.

Fortunately the condition clears up without permanent residual joint complications, although symptoms may persist for some months in isolated cases. The loss of time from employment varied from a few days to several weeks.

#### POLIOMYELITIS.

Poliomyelitis declined steadily from the introduction of immunisation in July, 1956, until the latter part of 1958, when there was an outbreak scattered through the western and northern suburbs. The focus of infection was a suburban creche, and this drew attention to the poor response to immunisation by pre-school children in certain areas. The number of cases notified in the last five years was -

|      |   |                     |
|------|---|---------------------|
| 1954 | - | 569                 |
| 1955 | - | 235                 |
| 1956 | - | 252                 |
| 1957 | - | 13                  |
| 1958 | - | 60                  |
| 1959 | - | 29 (for six months) |

viruses become attached to persons with gross and other forms of  
upper respiratory tract infection. This is believed to be the  
first record of the WA virus being found in Australia.

Although the number of influenza cases did not reach  
the proportions of the 1957 pandemic, nevertheless large numbers  
of the population were affected. As notification of this disease  
has been discontinued, comparative figures of cases incidence are  
not available.

The immune response in the community in these two  
epidemics are interesting. In the initial stages of the 1957  
epidemic, no immune bodies to the prevalent type of Asian  
influenza were found. A gradual increase in the number of  
individuals showing antibody in their sera levelled out at 45%  
of the population. In 1959, the number of individuals with  
demonstrable antibody was 40% at the beginning of the epidemic  
and 50% one month later.

EPIDEMIOLOGICAL

An outbreak of poliomyelitis occurred in the Murray  
Valley area during last summer involving several hundred  
persons.

Investigations were initiated by the District Health  
Officer in collaboration with the Major and Miss Bell Institute  
and the hospital. The epidemiological picture was similar  
to a previous outbreak in this area during 1958. There is strong  
evidence that this is an enterogroup-virus infection -  
probably of nonpolio type.

Attempts to isolate a virus from specimens collected  
during the epidemic have been unsuccessful to date, however there  
is serological evidence that this disease may be caused by the  
group A or closely related viruses. These particular viruses  
have been isolated from mosquitoes but not from man.

Fortunately the condition clears up without permanent  
residual joint complications, although symptoms may persist for  
some months in isolated cases. The loss of time from employment  
varies from a few days to several weeks.

IMMUNITY

Poliomyelitis declined steadily from the introduction  
of immunization in July, 1956, until the latter part of 1958, when  
there was an outbreak scattered through the western and northern  
regions. The focus of infection was a suburban cottage, and this  
draws attention to the poor response to immunization by pre-school  
children in certain areas. The number of cases notified in the  
last five years was -

|      |   |                     |
|------|---|---------------------|
| 1954 | - | 269                 |
| 1955 | - | 232                 |
| 1956 | - | 282                 |
| 1957 | - | 13                  |
| 1958 | - | 55                  |
| 1959 | - | 22 (for six months) |

Immunisation of the children continued and was extended to adults. It was conservatively estimated that at the end of June, 1959, 524,000 people had received the complete course, and almost 400,000 are awaiting their third dose.

The age distribution is as follows:-

|             |   |         |
|-------------|---|---------|
| Under 1     | - | 66,961  |
| 1 - 4       | - | 203,331 |
| 5 - 9       | - | 240,045 |
| 10 - 14     | - | 171,689 |
| 15 - 19     | - | 58,761  |
| 20 and over | - | 176,413 |

The aftercare and consultative service for poliomyelitis patients continued to operate. Although the number of cases of poliomyelitis was small, an apparently increasing incidence of polyneuritis and increased referral of allied diseases fully utilised the facilities available and referral of patients is still well in excess of the rate of discharges from treatment.

#### DIPHTHERIA.

The incidence of cases of diphtheria has steadily declined from 148 notifications in the calendar year of 1955 to 35 cases in 1958.

The notifications for the first six months of 1959 have been 8. This trend is noted with satisfaction but gives no reason for complacency in immunisation policy and plans.

#### TETANUS.

During the ten-year period 1949-1958, 82 persons have died in Victoria from tetanus. Of three persons who contracted the disease following surgical operations last year, two died.

This serious situation prompted the Minister to appoint a Tetanus Prevention Committee, under the chairmanship of Dr. E. V. Keogh, to consider tetanus prevention in its widest aspects and advise on measures to lessen the incidence.

Following on the first meeting of this Committee in December 1958, the following recommendations were submitted to the Minister:-

- (1) Active immunisation to be extended to school children over the age of seven years (under the existing scheme provision is made to immunise younger children with triple antigen and C.D.T.).
- (2) Immunisation of industrial employees, particularly those under 30 years of age.
- (3) Active immunisation for patients undergoing lower limb operations.
- (4) Issue of a record card to every person immunised against Tetanus, containing details of the course and dates of inoculations.

The Committee approved of the procedure now in operation at certain hospitals whereby all patients on the surgical waiting lists are advised and offered active tetanus immunisation. It was further recommended that public hospitals should offer a course of active immunisation to every patient given tetanus antitoxin in the course of treatment.

Examination of the children continued and was extended to include... it was conservatively estimated that at the end of 1955, 224,000 people had received the complete course, and almost 400,000 are awaiting their third dose.

The distribution is as follows:-

|             |         |
|-------------|---------|
| Under 1     | 58,001  |
| 1 - 4       | 200,111 |
| 5 - 9       | 240,042 |
| 10 - 14     | 171,000 |
| 15 - 19     | 58,761  |
| 20 and over | 178,413 |

The literature and consultative services for poliomyelitis patients continued to operate. Although the number of cases of poliomyelitis was small, an increasing incidence of poliomyelitis was reported in the United States. It is estimated that poliomyelitis will be a major cause of disability in the years of the 1950's.

DISCUSSION

The incidence of cases of poliomyelitis has steadily declined from 148 notifications in the calendar year of 1952 to 35 cases in 1955. The notification for the first six months of 1955 have been 8. This trend is noted with satisfaction but given no reason for complacency in immunization policy and plans.

CONCLUSIONS

During the two-year period 1954-1955, 55 persons have died in Victoria from tetanus. Of these persons who contracted the disease following surgical operations last year, two died. This serious situation prompted the Minister to appoint a Tetanus Prevention Committee, under the chairmanship of Dr. R. V. Keogh, to consider tetanus prevention in the light of reports and advice on measures to lessen the incidence. Following on the first meeting of this Committee in December 1955, the following recommendations were submitted to the Minister:-

- (1) Active immunization to be extended to school children over the age of seven years (under the existing scheme provision is made for immunizing younger children with triple antigen and D.P.T.).
- (2) Immunization of industrial workers, particularly those under 30 years of age.
- (3) Active immunization for patients undergoing lower limb operations.
- (4) Issue of a booklet and to every person immunized against tetanus, containing a table of the sources and dates of immunizations.

The Committee approved of the procedure now in operation at certain hospitals whereby all patients on the surgical waiting lists are advised and offered active tetanus immunization. It was further recommended that public hospitals should offer a course of active immunization to every patient given tetanus antitoxin in the course of treatment.

IMMUNISATION.

The policy of the Commission regarding immunisation against preventable diseases has been actively pursued.

An index of the scale of immunising procedures can be gained by the amount of immunising agents issued in the period from 1st July, 1958 to 30th June, 1959.

|  |              |
|--|--------------|
| Triple Antigen                             | 141,848 c.c. |
| Combined Diphtheria & Tetanus Toxoid       | 42,044 c.c.  |
| Diphtheria Prophylactic (PT.AP.)           | 3,104 c.c.   |
| Purified Diphtheria Toxoid (diluted)       | 757 c.c.     |
| Purified Tetanus Toxoid (A.P.A.)           | 41,853 c.c.  |
| Tetanus Prophylactic (Formalinised Toxoid) | 2,522 c.c.   |
| Small Pox Vaccine                          | 25,195 doses |
| Pertussis (Prophylactic H.A.P.A.)          | 120 c.c.     |
| Mixed Pertussis & Diphtheria Antigen       | 12 c.c.      |
| Salk Vaccine                               | 609,248 c.c. |
| Gamma Globulin                             | 2,250 c.c.   |

TUBERCULOSIS.

The trends revealed in previous years showing a decline in both morbidity and mortality rates are continuing and are a source of satisfaction, especially in relation to the expanding population of Victoria in general, and greater Melbourne in particular. It is emphasised however that although the situation is promising it gives no reason for complacency.

Institutional treatment has been readily available for all types of the disease, surgical and medical, and no waiting lists in any category are recorded.

A ward of 20 beds at Heatherton Sanatorium is available for the use of Prince Henry's Hospital for the accommodation of female convalescent patients.

Deaths numbered 145 in 1958, the mortality rate being 5.24 per 100,000 for all forms of tuberculosis, 4.85 being pulmonary and 0.39 non-pulmonary disease. Morbidity rate is 28.01 per 100,000, the total number being 776.

These figures compare favourably with preceding years, as shown hereunder:-

| Year | Deaths | Mort. Rate | Notifications | Morb. Rate | Population |
|------|--------|------------|---------------|------------|------------|
| 1954 | 245    | 10.        | 1,143         | 46.59      | 2,453,000  |
| 1955 | 222    | 8.79       | 974           | 38.55      | 2,526,000  |
| 1956 | 194    | 7.45       | 885           | 33.98      | 2,604,000  |
| 1957 | 145    | 5.42       | 813           | 30.40      | 2,674,000  |
| 1958 | 145    | 5.24       | 776           | 28.01      | 2,770,919  |

TABLE VIII

The policy of the Commission regarding vaccination against zoonotic diseases has been actively pursued. An index of the scale of immunizing procedures can be gained by the amount of vaccine against anthrax in the period from July, 1956 to 30th June, 1957.

|              |  |
|--------------|--|
| 141,848 c.c. | Typhoid antigen                            |
| 45,044 c.c.  | Combined Bacteriophage Tetanus Toxoid      |
| 3,704 c.c.   | Japanese Encephalitis (J.E.)               |
| 737 c.c.     | Modified Diptheria Toxoid (diphtheria)     |
| 41,021 c.c.  | Modified Tetanus Toxoid (A.T.A.)           |
| 1,422 c.c.   | Tetanus prophylactic (Formalinized Toxoid) |
| 15,197 doses | Small Pox Vaccine                          |
| 133 c.c.     | Antisera (Prophylactic H.A.F.A.)           |
| 12 c.c.      | Anti-Tetanus & Diptheria Antigen           |
| 500,258 c.c. | Milk Vaccine                               |
| 2,220 c.c.   | Gamma Globulin                             |

DISCUSSION

The results recorded in previous years under a heading in both mortality and morbidity rates are continuing and the source of vaccination, especially in relation to the expansion of Victoria in New South Wales, and another New South Wales particular. It is emphasized however that although the situation is promising it does not mean for complacency.

Additional treatment has been readily available for all types of this disease, surgical and medical, and no deaths in any category are recorded.

A ward of 50 beds at Westmoreland Hospital is available for the use of Prince Henry's Hospital for the accommodation of acute convalescent patients.

Deaths numbered 145 in 1956, the mortality rate being 2.14 per 100,000 for 415 cases of tuberculous, 4.23 being voluntary and 0.13 compulsory disease. Morbidity rate is 28.01 per 100,000. The 1957 record being 775.

These figures compare favourably with preceding years, as shown hereunder:-

| Year | Deaths | Morb. Rate | Mortality Rate | Population |
|------|--------|------------|----------------|------------|
| 1954 | 247    | 10.4       | 1,143          | 5,437,000  |
| 1955 | 222    | 8.79       | 974            | 5,262,100  |
| 1956 | 145    | 7.42       | 882            | 5,264,400  |
| 1957 | 145    | 7.42       | 817            | 5,274,000  |
| 1958 | 145    | 7.84       | 776            | 5,770,200  |

Case finding is proceeding along lines already long established, being based on mass x-ray surveys, tuberculin surveys associated with B.C.G. vaccination, as well as routine health hospital and practitioner services of the State.

The programme for mass x-ray surveys is being compiled to include annual visits to areas of denser population and greater movement of people in provincial areas, e.g. Latrobe Valley, Geelong, Ballarat and Bendigo, as well as the metropolitan radius and suburbs, while visits to the more sparsely populated areas, with little changes, are being made at 2 or 3 year intervals. Examination of persons according to trades and professions, e.g. hairdressers, barmen, firemen, teachers, etc., providing direct services to the public was commenced during the year.

Government and semi-Government departments have been approached to include routine chest x-ray examination, both initial and annual, as part of medical examination.

Of the 413,932 people included in the mass surveys for 1958, 184 (0.04%) were tuberculous (proved or possibly active), 1,087 (0.26%) were healed or quiescent T.B., 1,869 had non-tuberculous abnormalities of the lungs and chest. In this period, routine mass x-ray surveys have been undertaken in mental hospitals, institutions for the aged, and prisons. Routine x-rays of the chest have been continued for applicants for Old Age and Invalid Pensions, and for women attending ante-natal clinics. The incidence of active tuberculosis found in all these groups has been extremely low, and conforms to the general picture seen in the population.

Attendances at mass x-ray surveys have been very adversely affected by press and radio comments and reports on the potential dangers attributed to x-ray examinations. The Commission is satisfied that there is no danger whatever in the annual x-ray of the chest.

Tuberculin surveys in school children show that the percentage of natural positive reactors was 6.46% in the metropolitan area, and 5.72% in provincial and rural areas.

In the year 1958, admissions to sanatoria and chalets and approved tuberculosis beds at hospitals numbered 1,298, (male 787, female 511) - of which approximately 6% were migrants. These figures include 29 males and 28 females treated for non-pulmonary tuberculosis.

Tuberculosis allowances granted, as at December 31st, 1958, numbered 582, compared with 1,421; 1,302; 1,121; and 783 at the same dates in 1954, 1955, 1956 and 1957 respectively.

Country services, maintained by clinics based on chalets attached to the base hospitals, have been increased by establishing clinics, on a monthly basis, and serviced by or under the direction of Dr. R. Marshman, at Traralgon and Yallourn, centres of development and increasing population, and at Wonthaggi, where the need has been recognised for some time. The clinics have been well received by both the public and the profession.

Bovine tuberculosis is not a clinical problem in this State, but it is known that bovine infection, of up to 10% incidence, is present in some of the dairy herds in the main dairying districts. Therefore, it is a matter to be noted with gratification that a long-term programme has been undertaken by the State departments concerned to control and ultimately eliminate bovine tuberculosis from all herds in the State. This will

Case findings in preceding years have already been established, being based on mass x-ray surveys, systematic surveys associated with U.S. vaccination, as well as routine health checks and practitioner surveys at the State level.

The program for mass x-ray surveys is being modified to include annual visits to areas of higher population and higher movement of people in provincial areas, e.g., Lakewood Valley, Colton, Hillside and Hedges, as well as the metropolitan region and adjacent areas. The program is being modified to include visits to the area, especially in the metropolitan region with special emphasis on the area around the city of Lakewood. Examination of persons according to gender and profession, e.g., businessmen, bank clerks, teachers, etc., providing direct services to the public was commenced during the year.

Government and semi-government departments have been approached to include routine chest x-ray examination both initial and annual, as part of a health examination.

Of the 41,912 people included in the mass surveys for 1957, 184 (0.4%) were tuberculous (primary or secondary infection), 1,047 (2.5%) were healed or had active T.B., 1,889 had non-tuberculous chest x-ray abnormalities. In this period, routine mass x-ray surveys have been undertaken in several hospitals, including for the Army and Air Force. Routine x-rays of the chest have been continued for patients for 614 and 1,047 tuberculous and for 1,047 non-tuberculous patients. The incidence of active tuberculosis found in all these groups has been extremely low, and confined to the general picture seen in the population.

Surveys of mass x-ray surveys have been very extensively effected by mass and radio cameras and results of chest x-rays obtained attributed to x-ray examinations. The Commission is satisfied that there is no danger whatever in the annual x-ray of the chest.

Tuberculin surveys in school children show that the percentage of latent positive reactions was 6.1% in the metropolitan area, and 5.7% in provincial and rural areas.

In the year 1958, attention to reactions to reactions and chest x-rays and surveys tuberculosis beds at hospitals numbered 1,208 (also 1957, 1,047) - of which approximately 60 were tuberculous. These figures include 23 cases and 28 lesions noted for non-tuberculous tuberculosis.

Tuberculous allowances granted, as at December 31, 1958, numbered 222, compared with 1,411, 1,411, and 133 at the same dates in 1954, 1955, and 1957 respectively.

Country services, maintained by clinical staff as chest x-rays in the past hospitals, have been increased by the inclusion of a mobile clinic, on a weekly basis, and serviced by or under the direction of Dr. E. W. Johnson, at Franklin and Yarrowood, centers of a voluntary and hospital organization, and at Westport, where the need has been recognized for some time. The clinical staff have well reacted by both the public and the profession.

Active tuberculosis is not a clinical problem in this State, but it is known that active infection, of up to 10% incidence, is present in some of the busy areas in the State during the winter. Therefore, it is a matter to be noted with regard to the fact that a long-term program has been undertaken by the State department concerned to control and ultimately eliminate tuberculosis from all parts of the State. This will

diminish the total tuberculosis reservoir, and at the same time remove a source of confusion in our tuberculin surveys.

The education of nurses in tuberculosis is being continued in two categories - post-graduate course for State registered nurses, and one year course for nursing aides. The former is freely availed of by interstate and Asian nurses. The recently established Victorian Nursing Council is to assume responsibility for the training of Tuberculosis Nursing Aides, in association with the Tuberculosis Service, and the added status given to the aides, now to be State registered, will be beneficial to recruiting for our sanatoria services.

The Victorian Tuberculosis Association continues to work actively in the fields of publicity, education and benevolence, and co-operates very fully with the State services. A cine-film, in colour, is made each year for showing at cinema theatres, publicising the value of chest x-ray as an annual event, and emphasising tuberculosis prevention as a "family" affair.

#### INFECTIVE HEPATITIS.

Infective Hepatitis remains endemic within the community and 1060 cases were notified in 1958, compared with 1372 in 1957. Notifications for the first six months of 1959 are slightly but not unduly in excess of those for the corresponding period of 1958. The level of endemicity appears to have settled down to that which existed before the peak years of 1955 and 1956.

The actual incidence of the disease is difficult to estimate, but must be considerable as only icteric cases are notifiable. The use of gamma globulin as a preventive measure in the protection of contacts and especially its use in outbreaks in institutions has been actively encouraged.

Great emphasis is still placed on general hygiene and sanitation.

#### DIARRHOEA AND DYSENTERY.

There has been no great variation in the incidence of either of these diseases during this year from past notifications. Localised outbreaks are promptly dealt with but the Commission feels that a reduction in the steady occurrence is a matter which is practicable. It also recognises the fact that many mild cases are not notified.

The observance of regulations in relationship to hygienic handling and carriage of food, of those pertaining to sanitation and pest control is again strongly emphasised.

#### DISSEMINATED SCLEROSIS.

A survey of disseminated sclerosis in Victoria was made at the request of the Consultative Council on Poliomyelitis. The established services of the Poliomyelitis Division were made available to the medical profession in a consultant capacity, and about 150 patients have been referred for physical treatment and assessment.

maintain the total tuberculosis rate, and at the same time  
remove a source of infection in our tuberculous groups.

The education of nurses in tuberculosis is being  
continued in two out-patient - post-graduate courses for 1936.  
The first course was for nurses in the U.S.A. and the second  
course is being held at the University of California and other  
universities. The National Tuberculosis Council is to continue  
its activities for the training of tuberculosis nursing staff in  
collaboration with the Tuberculosis Service, and the staff of the  
Tuberculosis Service will be trained to provide for our tuberculous  
patients.

The National Tuberculosis Association continues to  
work actively in the fields of publicity, education and supervision,  
and co-operates with the State Tuberculosis Service, the U.S.A.  
in various ways. It is also working for the improvement of  
tuberculosis in general, and is holding an annual event, and  
organizing tuberculosis prevention as a "family" affair.

INFECTIVE MONONUCLEOSIS

Infective mononucleosis remains endemic within the  
community and 1935 cases were reported in 1935, compared with 177  
in 1934. Notifications for the first six months of 1935 are  
slightly but not really in excess of those for the corresponding  
period of 1934. The level of infectivity appears to have fallen  
down to that which existed before the peak years of 1933 and 1934.

The general character of the disease is difficult to estimate,  
but must be considered as an acute infectious disease. The  
use of gamma globulin as a prophylactic measure in the treatment of  
contacts and especially the use in out-patient tuberculosis has  
been actively encouraged.

Great emphasis is still placed on general hygiene  
and sanitation.

GENERAL TUBERCULOSIS

There has been no great variation in the incidence of  
either of these diseases during this year from past years.  
Localized outbreaks are promptly dealt with but the Commission feels  
that a reduction in the already occurrence is a matter which is  
practicable. It also recognizes the fact that many mild cases are  
not notified.

The opportunity of vaccination in relation to  
tuberculous meningitis and cerebral abscess, of those remaining in  
contact and post contact is again strongly emphasized.

EXPERIMENTAL TUBERCULOSIS

A survey of disseminated tuberculous infections in Victoria was made  
at the request of the Committee on Tuberculosis. The  
epidemiological survey of the tuberculous infection was made possible  
by the direct infection in a consultant capacity, and about 150  
patients have been referred for physical treatment and observation.

A number of patients were admitted to Fairfield Hospital for short periods and others have received out-patient help. Although it is felt that the help provided has been of benefit to these patients, it must be stressed that this does not alter the nature of the disease for which there is at present no specific treatment.

#### ENDEMIC GOITRE.

East Gippsland has been recognised as an endemic goitre region since its pioneering days. Recent experimental work has thrown new light upon factors called food goitrogens as well as iodine lack in the diet as aetiological agents.

For the past ten years iodine tablets have been issued free to school children. To assess the value of these tablets a survey was conducted throughout the area. Results suggested there had been an improvement in that the large goitre reported by earlier workers was not present but there was still evidence of the lower grade goitres in school children.

The survey is not yet complete, as the food goitrogens are considered to be in milk from cows grazing on certain weed-infested pastures. It is proposed therefore to conduct further surveys during the spring, summer and autumn of 1959-1960.

#### VENEREAL DISEASES DIVISION.

Notifications of venereal disease received during the calendar year 1958 are set out below:-

|                   | <u>GONORRHOEA</u> |           |                  | <u>SYPHILIS.</u> |           |                  |
|-------------------|-------------------|-----------|------------------|------------------|-----------|------------------|
|                   | <u>M.</u>         | <u>F.</u> |                  | <u>M.</u>        | <u>F.</u> |                  |
| Government Clinic | 535               | 128       | 663              | 72               | 21        | 93               |
| Other sources     | 41                | 9         | 50               | 4                | 7         | 11               |
|                   |                   |           | <u>Total 713</u> |                  |           | <u>Total 104</u> |

For purposes of comparison the total number of infections of gonorrhoea and syphilis reported in Victoria for both sexes in various years since 1951 are also quoted.

|      | <u>Gonorrhoea</u> | <u>Syphilis</u> |
|------|-------------------|-----------------|
| 1951 | 718               | 281             |
| 1954 | 467               | 133             |
| 1957 | 809               | 162             |
| 1958 | 713               | 104             |

Although the Victorian population has expanded from about 2.3 million in 1951 to about 2.8 million in 1958, the number of reported infections has remained fairly stable. It is pointed out that the figures covering reported cases are only an indication of a trend, and are not of statistical significance to be related to incidence.

With deep regret the death of Sister Edith A. Adams is recorded. She died on the 7th April following a brief illness. Sister Adams had worked for 11 years in the Women's Clinic. She was noted for her kindness to the patients among whom she had made many friends.

A number of patients were admitted to the Hospital for about 2 months and others were treated out-patient basis. Although it is felt that the hospital was of benefit to these patients, it must be stressed that this does not mean the absence of the disease for which there is a chronic pathological process.

WOUND COLIC

Wound colic has been reported as an endemic colic region since the discovery of the experimental work has shown that when larvae of the colic are introduced into the host an pathological process.

For the past ten years colic larvae have been found in the sheep children. In cases the value of these larvae was conducted throughout the area. Results suggested that there was an improvement in that the large colic reported by earlier workers was not present but there was still evidence of the colic larvae in sheep children.

The survey is not yet complete, as the colic larvae are considered to be in high abundance on certain farms and it is expected that there is a further survey during the spring, summer and autumn of 1959-1960.

VETERINARY MEDICAL DIVISION

Notified cases of various diseases reported during the calendar year 1958 are set out below:-

| DISEASE            | 1958       |           | 1957       |           |
|--------------------|------------|-----------|------------|-----------|
|                    | No.        | %         | No.        | %         |
| Government Clinics | 270        | 72        | 263        | 71        |
| Gen. Practice      | 11         | 3         | 20         | 5         |
| <b>Total</b>       | <b>281</b> | <b>75</b> | <b>283</b> | <b>76</b> |

For purposes of comparison the total number of infections of Government and private reported in Victoria for both years is set out below:-

| Year | Government | Private |
|------|------------|---------|
| 1958 | 270        | 11      |
| 1957 | 263        | 20      |
| 1956 | 213        | 11      |
| 1955 | 187        | 11      |
| 1954 | 162        | 11      |
| 1953 | 141        | 11      |

Although the Victorian population has increased from about 2.5 million in 1951 to about 3.8 million in 1958, the number of reported infections has remained fairly stable. It is pointed out that the figures covering reported cases are only an indication of a trend, and are not of statistical significance to be taken as fact.

With regard to the death of Walter Keith A. Jones is recorded. He died on the 10th April following a viral disease. Walter Jones had worked for 11 years in the Wound's Clinic. He was noted for his kindness to the patients and was one of the best friends.

PUBLIC HEALTH LABORATORY.

The annual total of examinations carried out in the three sections of the Public Health Laboratory shows a 4 per cent. rise over last year to the record number of 89,083.

Diphtheria:

Only seven virulent strains of Corynebacterium diphtheriae were isolated and there was no evidence of epidemic spread. Among these seven cultures no less than five serological types are represented. The sporadic nature of these cases pays tribute to the efficacy of the immunisation policy, but at the same time underlines the imperative need to continue it.

Salmonella:

The number of cultures of human origin which includes those isolated here, together with those received for identification from other laboratories, has continued to rise steadily as previously noted. The increase from 223 in 1957 to 275 for the year under review is due mainly to S.typhi-murium; S.bovis-morbificans and newport remain next on the list in regard to numbers. S.darby, which produced a serious hospital outbreak some years ago, remains at a low endemic level. The trend over the last three years is tabulated below:

|                            | <u>1956</u> | <u>1957</u> | <u>1958</u> |
|----------------------------|-------------|-------------|-------------|
| <u>S.typhi-murium</u>      | 133         | 131         | 206         |
| <u>S.bovis-morbificans</u> | 7           | 37          | 22          |
| <u>S.newport</u>           | 16          | 26          | 17          |
| <u>S.darby</u>             | 4           | 6           | 6           |
| Unclassified               | 16          | 23          | 24          |
|                            | <u>176</u>  | <u>223</u>  | <u>275</u>  |

Among the unclassified are included three cultures of S.paratyphi B (phage type Dundee) from three members of a family in Box Hill. The first culture was isolated from a three year old child in Fairfield Hospital with enteritis; routine faecal specimens from the parents and the one other child in the family revealed that the father and the one year old brother were apparently transient symptomless excreters. Efforts to discover the source of this infection were without avail. Our records show that the only other isolation of this organism was from a case in 1955; no connection between these two foci could be established by inquiry.

S.nyborg - A species which has not previously appeared in our list of Victorian salmonellas was isolated from a child with gastro-enteritis in the Royal Children's Hospital: this rare species was found on one occasion in Papual dessicated coconut in 1953.

S.barielly - This is another unusual species which was encountered once only. This strain was isolated by the Geelong Hospital Laboratory and sent for identification.

Typhoid - There were six sporadic cases from which typhoid bacilli were isolated: one of these proved to be of phage type 38, a strain new to Australia. It came from an Italian woman whose history suggests that she may have acquired her infection in Europe. One further case due to this exotic type has since occurred so it is possible that the strain may become established in the community.

REPORT ON THE RESULTS OF INVESTIGATIONS

The annual total of examinations carried out in the  
this section of the Public Health Laboratory shows a 4 per cent  
rise over last year to the record number of 89,083.

Microbiology

Only seven virulent strains of *Corynebacterium*  
diphtheriae were isolated and there was no evidence of epidemic  
spread. Among these seven cultures no less than five serological  
types are recognized. The sporadic nature of these cases may  
point to the efficacy of the immunization policy, but at the same  
time indicates the imperative need to continue it.

Salmonella

The number of cultures of human origin which included  
those isolated here, together with those received for identification  
from other laboratories, has continued to rise steadily or practically  
steadily. The increase from 523 in 1956 to 575 for the year under  
review is due mainly to *S. typhi*-*orientalis* and  
isolates remain high on the list in 1957 to number 2,400.  
which produced a serious hospital outbreak over the year 1956, remains  
at a low endemic level. The trend over the last three years is  
tabulated below.

| 1958 | 1957 | 1956 |                                      |
|------|------|------|--------------------------------------|
| 206  | 131  | 113  | <i>S. typhi</i> - <i>orientalis</i>  |
| 52   | 31   | 7    | <i>S. typhi</i>                      |
| 17   | 16   | 16   | <i>S. typhi</i> - <i>disenteriae</i> |
| 6    | 8    | 1    | <i>S. typhi</i> - <i>paratyphi</i>   |
| 54   | 27   | 16   | Unidentified                         |
| 315  | 203  | 153  |                                      |

Among the unidentified we included three cultures of  
*S. typhi* (large type) from three members of a family in  
New Hill. The first culture was isolated from a three year old  
child in Victoria Hospital with enteritis: routine faecal specimens  
from the parents and the one other child in the family revealed that  
the father and the one year old brother were apparently transient  
symptomatic carriers. Efforts to discover the source of this  
infection were without avail. Our records show that the only other  
isolation of this organism was from a case in 1955; no connection  
between these two isolations could be established by inquiry.

*S. typhi* - A species which has not previously occurred  
in our list of Victorian organisms was isolated from a child with  
Enterocolitis in the Royal Children's Hospital. This rare species  
was found on one occasion in England described as occurring in 1951.

*S. paratyphi* - This is another unusual species which was  
unobserved until now. This strain was isolated by the General Hospital  
Laboratory and sent for identification.

*S. typhi* - There were six epidemic cases first which *S. typhi*  
isolated were identified: one of these proved to be of type 10,  
a strain not in Australia. It came from an Italian woman whose  
history suggests that she may have acquired her infection in Europe.  
One further case due to this exotic type has since occurred and it is  
possible that the strain may become established in the community.

### Shigellosis:

The total number of human isolations was 224, as compared with 133 last year.

A major outbreak of shigella sonnei infection struck the town of Mansfield in April when something like a quarter of the population was affected: at least 321 people are known to have suffered to some degree. The situation was so urgent that an emergency laboratory was set up on the spot by members of the Public Health Laboratory staff. In the course of two weeks 600 specimens were examined, 48 of which yielded Sh. sonnei. The epidemiology of the outbreak was confusing, but it appeared that the State School may have been involved in disseminating the infection throughout the community. The epidemic persisted for about six weeks and ended abruptly.

Apart from this outbreak shigella isolations showed some general increase from previous years. Sh. sonnei has unfortunately appeared in at least three institutions caring for children.

Of other Shigella types, Sh. flexneri 1a remains next in importance.

Fundamental research into the pathology of shigellosis is being carried out in the Public Health Laboratory by Dr. Cooper and some of this work has already been submitted for publication.

### Staphylococcal Food-Poisoning:

Early in December some scattered cases of what appeared to be staphylococcal food-poisoning occurred in the Ringwood-Heathmont district. Inquiry suggested that corned beef manufactured in another suburb was responsible and this suggestion was substantiated by the isolation of Staph. pyogenes from a sample of the corned beef obtained in Ringwood and from the faeces of one patient. Phage typing showed some similarity between the two cultures, but the correspondence was not complete: both were penicillin resistant. At the request of the district health officer and the medical officer of health, a visit was paid to the factory and it was established that though the conditions of manufacture were quite good, on occasions when demand for the products was high and distribution was hurried, some of the smallgoods were not well chilled before despatch, so that any small inoculum of staphylococci - an organism noted for its resistance to the inhibitory effect of salt - could multiply rapidly in the meat. Advice was given to the manufacturer on prevention of contamination and the importance of rapidly cooling and maintaining the products at a low temperature at all times after cooking. During this investigation members of a family owning a retail smallgoods business were discovered to have suffered from gastro-enteritis. On examination of faeces from four members, two yielded staphylococci related to the phage type found in the corned beef from Ringwood, and three yielded also salmonellas - two S. chester and one S. derby. S. chester was also isolated from the corned beef on sale in their shop. This confusing episode further emphasises the dangers to the public of apparently minor lapses in food hygiene.

### Brucellosis:

A number of requests from practitioners for brucella agglutination tests increased during the year and the number of fresh cases - probably brucellosis - brought to light rose to 46 as compared with 37 in 1957. As has been evident in the past, this is frequently an occupational disease affecting dairy farmers, although a few cases occur in children and in older people who give no history of contact with cattle.

Discussion

The total number of human infections was 124, as compared with 100 in 1957.

A major outbreak of shigellosis among children at the town of Havelock in April was similar to that reported in the previous year. At least 100 people are known to have been infected. The situation was so urgent that a laboratory was set up on the spot by members of the Public Health Laboratory staff. In the course of two weeks 600 specimens were examined, 45 of which yielded the organism. The epidemiology of the outbreak was complex, but it appeared that the State School may have been involved in disseminating the infection throughout the community. The epidemic persisted for over six weeks and ended abruptly.

Apart from this outbreak shigellosis infections showed some general increase from previous years. 22 cases were reported in 1958 from the institutions caring for children.

Of other shigellosis types, S. flexneri is common and S. sonnei is common.

When a case is reported into the laboratory of shigellosis it is carried out in the Public Health Laboratory by Dr. Cook and the work has already been reported for your action.

Shigellosis and Food-Intake

It is known that a certain amount of shigellosis is due to shigellosis food-intake in the Havelock district. During 1957 a total of 100 cases were reported in the district and a similar number in 1958. The epidemiology of shigellosis in Havelock and the factors of infection are similar to those reported elsewhere. It is known that the epidemiology was not identical between the two outbreaks, but the epidemiology was similar. Both were shigellosis infections. It is known that the outbreak in Havelock and the outbreak in the district were similar. It was not clear that though the conditions of the outbreak were quite good, on occasions when demand for the products was high and distribution was hurried, some of the shigellosis were not well stored before being sold, so that any small amount of shigellosis - an organism noted for its resistance to the laboratory effect of acid - could multiply rapidly in the laboratory. It is known that the epidemiology and the resistance of the organism on preservation of the products at a low temperature is a factor in the epidemiology. During this investigation many of the shigellosis cases were traced to the Havelock district. On examination of cases from other districts, two yielded shigellosis related to the Havelock district - two cases from Havelock, and three yielded also shigellosis - two from Havelock and one from Havelock. This containing shigellosis cases had an effect in their shops. This containing shigellosis cases had an effect in the shops of shigellosis cases in Havelock.

Shigellosis

A number of reports from practitioners for shigellosis infections were received during the year and the number of cases - shigellosis infections - present in 1958 was 124 compared with 100 in 1957. As has been evident in the past, this is probably an overestimate of the actual number of cases, although a few cases occur in children and in other people who give no history of contact with Havelock.

### TUBERCULOSIS BRANCH LABORATORY.

As a result of the successful activities of the State-wide campaign against tuberculosis, the number of specimens received for examination has begun to decline. This has made it possible to examine all sputum specimens by culture as well as microscopically.

Efforts to improve the efficiency of examination of all specimens have continued; in particular the introduction of the low-power objective to fluorescence microscopy enables a far greater volume of material, such as sputum, to be scanned for acid-fast bacilli, thus rendering the examination more reliable.

During the year an interesting phenomenon came to light when it was noticed that fasting gastric contents from a large number of patients in a certain country hospital yielded on culture a growth of saprophytic acid-fast bacilli: these were sometimes associated with a coincident growth of mycobacterium tuberculosis. Investigations showed that the saprophyte existed as a contaminant in the large bottle of "sterile" water which was used to top up the bottles issued for collecting the specimens of fasting gastric contents. The problem was solved by providing smaller bottles of truly sterile water for this purpose.

### CHEMICAL LABORATORY.

General: Miss M.K. Evans retired on the 30th May, 1959, after having been chemist in charge of the Health Section of the State Laboratories since the latter were established in 1932, and previously when the laboratory was at Queen Street. She had accumulated a wide experience in food chemistry and court procedure which will be hard to replace.

The total number of samples submitted during the year under review showed an increase of 20% over the previous year and an additional chemist was appointed to the staff.

The samples submitted covered the usual wide range, in which foodstuffs predominated, and three types of these are worthy of mention.

#### Olive Oil.

A number of samples of olive oil were found to be adulterated by admixture with other vegetable oils and successful prosecutions resulted; one sample consisted mainly of maize oil with just sufficient olive oil to give a flavour. The adulteration was found to have been carried out by local bottlers.

#### Meat and Meat Products.

Many samples of sausage meat or sausages were found to be deficient in meat content and/or to contain excess fat. A number contained preservative above the permitted maximum. However, as far as preservative is concerned, most trouble was experienced with chopped meats containing sulphur dioxide, which is not allowed in any fresh meat. In some cases, it was alleged in defence that the chopped meat contained a trace of salt and therefore came under the definition of "sausage meat". This attempt at evasion of the Regulations is at present receiving attention, with a view to appropriate action. Many butchers appear to be determined to add sulphur dioxide to such meat and are not deterred by occasional fines.

WORKING IN BROWN LABORATORY

As a result of the successful activities of the laboratory during the year, the number of specimens received for examination has been to date 100. This has made it possible to examine all aquatic specimens by culture as well as microscopically.

Efforts to improve the efficiency of examination of all specimens have continued; in particular the introduction of the low-power objective to fluorescence microscopy enables a far greater volume of material, such as water, to be examined for gold-bacteria. The methods of examination were reliable.

During the year an interesting phenomenon was noted when it was noticed that certain aquatic contents from a large number of specimens in a certain country hospital yielded on culture a growth of aprotrophic gold-bacteria. These were sometimes associated with a coincident growth of *Micrococcus lysodeikticus*. It was found that the aprotrophic growth was a contaminant in the large bottles of "sterile" water which was used for the culture medium for collecting the specimens of aquatic contents. The problem was solved by providing smaller bottles of truly sterile water for this purpose.

CHEMICAL LABORATORY

During the year the laboratory was under the supervision of Mr. J. H. ... The laboratory was at Green Street. The had accumulated a large experience in food chemistry and some products which will be found in various places.

The total number of samples submitted during the year under review showed an increase of 20% over the previous year and an additional chemist was appointed to the staff.

The samples submitted covered the usual wide range, in which *Escherichia coli* predominated, and three types of these are worthy of mention.

OLIVE OIL

A number of samples of olive oil were found to be adulterated by distillate with other vegetable oils and mineral oils. The adulteration was not detected by the usual methods of examination. The adulteration was found to have been carried out by local distillers.

MEAT AND MEAT PRODUCTS

Many samples of sausage meat or sausages were found to be deficient in meat content and/or to contain excess fat. A number contained preservative above the permitted maximum. However, as an alternative to sausage, meat products are prepared with sodium nitrite containing sulphur dioxide, which is not allowed in any form. In some cases it was alleged in balance that the product contained traces of salt and therefore some under the definition of "sausage meat". This claim is under the definition of "sausage meat" given preceding attention, with a view to appropriate action. The butchers appear to be determined to add sulphur dioxide to their meat and are not deterred by occasional losses.

### Coal Tar Colours.

The list of coal tar dyes permitted to be used to colour foods was recently amended. The present list is now common to all States and does not include a number of dyes previously permitted. The laboratory has been involved in a considerable amount of work in investigating methods for identification of these dyes and in analysing various types of food for the nature of the colouring present. The colouring of the casings of saveloys with a non-permitted dye has resulted in numerous prosecutions and has caused considerable discussion. It is therefore of interest to examine this matter in some detail.

Practically every country has reviewed, or is reviewing, food colours as many previously in use and thought to be harmless have since been proved to be dangerous. The Commonwealth Food Additives Committee, on whose recommendation all States adopted the current list, laid down the following principles for guidance:-

Coal tar dyes should be prohibited in food unless:

- (a) artificial colouring of a particular food is desirable in the public interest;
- (b) the desired shade cannot be retained or derived from the natural colour by any practicable improvement in processing;
- (c) there exists no satisfactory alternative colouring agent which is itself a foodstuff or a derivative of a foodstuff; and
- (d) the innocuity of the aniline or synthetic dye proposed to be used cannot reasonably be called in question.

Under (d), coal tar dyes were rejected as unsuitable food colours if they fell into any of the following categories:-

1. Fat-soluble dyes - such are stored in the body and cause liver damage.
2. Basic dyes - stain protein and are not readily eliminated.
3. Carcinogenic tendencies - without going into a detailed chemical discussion, it has been proved that coal tar dyes containing certain organic derivatives in their constitution or breaking down in the system to certain organic compounds, are definitely carcinogenic when tried with experimental animals, or are strongly suspect.
4. Toxicity - the dye stuff itself must not be toxic nor should it contain toxic intermediate products or excessive amounts of poisonous metals or other poisonous ingredients.

It will be generally agreed that the foregoing is a sound basis on which to view the whole question of coal tar food dyes and that a dyestuff that is suspect of falling into any of the above categories, although not definitely proved so, should not be included in a permitted list until further investigation has proved it harmless

### Saveloys and Frankfurts.

The exclusion of some of the older dyes caused some temporary inconvenience to food manufacturers and particularly to those making frankfurts and saveloys, where Orange II (not now permitted) was generally used to colour the skins. Orange II is one dye which has been proved to be harmful, it has carcinogenic properties and can cause liver damage.

Food for Colours

The list of food dyes permitted to be used in colour foods was recently amended. The present list is now common to all States and does not include a number of dyes previously permitted. The laboratory has been involved in a considerable amount of work in investigating methods for identification of these dyes and in analyzing various types of food for the nature of the coloring present. The coloring of the samples of samples with a non-permitted dye has resulted in numerous prosecutions and has caused considerable dissatisfaction. It is therefore of interest to examine this matter in some detail.

Practically every sample has reviewed, or is reviewing, food colours as they are available. It has been thought to be desirable that some be proved to be safe. The Commission on Food Admixtures, on whose recommendation all States adopted the current list, laid down the following principles for guidance:-

Food for dyes should be prohibited in food unless:

- (a) artificial coloring of a particular food is desirable in the public interest;
- (b) the desired shade cannot be obtained or derived from the natural colour by any reasonable improvement in processing;
- (c) there exists no satisfactory alternative coloring agents which is itself a foodstuff or a derivative of a foodstuff; and
- (d) the innocuity of the emulsion or synthetic dye proposed to be used is not demonstrably in question.

Under (d), food for dyes were rejected as unsuitable food colours if they fell into any of the following categories:-

- 1. Fat-soluble dyes - such as stored in the body and cause liver-damage.
- 2. Basic dyes - stain protein and are not readily eliminated.
- 3. Carcinogenic substances - without colour into a detailed chemical examination. It has been proved that food for dyes containing certain organic derivatives in their composition or breaking down in the system to certain organic compounds, are definitely carcinogenic when tested with experimental animals, or are strongly suspect.
- 4. Toxicity - the dye itself must not be toxic nor should it contain toxic fat-soluble products or excessive amounts of poisonous metals or other poisonous ingredients.

It will be generally agreed that the foregoing is a sound basis on which to view the whole question of food for dyes and that a doubt as to the safety of falling into any of the above categories, although not definitely proved so, should not be included in a permitted list until further investigation has proved it harmless.

Food for Dyes

The inclusion of some of the dyes named above temporary suspensions to food manufacturers and particularly to those making products and beverages, where Orange II (not now permitted) was generally used to colour the liquid. Orange II is one of the dyes which has been proved to be harmful. It has carcinogenic properties and can cause liver damage.

Apparently, some smallgoods manufacturers have been prepared to run the risk of prosecution by continuing to use this particular dye and, in most cases at least, this has not been done in ignorance; the trade generally is aware that Orange II is prohibited for this purpose.

Orange II, along with many other dyes not allowed for food colouring, is used for other purposes and there would be no justification for prohibiting its entry into the country. Further, if it is sold to a purchaser simply as a dye, without any indication by him that it will be used to colour food, the vendor cannot be held liable if, later, it is so used.

The Regulations require that any colouring sold for or intended for colouring food shall bear a label stating the name of the dye or dyes present, or the Rowe Colour Index number. Provided this regulation is strictly policed and, as a result, the purchaser is aware of the dye or dyes present, the responsibility for use of a prohibited dye must rest on the food manufacturer.

#### PROPRIETARY MEDICINES ADVISORY COMMITTEE.

Since the Proprietary Medicines Legislation first came into operation in February, 1948, 10,400 applications for registration have been received, and of this number 8,200 preparations have been registered. New applications are being received at an average rate of sixty per month.

The Commission desires to express its appreciation of the work of Mr. A. W. McGibbony, O.B.E. Mr. McGibbony was nominated to the committee at its inception in 1948, as representing the Pharmacy Board of Victoria. He remained a member until beset by ill-health, and retired on 4th June, 1959. Mr. McGibbony possessed a unique knowledge of the classifications of poisonous substances and was a most valued member of the committee.

#### S E W E R A G E.

The decision of Cabinet to increase the allotment of funds for provincial sewerage has resulted in a revival of interest in this field and work is proceeding at Korumburra and Sale, and is about to commence at Lorne. Schemes for these townships were considered by the Commission some years ago but remained in abeyance because of financial difficulties.

During the year the Commission approved of a site for the sewage treatment works for Wodonga. It is expected that several additional schemes will be considered during next year.

#### Mass Septic Tank Installations.

The year saw the completion of the thirtythird township installing septic tanks to serve each house under the provisions of Part XLVI of the Local Government Act. Four additional townships are likely to be completed in the next year. This section of the Act provides for financing such schemes as for private road construction and requires the Commission's approval of the installations.

Some of the early schemes of this nature provided for units of the dry type only but with the advent of the 6-pint flushing pedestal, it is now usual to install the more satisfactory wet type.

Accordingly, your attention is directed to the fact that the risk of loss of the property in question is not borne by the owner of the property, but by the person who is in possession of the property at the time of the loss. It is suggested that you should be advised of this fact.

George II, along with other states not named in the foregoing, is one of the states which have been invited to participate in the collection of the property. It is suggested that you should be advised of this fact.

The Commission requests that you should be advised of this fact. It is suggested that you should be advised of this fact.

PROVISIONAL REGISTER: UNITED STATES

Since the Provisional Register is being prepared, it is suggested that you should be advised of this fact. It is suggested that you should be advised of this fact.

The Commission desires to express its appreciation of the work of the Provisional Register. It is suggested that you should be advised of this fact.

REMARKS

The Commission desires to express its appreciation of the work of the Provisional Register. It is suggested that you should be advised of this fact.

During the year the Commission approved of a plan for the Provisional Register. It is suggested that you should be advised of this fact.

Notes on the Provisional Register

The year saw the completion of the Provisional Register. It is suggested that you should be advised of this fact.

It is suggested that you should be advised of this fact. It is suggested that you should be advised of this fact.

### PUBLIC BUILDINGS.

The number of approvals of plans and specifications of new public buildings and additions and alterations to existing public buildings remained at the high level of recent years. For the year under review the figures were 488 new buildings and 460 additions and alterations, total examinations, 948. Pre-school and infant welfare centres represented the largest single group of new undertakings.

Inspections of public buildings during public occupation continued throughout the year, the total number of visits being 1,500. A number of prosecutions were successful, for breaches of the regulations detected during these visits, but generally it was found that conditions were satisfactory. No instance of overcrowding of a picture theatre was reported, attendances generally being poor. The number of theatres closed down now total 36, and many more operate on restricted schedules.

### PUBLIC WATER SUPPLIES.

The recommendation of the Commission that a chemist be appointed for the supervision of plants chlorinating public water supplies throughout Victoria has been effected. This officer is working from the Department of Health in collaboration with the State Rivers and Water Supply Commission and has covered a large proportion of the State.

The main approach has been through the Local Water Trusts, to whom recommendations are submitted. Many deficiencies have become apparent but the work is continuing and expanding.

### AIR POLLUTION.

The Clean Air Committee has continued with its survey of the methods adopted in different parts of the world to detect and control air pollution.

Four sub-committees, as under, have been formed to assist the functioning of the main committee.

#### Research Sub-Committee.

To advise on measures of research which should be carried out such as the investigation of fall-out in Melbourne and other areas.

#### Investigation and Action Sub-Committee.

To concern itself with practical measures to be taken to eliminate existing air pollution problems.

#### Publicity and Education Sub-Committee.

To devise and arrange publicity and educational programmes for health inspectors and other municipal officers, and persons connected with the combustion of fuel.

#### Legislation Sub-Committee.

To review existing legislation and prepare draft regulations for consideration by the full committee.

PUBLIC BUILDINGS

The number of approvals of plans and specifications of new public buildings and alterations to existing public buildings remained at the high level of recent years. For the year under review the figures were 488 new buildings and 480 alterations and 948 pre-school and infant welfare centres represented the largest single group of new undertakings.

Inspections of public buildings during public occupation continued throughout the year, the total number of visits being 1,500. A number of prosecutions were successful, for breaches of the regulations detected during these visits, but generally it was found that conditions were satisfactory. No instance of overcrowding of a picture theatre was reported, attendances generally being poor. The number of theatres closed now total 36, and many more operate on restricted schedules.

PUBLIC WATER SUPPLIES

The recommendation of the Commission that a chemist be appointed for the supervision of plants chlorinating public water supplies throughout Victoria has been effected. This officer is working from the Department of Health in collaboration with the Rivers and Water Supply Commission and has covered a large proportion of the State.

The main approach has been through the Local Water Boards to whom recommendations are submitted. Many deficiencies have become apparent but the work is continuing and expanding.

AIR POLLUTION

The Clean Air Committee has continued with its survey of the methods adopted in different parts of the world to detect and control air pollution.

Four sub-committees, as under, have been formed to assist the functioning of the main committee.

Research Sub-Committee

To advise on sources of research which should be carried out such as the investigation of fall-out in Melbourne and other areas.

Investigation and Action Sub-Committee

To concern itself with practical measures to be taken to eliminate existing air pollution problems.

Publicity and Education Sub-Committee

To devise and arrange publicity and educational programmes for health inspectors and other municipal officials and persons connected with the occupation of fuel.

Legislation Sub-Committee

To review existing legislation and propose draft regulations for consideration by the full committee.

Towards the end of the year a senior research officer was appointed to the staff of the General Health Branch to assist with air pollution matters. The branch now has a staff of two officers who are engaged full-time on air pollution problems.

#### INDUSTRIAL HYGIENE DIVISION.

Considerable changes in the Industrial Hygiene Division have been necessary to administer the Irradiating Apparatus and Radio-active Substances Regulations 1959, which were promulgated in May of this year.

An administrative officer has been added to the staff in order to cope with the extra clerical work involved and a medical officer has been seconded to the staff from the Tuberculosis Branch to supervise the hazards associated with the use of radiation in medical, dental and veterinary work.

A scientific officer of the Division who has undergone special training in the subject is supervising the hazards associated with the use of radiation in industry.

Unfortunately this has had the effect of depleting the scientific staff engaged in general duties and until an extra scientific officer is made available there will be inevitably a curtailment of some of the other activities of the Division.

Many early difficulties have been encountered in the administration of the regulations, but such could only be expected with new legislation in a relatively unexplored field.

On the other hand, the generally co-operative attitude of people engaged in radiation work has helped to smooth out most of the difficulties that have arisen.

#### AERIAL BAITING BY MEANS OF 1080 RABBIT POISON.

During the year the Health Department co-operated with the Agriculture Department in this method of destruction of the rabbit pest.

It has been considered to be a useful method of attack in inaccessible forest and mountainous areas adjoining pastures. Diced carrots cut into  $\frac{1}{2}$ " -  $\frac{3}{4}$ " cubes, sprinkled with a solution of 1080 (Sodium Fluoroacetate), in the proportion of 1/10 oz. to 20 lbs. of carrots have been used.

The Health Department felt that possible contamination of water supplies and risk of children getting access to the poison needed supervision. This has been conscientiously carried out by district health officers in co-operation with inspectors of the Lands Department.

At one stage it was suggested that a mixture of jam and 1080 might be utilised near burrows, expressed from a type of pressure gun. However, the Health Commission felt this was inadvisable because of the risk to children.

Towards the end of the year a senior research officer was appointed to the staff of the 6 Naval Health Branch to assist with air pollution matters. The branch now has a staff of two officers and one engaged full-time on air pollution problems.

INDUSTRIAL HYGIENE DIVISION

During the year the Industrial Hygiene Division has been busy in connection with the Industrial Hygiene and Radioactive Substances Regulations 1958, which were promulgated in May of this year.

An administrative officer has been added to the staff in order to cope with the extra clerical work involved and a medical officer has been seconded to the staff from the Tuberculosis Branch to supervise the hazards associated with the use of radiation in industry, animal and veterinary work.

A not public officer of the Division who has undergone special training in the subject is supervising the hazards associated with the use of radiation in industry.

Unfortunately this has had the effect of depleting the scientific staff engaged in general duties and until an extra scientific officer is made available there will be inevitably a curtailment of some of the other activities of the Division.

Many very difficult problems have been encountered in the administration of the regulations, but much could be expected with the inclusion of a relatively unexperienced field.

On the other hand, the generally co-operative attitude of people engaged in radiation work has helped to smooth out most of the difficulties that have arisen.

GENERAL MATTERS BY MEANS OF 1080 BARIUM

POISON

During the year the Health Department co-operated with the Agricultural Department in this method of destruction of the rabbit pest.

It has been considered to be a useful method of attack in the case of forest and mountainous areas where other measures are not practicable. About 1000 (Barium Fluorocitrate), in the proportion of 1/10 oz. to 20 lbs. of carrots have been used.

The Health Department felt that possible contamination of water supplies and risk of children getting access to the poison needed investigation. This has been exceptionally carried out by district health officers in co-operation with inspectors of the Health Department.

At one stage it was suggested that a mixture of 100 and 1080 might be utilized near burrows, expressed from a type of procedure. However, the Health Commission felt this was inadvisable because of the risk to children.

DRYCLEANING STERILIZATION OF HOSPITAL  
BLANKETS.

Investigations into the efficacy of the drycleaning - quaternary ammonium compound method of sterilizing blankets is being carried out at Fairfield Hospital by departmental officers in conjunction with Mr. H. A. George (chief engineer) and Dr. Ferris (pathologist).

The results of this study to date using a non-ionic detergent and a commercial quaternary ammonium compound show that whilst a marked reduction in bacteria occurs after processing, the finished blanket is not entirely sterile. There is some residual bactericidal effect in the blankets which, although not marked, does reduce the bacterial count. Whether this residual effect is of significance in reducing cross-infection in a hospital ward can only be determined by controlled studies.

The plant was installed at Fairfield Hospital by the Hospitals and Charities Commission and the Health Commission as a pilot study on blanket sterilization.

LEGISLATION.

The following consolidating legislation came into operation on 1st April, 1959:-

Cemeteries Act, 1958 (No.6217).  
Clean Air Act, 1958 (No.6220).  
Health Act, 1958 (No.6270).  
Venereal Diseases Act, 1958 (No.6408).

The Health Act, 1959 (No.6507) came into operation on 5th May, 1959, and provides that the council of any municipality must obtain the consent in writing of the Commission before establishing any garbage or sanitary depot. The Act also enables councils to levy a charge for the disposal of trade waste; increases the salary of the Director of Tuberculosis; provides new powers in relation to the notification of disease; alters the definition of an "apartment house"; prohibits the use of certain substances in the manufacture of toys, decorative paper and paper serviettes; and makes provision for councils to charge higher fees for the registration of certain premises.

The Cemeteries Act, 1959 (No.6530), which was given Royal Assent on 12th May, 1959, provides for several amendments to the law relating to certification of death for cremation purposes, and is in accordance with the recommendations of a special committee whose report was accepted by the Commission last year.

Among other things the new Act provides for the introduction of an application for cremation form which is to be completed and signed by the executor or next-of-kin of the deceased. The Act also amends the form of the certificates, which are given by the doctor who attended the deceased and the certifying medical practitioner.

The Act has yet to be proclaimed. The Commission has made a tentative recommendation that it should be brought into operation on 1st February, 1960, provided that the necessary forms can be printed and distributed beforehand.

INVESTIGATING STEWARTS BY HEALTH  
ALWAYS

Investigation into the efficacy of the hydraulic  
system was conducted under the direction of Dr. J. H.  
Lambert, Chief Engineer, and Dr. J. H. Lamb  
(Psychologist).

The results of this study are being  
presented and a complete report will be  
submitted to the Board of Health. It is  
hoped that the results will be of  
benefit to the public.

The study was conducted at the  
Health Commission and the Board of Health.

LEGISLATION

The following consolidated legislation was introduced  
on January 1, 1933:

- General Business Act, 1933 (No. 100)
- Health Act, 1933 (No. 101)
- City Act, 1933 (No. 102)
- Sanitation Act, 1933 (No. 103)

The Health Act, 1933 (No. 101) was introduced on  
January 1, 1933, and provides that the Council of the  
City of New York shall have the honor to  
advise the Council in writing of the results of  
any survey or sanitary report. The Act also  
provides for the disposal of waste water; increases  
the power of the Board of Health; provides new  
powers in relation to the regulation of  
business; provides for the regulation of  
the manufacture of certain articles; and makes  
provision for the regulation of certain  
business.

The Sanitation Act, 1933 (No. 103), which was given  
effect on July 1, 1933, provides for several  
amendments to the law relating to the  
regulation of death for certain purposes, and is  
in accordance with the recommendations of a  
committee which was appointed by the Council  
last year.

Among other things the new Act provides for the  
regulation of the construction law which is to be  
enforced and also provides for the regulation  
of the construction law which is to be enforced.  
The Act also provides for the regulation of  
the construction law which is to be enforced.

The Act has yet to be introduced. The Commission  
has recommended that it should be brought into  
effect as soon as possible. The Commission  
has also recommended that the necessary laws  
be introduced.

REGULATIONS.

The following regulations were approved:-

Food and Drug Standards Regulations, 1958.

This is a consolidation of the numerous amending Food and Drug Standards Regulations with the earlier basic regulations of 1939.

Amending Public Building Regulations 1958 (No.3).

These regulations provide that for a two-leaf exit door of a public building (except theatres) any type of lock may be provided other than a lock which prevents the two leaves from separating.

Irradiating Apparatus and Radio-active Substances Regulations, 1959.

Provide for the licensing of all irradiating apparatus and radio-active substance intended to be held, used, sold or transported.

The regulations also provide for general safety precautions; the medical examination of employees exposed to a radiation hazard; the disposal of radio-active wastes; the control of radio-active contamination; and the transport of radio-active substances.

Amending Food & Drug Standards Regulations 1959 (No.1).

These regulations define antioxidants and prescribe the kinds and quantities that may be added to certain foods; amend the list of poisonous substances and the quantities thereof that are permitted in or on food; define standards for flavoured skim milk powder and concentrated flavoured cordials.

PROCLAMATIONS AND ORDERS-IN-COUNCIL.

The offensive trades provisions of the Health Act (so far as those provisions are applicable to piggeries) were extended to the whole of the municipal district of the Shire of Ararat.

Portion of the municipal district of the Shire of Corio was prescribed for the purpose of preventing the deposit of nightsoil.

Two new meat areas, Benalla and South Gippsland were constituted.

Authority was given to the Council of the City of Melbourne to establish a garbage tip in a large quarry hole at Brunswick.

APPENDIX

The following regulations are proposed -

1. The following regulations are proposed -

This is a consolidation of the various regulations  
and has been prepared in accordance with the  
regulations of 1931.

2. The following regulations are proposed -

These regulations provide for a two-year term  
of office for the members of the Council  
and also provide for a two-year term  
of office for the members of the Council.

3. The following regulations are proposed -

These regulations provide for the election of  
members of the Council and also provide  
for the election of members of the Council.

The following regulations provide for the election  
of members of the Council and also provide  
for the election of members of the Council.

4. The following regulations are proposed -

These regulations provide for the election  
of members of the Council and also provide  
for the election of members of the Council.

REGULATIONS AND BY-LAWS

The following regulations provide for the election  
of members of the Council and also provide  
for the election of members of the Council.

These regulations provide for the election  
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for the election of members of the Council.

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for the election of members of the Council.

These regulations provide for the election  
of members of the Council and also provide  
for the election of members of the Council.



- 1 -

GENERAL

Dr. W. E. Johnson acted as Chairman of the Commission for three months during the absence of the Chief Health Officer on long service leave. During the same period Dr. R. J. Farnham also acted for the Chief Health Officer in respect of his official commitments as head of the General Health Branch and various statutory committees.

Mr. G. W. Hogan succeeded Mr. G. V. Scallan as Secretary of the Commission following Mr. Scallan's transfer to the Mental Hygiene Branch.

In March, Dr. H. Forbes Macdonald left for Great Britain and the United States of America in connection of investigations on immunisation and other public health matters for which he was awarded a Commonwealth Health and Medical Research Council Fellowship.

Respectfully submitted -

Members of the  
Commission.

KEVIN SWANBY  
WALTER JOHNSON  
FRANK J. CHILL  
A. E. THORSON  
T. A. FLOOD  
H. WOLFE  
A. E. ALLEN

G. W. HOGAN  
Secretary,  
Wellington, 29th September, 1955.

NATIONAL HEALTH AND MEDICAL RESEARCH  
COUNCIL COMMITTEE ON EPIDEMIOLOGY & INFECTIOUS DISEASE.

The Committee on Epidemiology and Infectious Disease met at the Commonwealth Serum Laboratories, 12th June, 1959.

Present:

Professor E. Ford - Chairman  
Professor H. Ward.  
Dr. P. L. Bazeley.  
Dr. C. E. Cook

Co-opted members -

Dr. E. V. Keogh  
Dr. H. McLorinan  
Dr. S. Fazekas  
Dr. E. L. French  
Dr. A. A. Ferris  
Dr. R. W. Greville

The Committee received -

1. From the National Health and Medical Research Council a request for -
  - (a) An explicit statement upon polyvalent influenza virus vaccines, their efficacy, the duration of immunity conferred, their freedom from side effects and their value in the control of epidemics.
  - (b) Advice upon the practicability of immunisation against epidemic upper respiratory tract infections.
2. From the Commissioner of Public Health, Western Australia, a request for definite answers to the following questions about influenza vaccination.
  - (a) The value of vaccination where the vaccine has been prepared from the specific strain involved.
  - (b) The value of a stock vaccine which contains the type but not the specific strain.
  - (c) The value of a stock vaccine which does not contain the type.
  - (d) Time taken to develop immunity after vaccination and duration of immunity.

1. (a) POLYVALENT INFLUENZA VACCINE.

Efficacy: Polyvalent vaccines can afford considerable protection against the clinical effects of infection with Influenza virus when the virus concerned is included in sufficient amount in the vaccine; under these conditions, substantial protection (up to 75%) from clinical Influenza can be expected.

MEMORANDUM FOR THE RECORD  
RE: THE COMMITTEE ON PUBLIC HEALTH

The Committee on Public Health and International Health was set up at the  
Department of Health, Education and Welfare, 1955 June, 1955.

Presently

- Chairman -
- Professor E. Ford
- Professor H. Ford
- Dr. J. A. B. ...
- Dr. G. ...
- Dr. V. ...
- Dr. H. ...
- Dr. S. ...
- Dr. J. ...
- Dr. A. ...
- Dr. R. ...

- 1. The Committee is composed of the following members:
- (a) An explicit statement was prepared following virus vaccines, their efficacy, the duration of immunity conferred, their freedom from side effects and their value in the control of epidemics.
- (b) Advice was given the practicability of vaccination against epidemic type respiratory virus infections.
- 2. From the Committee of Public Health, Western countries a request for definite answers to the following questions about influenza vaccination.
- (a) The value of vaccination when the vaccine has been prepared from the specific strain involved.
- (b) The value of a stock vaccine which contains the type but not the specific strain.
- (c) The value of a stock vaccine which does not contain the type.
- (d) How often to develop immunity after vaccination and duration of immunity.

3. (a) EVALUATION OF INFLUENZA VACCINES

Experimental vaccines can afford considerable protection against the clinical effects of infection with influenza virus when the virus concerned is included in sufficient amount in the vaccine. Under these conditions, substantial protection (up to 75%) from clinical influenza can be expected.

If, however, a new sub-type of virus appears and becomes prevalent in epidemic form no protection can be anticipated from a vaccine which does not include it.

The emergence of new sub-types of virus can not be precisely forecast, but in past experience, new variants of Influenza A have been identified at intervals of 10 to 15 years - in 1918, 1933, 1946 and 1956. With Influenza B, changes have been less frequent.

Duration of Immunity. Some degree of protection may be anticipated 14 days after the administration of an adequate dose of the vaccine and maximum protection at about the second month. Protection may be expected to last from 1 to 2 years.

A recommended course consists of two doses of vaccine, one month apart followed by a re-inforcing dose after an interval of 12 months.

Side Effects: At present influenza virus for use in vaccines is grown in eggs and allergic reactions may be expected in persons sensitive to egg protein.

Toxic reactions (3 to 4% general and 3 to 4% local) are likely to occur in some 6% of cases when the vaccine is given subcutaneously. If the vaccine is administered intradermally, this risk is appreciably reduced.

Although, theoretically, the repeated injection of the egg protein content in the vaccine could produce sensitivity, this has not been observed in practice in extensive trials.

It is expected that influenza vaccine from which the egg antigen has been removed will ultimately be produced.

Control of Epidemics: Although a suitable vaccine will avert the development of symptoms of clinical influenza, it cannot be expected to prevent the spread of virus through the community. It is unlikely therefore that non-vaccinated persons will be safe-guarded by the protection of the vaccinated.

In an epidemic year when the prevailing virus is without major antigenic change from the previous year, vaccines would be useful to protect those previously unvaccinated with those who have not experienced infection with the prevalent strain. If no new sub-type appears, the vaccine should to this extent reduce the prevalence of clinical influenza.

If a new antigenic sub-type should appear and become epidemic, there would be very little opportunity with methods at present in use to prepare, issue and administer an effective vaccine in sufficient quantity to influence the course of an epidemic.

(b) VACCINES FOR UPPER RESPIRATORY TRACT INFECTIONS.

The Committee considers that at present there is not sufficient evidence about upper respiratory tract infections other than influenza to justify the use of vaccines in an attempt to control them. The Committee emphasises the desirability of the Commonwealth Serum Laboratories conducting further research into the production and value of these vaccines. In particular, assessment of their value should be undertaken by submitting them to field trial.

(Continued)

It, however, a new sub-type of virus never had been  
prevalent in epidemic form no protection can be anticipated from  
a vaccine which does not include it.

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influenza A have been identified at intervals of 10 to 15 years -  
in 1918, 1933, 1948 and 1956. With influenza B, changes have been  
less frequent.

Duration of Immunity. Some degree of protection may be anticipated  
if the effect of administration of an adequate dose of the vaccine  
was maximum protection at about the second month. Protection may  
be expected to last from 1 to 2 years.

A recommended course consists of two doses of vaccine,  
one month apart followed by a re-inoculating dose after an interval  
of 12 months.

Side Effects. An epidemic influenza virus for use in vaccine is  
grown in eggs and all the reactions may be expected to be  
similar to egg protein.

Some reactions (3 to 4% general and 3 to 4% local) are  
likely to occur in some 8% of cases when the vaccine is given  
subcutaneously. If the vaccine is administered intramuscularly,  
this risk is appreciably reduced.

Although, theoretically, the reported injection of the  
egg protein content in the vaccine could produce sensitivity, this  
has not been observed in practice in extensive trials.

It is expected that influenza vaccine from which the  
egg antigen has been removed will likewise be produced.

Control of Epidemics. Although a suitable vaccine will avert the  
development of epidemics of classical influenza, it cannot be expected  
to prevent the spread of virus through the community. It is entirely  
therefore that non-vaccinated persons will be well-protected by the  
protection of the vaccinated.

In an epidemic year when the prevailing virus is without  
major antigenic change from the previous year, vaccines would be  
used to protect those previously unvaccinated with those who have  
not responded satisfactorily with the prevailing strain. If no new  
antigenic variants, the vaccine should be this extent reduce the  
prevalence of classical influenza.

If a new epidemic sub-type should appear and become  
epidemic, there would be very little opportunity with existing  
vaccine in use to protect, unless and otherwise an effective vaccine  
in sufficient quantity to influence the course of an epidemic.

(b) VACCINES FOR UPPER RESPIRATORY TRACT INFECTIONS

The Committee considers that at present there is not  
sufficient evidence about upper respiratory tract infections other  
than influenza to justify the use of vaccines in an attempt to control  
them. The Committee emphasizes the desirability of the Government  
from laboratories conducting further research into the production and  
value of these vaccines. In particular, assessment of their value  
should be undertaken by admitting them to field trials.

(Appendix continued)

2. QUESTIONS FROM WESTERN AUSTRALIA.

In its consideration of four questions from Western Australia, the Committee has substituted the word "sub-type" for the word "type" throughout.

With this substitution, the Committee's answers are:-

- (a) A vaccine in which at least 100 CCA of the prevalent sub-type of influenza virus is included will give up to 75% protection.
- (b) See 1.
- (c) No value.
- (d) Some protection will be obtained at 14 days. Maximum protection may be expected two months after administration. If a re-inforcing dose is given after the lapse of a year, protection may be expected to endure for another 1 or 2 years.

3. GENERAL.

The Committee recognises that a number of problems related to large scale immunisation against influenza still require solution and considers that the Commonwealth Serum Laboratories should be supported in research projects, including field trials of vaccines, directed to their elucidation.

The Committee emphasises that the value of an influenza vaccine as a prophylactic at any time will depend upon its containing in adequate amount the prevalent sub-type of virus. It is important therefore that the Commonwealth Serum Laboratories as manufacturers of the vaccine should at all times be aware of the prevalence of influenza viruses in different parts of Australia.

The Committee considers that this purpose might most readily be served by the free interchange of information between the Commonwealth Serum Laboratories and other virus laboratories throughout Australia. To develop an adequate liaison for this purpose the Committee suggests that an early conference of interested virologists might be arranged at the Australian National University.

In order that the scope of enquiry may be extended Health authorities might consider practicable measures to encourage the collaboration of medical practitioners in the submission of material for study by laboratories staffed and equipped for the identification of viruses.

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(Annex continued)

...of four questions from Western...  
...has submitted the word "sub-type" for...  
...the word...



- (a) ...in which at least 100 GUA of the virus...
- (b) ...type of influenza virus is included with...
- (c) ...to the protection...
- (d) ...to value...
- (e) ...this protection will be obtained at 14 days...
- (f) ...maximum protection may be expected two months...
- (g) ...after administration. If a re-inoculation dose...
- (h) ...is given after the lapse of a year, protection...
- (i) ...is expected to endure for another 1 or 2 years.

GENERAL

The Committee recognizes that a number of problems...  
...related to large scale immunization against influenza will...  
...require solution and considers that the Commonwealth Bureau...  
...of Biological Services should be requested to conduct research, including...  
...this trial on vaccines, directed to their identification...

The Committee considers that the value of an influenza...  
...vaccine as a prophylactic is very low when the virus...  
...contained in the vaccine is of the prevalent sub-type of virus...  
...It is important therefore that the Commonwealth Bureau of Biological...  
...Services should be requested to ensure that all strains of virus of...  
...the prevalent sub-type of influenza viruses in different parts of Australia...

The Committee considers that this success might be...  
...readily be achieved by the free interchange of information between...  
...the Commonwealth Bureau of Biological Services and other virus laboratories...  
...throughout Australia. To achieve an adequate liaison for this...  
...purpose the Committee suggests that an early conference of...  
...the various virusologists might be arranged at the Australian National...  
...University.

In order that the scope of enquiry may be extended...  
...Health Research Council's Virus Research Unit, it is suggested to encourage...  
...the collaboration of medical practitioners in the acquisition of...  
...material for study by laboratory studies and equipped for the...  
...isolation of viruses.

## VITAL STATISTICS.

## POPULATION AT 31ST DECEMBER, 1953.

|                           |            |
|---------------------------|------------|
| Victoria .. .. .          | 2,416,054* |
| Metropolitan Area .. .. . | 1,426,500  |

## SUMMARY OF VITAL STATISTICS, VICTORIA, 1953.

| Division.                      | Number of— |         |         |                        | Rate per 1,000 of Mean Population.† |         |         | Infantile Mortality.                    |
|--------------------------------|------------|---------|---------|------------------------|-------------------------------------|---------|---------|---|
|                                | Marriages. | Births. | Deaths. | Deaths under One Year. | Marriages.                          | Births. | Deaths. | Deaths under One Year per 1,000 Births. |
| Greater Melbourne .. .. .      | ..         | 27,560  | 13,731  | 544                    | ..                                  | 19·51   | 9·72    | 19·74                                   |
| Remainder of the State .. .. . | ..         | 26,001  | 8,919   | 589                    | ..                                  | 26·74   | 9·17    | 22·65                                   |
| Victoria .. .. .               | 19,258     | 53,561  | 22,650  | 1,133                  | 8·07                                | 22·46   | 9·50    | 21·15                                   |

\* Revised in accordance with preliminary results of the Census of 30th June, 1954.  
† Subject to revision.

## BIRTHS.

The following table shows the birth rates from 1855 to 1953:—

| 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                         | 1938 .. .. . | 30,344                 | 16·25                         |
| 1860-64 .. .. . | 24,060                 | 43·29                         | 1939 .. .. . | 30,493                 | 16·20                         |
| 1865-69 .. .. . | 25,963                 | 39·77                         | 1940 .. .. . | 31,962                 | 16·86                         |
| 1870-79 .. .. . | 26,971                 | 34·60                         | 1941 .. .. . | 34,406                 | 17·76                         |
| 1880-89 .. .. . | 30,113                 | 31·45                         | 1942 .. .. . | 35,927                 | 18·27                         |
| 1890-99 .. .. . | 34,310                 | 29·37                         | 1943 .. .. . | 39,117                 | 19·74                         |
| 1900-09 .. .. . | 30,655                 | 24·92                         | 1944 .. .. . | 39,358                 | 19·70                         |
| 1910-19 .. .. . | 33,800                 | 24·27                         | 1945 .. .. . | 41,200                 | 20·46                         |
| 1920-29 .. .. . | 35,457                 | 21·77                         | 1946 .. .. . | 46,693                 | 22·99                         |
| 1930 .. .. .    | 33,127                 | 18·55                         | 1947 .. .. . | 47,366                 | 23·06                         |
| 1931 .. .. .    | 30,332                 | 16·68                         | 1948 .. .. . | 46,099                 | 22·06                         |
| 1932 .. .. .    | 27,464                 | 15·18                         | 1949 .. .. . | 46,873                 | 21·92                         |
| 1933 .. .. .    | 28,302                 | 15·59                         | 1950 .. .. . | 49,830                 | 22·61                         |
| 1934 .. .. .    | 27,828                 | 15·20                         | 1951 .. .. . | 50,553                 | 22·28                         |
| 1935 .. .. .    | 27,884                 | 15·16                         | 1952 .. .. . | 53,738                 | 23·02                         |
| 1936 .. .. .    | 28,883                 | 15·63                         | 1953 .. .. . | 53,561                 | 22·46                         |
| 1937 .. .. .    | 29,731                 | 16·02                         |              |                        |                               |

## MARRIAGES.

Marriages in Victoria in 1953 numbered 19,238.

| Period.      | Marriage Rate per 1,000 of Population. | Period.      | Marriage Rate per 1,000 of Population. |
|--------------|--|--------------|--|
| 1931 .. .. . | 5·06                                   | 1942 .. .. . | 12·02                                  |
| 1932 .. .. . | 6·49                                   | 1943 .. .. . | 9·26                                   |
| 1933 .. .. . | 6·96                                   | 1944 .. .. . | 8·94                                   |
| 1934 .. .. . | 7·57                                   | 1945 .. .. . | 8·20                                   |
| 1935 .. .. . | 8·38                                   | 1946 .. .. . | 10·54                                  |
| 1936 .. .. . | 8·61                                   | 1947 .. .. . | 9·95                                   |
| 1937 .. .. . | 8·74                                   | 1948 .. .. . | 9·59                                   |
| 1938 .. .. . | 9·16                                   | 1949 .. .. . | 9·38                                   |
| 1939 .. .. . | 9·23                                   | 1950 .. .. . | 9·22                                   |
| 1940 .. .. . | 11·76                                  | 1951 .. .. . | 9·31                                   |
| 1941 .. .. . | 10·79                                  | 1952 .. .. . | 8·66                                   |
|              |  | 1953 .. .. . | 8·07                                   |

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.

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     | 1937 .. .. . | 37.1                             | 36.3           | 36.7      |
| 1885-89 .. .. . | 178.5                            | 97.9           | 133.3     | 1938 .. .. . | 34.1                             | 34.3           | 34.2      |
| 1890-94 .. .. . | 140.4                            | 94.9           | 114.7     | 1939 .. .. . | 32.3                             | 38.9           | 35.6      |
| 1895-99 .. .. . | 131.5                            | 100.0          | 112.5     | 1940 .. .. . | 39.7                             | 39.2           | 39.5      |
| 1900-04 .. .. . | 116.5                            | 86.2           | 98.2      | 1941 .. .. . | 34.6                             | 38.1           | 36.2      |
| 1905-09 .. .. . | 96.5                             | 71.5           | 81.2      | 1942 .. .. . | 43.8                             | 38.9           | 41.6*     |
| 1910-14 .. .. . | 84.2                             | 64.9           | 73.8      | 1943 .. .. . | 34.1                             | 38.2           | 35.8      |
| 1915-19 .. .. . | 76.2                             | 55.4           | 66.1      | 1944 .. .. . | 31.0                             | 33.3           | 32.0      |
| 1920-24 .. .. . | 71.6                             | 58.6           | 65.3      | 1945 .. .. . | 26.9                             | 29.6           | 28.0      |
| 1925-29 .. .. . | 58.3                             | 50.2           | 54.3      | 1946 .. .. . | 27.0                             | 27.3           | 27.2      |
| 1930 .. .. .    | 50.7                             | 42.3           | 46.5      | 1947 .. .. . | 26.8                             | 25.6           | 26.3      |
| 1931 .. .. .    | 48.0                             | 41.1           | 44.7      | 1948 .. .. . | 23.8                             | 24.1           | 23.9      |
| 1932 .. .. .    | 47.7                             | 38.9           | 43.0      | 1949 .. .. . | 20.3                             | 23.8           | 21.9      |
| 1933 .. .. .    | 40.9                             | 40.0           | 40.4      | 1950 .. .. . | 19.4                             | 20.9           | 20.1      |
| 1934 .. .. .    | 48.2                             | 41.4           | 44.6      | 1951 .. .. . | 20.8                             | 24.6           | 22.6      |
| 1935 .. .. .    | 43.0                             | 39.5           | 41.2      | 1952 .. .. . | 21.9                             | 22.7           | 22.3      |
| 1936 .. .. .    | 44.1                             | 40.7           | 42.3      | 1953 .. .. . | 19.7                             | 22.7           | 21.2      |

\* 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 1953 was 22,650 and the death rate per 1,000 of population in 1953 was 9.50.

| 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                              | 1939 .. .. . | 20,169                           | 10.72                              |
| 1880-89 .. .. . | 14,510                           | 15.13                              | 1940 .. .. . | 20,293                           | 10.70                              |
| 1890-99 .. .. . | 16,618                           | 14.21                              | 1941 .. .. . | 20,416*                          | 10.54                              |
| 1900-09 .. .. . | 15,194                           | 12.38                              | 1942 .. .. . | 21,973*                          | 11.18                              |
| 1910-19 .. .. . | 15,994                           | 11.47                              | 1943 .. .. . | 21,327*                          | 10.76                              |
| 1920-29 .. .. . | 16,524                           | 10.03                              | 1944 .. .. . | 20,502*                          | 10.26                              |
| 1930 .. .. .    | 15,959                           | 8.93                               | 1945 .. .. . | 20,496*                          | 10.18                              |
| 1931 .. .. .    | 17,033                           | 9.47                               | 1946 .. .. . | 21,534*                          | 10.60                              |
| 1932 .. .. .    | 16,805                           | 9.29                               | 1947 .. .. . | 21,442*                          | 10.44                              |
| 1933 .. .. .    | 17,456                           | 9.59                               | 1948 .. .. . | 21,825                           | 10.44                              |
| 1934 .. .. .    | 18,648                           | 10.18                              | 1949 .. .. . | 21,991                           | 10.28                              |
| 1935 .. .. .    | 18,456                           | 10.03                              | 1950 .. .. . | 22,341                           | 10.14                              |
| 1936 .. .. .    | 18,778                           | 10.16                              | 1951 .. .. . | 23,446                           | 10.33                              |
| 1937 .. .. .    | 18,613                           | 10.03                              | 1952 .. .. . | 23,322                           | 9.99                               |
| 1938 .. .. .    | 18,955                           | 10.15                              | 1953 .. .. . | 22,650                           | 9.50                               |

\* Excludes deaths of Defence personnel and of Internees and Prisoners of War from overseas.

MATERNAL DEATHS.

| Period.         | Average Annual Number of Deaths from—               |  |  |   |                       |   | Total.                       |                              | Rate per 10,000 Live Births from—                    |  |  |   |                       |   | Total.                       |                              |
|-----------------|---|--|--|---|-----------------------|---|------------------------------|------------------------------|--|--|--|---|-----------------------|---|------------------------------|------------------------------|
|                 | Sepsis of Pregnancy, Childbirth and the Puerperium. | Toxaemias of Pregnancy and the Puerperium. | Haemorrhage of Pregnancy and Childbirth. | Abortion without mention of Sepsis or Toxaemia. | Abortion with Sepsis. | Other Complications of Pregnancy, Childbirth, and the Puerperium. | Including Criminal Abortion. | Excluding Criminal Abortion. | Sepsis of Pregnancy, Childbirth, and the Puerperium. | Toxaemias of Pregnancy and the Puerperium. | Haemorrhage of Pregnancy and Childbirth. | Abortion without mention of Sepsis or Toxaemia. | Abortion with Sepsis. | Other Complications of Pregnancy, Childbirth, and the Puerperium. | Including Criminal Abortion. | Excluding Criminal Abortion. |
| 1930-34 .. .. . | 160   |  |  |   |                       |   | 160                          | 133                          | 54.37  |  |  |   |                       |   | 54.37                        | 45.20                        |
| 1935-39 .. .. . | 139   |  |  |   |                       |   | 139                          | 98                           | 47.17  |  |  |   |                       |   | 47.17                        | 33.12                        |
| 1940-44 .. .. . | 120   |  |  |   |                       |   | 120                          | 80                           | 33.14  |  |  |   |                       |   | 33.14                        | 22.18                        |
| 1945-49 .. .. . | 69  |  |  |   |                       |   | 69                           | 56                           | 15.12  |  |  |   |                       |   | 15.12                        | 12.36                        |
| 1950 .. .. .    | 4   | 15   | 3  | 3   | 8                     | 10  | 43                           | 35                           | 0.80   | 3.01                                       | 0.60                                     | 0.60  | 1.61                  | 2.01  | 8.63                         | 7.02                         |
| 1951 .. .. .    | 3   | 19   | 8  | 2   | 10                    | 8   | 50                           | 40                           | 0.59   | 3.76                                       | 1.58                                     | 0.40  | 1.98                  | 1.58  | 9.89                         | 7.91                         |
| 1952 .. .. .    | 4   | 13   | 4  | 3   | 6                     | 7   | 37                           | 32                           | 0.74   | 2.42                                       | 0.74                                     | 0.56  | 1.12                  | 1.30  | 6.88                         | 5.95                         |
| 1953 .. .. .    | 1   | 8  | 6  | 2   | 6                     | 4   | 27                           | 24                           | 0.19   | 1.49                                       | 1.12                                     | 0.37  | 1.12                  | 0.75  | 5.04                         | 4.48                         |

NOTE.—The above table shows the causes of maternal deaths in 1950 according to the Sixth Revision of the International List of Causes of Death. Corresponding details are not available for years prior to 1950.

## DEATH RATES FROM CERTAIN CAUSES.

| Cause of Death.  | Deaths per Million of Population.* |       |       |       |       |       |        |        |        |        |
|--|------------------------------------|-------|-------|-------|-------|-------|--------|--------|--------|--------|
|  | 1908-12.                           | 1944. | 1945. | 1946. | 1947. | 1948. | 1950.† | 1951.‡ | 1952.‡ | 1953.‡ |
| Heart diseases (including the conditions producing diseases of the heart)† | 1,141                              | 3,020 | 3,151 | 3,293 | 3,275 | 3,394 | 3,242  | 3,363  | 3,297  | 3,106  |
| Cancer   | 838                                | 1,331 | 1,366 | 1,396 | 1,416 | 1,385 | 1,456  | 1,397  | 1,423  | 1,411  |
| Nephritis, acute and chronic   | 576                                | 639   | 646   | 640   | 573   | 547   | 246    | 227    | 182    | 174    |
| Pneumonia and broncho-pneumonia  | 834                                | 576   | 558   | 613   | 555   | 594   | 383    | 427    | 314    | 276    |
| Accidental violence  | 531                                | 390   | 333   | 420   | 478   | 460   | 497    | 527    | 549    | 492    |
| Tuberculosis (all forms)   | 1,037                              | 377   | 363   | 350   | 330   | 307   | 196    | 179    | 148    | 117    |
| Diabetes   | 107                                | 208   | 208   | 213   | 213   | 217   | 167    | 156    | 176    | 173    |
| Gastro-enteritis and colitis, except diarrhoea of newborn                  | ..                                 | ..    | ..    | ..    | ..    | ..    | 48     | 70     | 41     | 42     |
| Diphtheria   | 122                                | 17    | 19    | 8     | 6     | 5     | 5      | 3      | 4      | 1      |

\* Subject to revision.

† Increase due to form of certification of death having been changed.

‡ Death rates from certain causes according to the Sixth Revision of the International List of Causes of Death.

NOTE.—Owing to changes in classification, rates given for nephritis, pneumonia, and diabetes for 1950 and 1951 are not strictly comparable with those given for years prior to 1950.

NOTE.—Rates given for 1950 and subsequent years are not strictly comparable with those given for earlier years owing to the introduction of the Sixth Revision (1948) of the International List of Causes of Death.

DEATH CERTIFICATE

Form with multiple columns and rows, containing faint text and possibly a table structure. The text is mostly illegible due to fading and bleed-through.

