FORTY-FIRST REPORT

OF THE

COMMISSION OF PUBLIC HEALTH

FOR THE

YEAR ENDED 30TH JUNE, 1963

PRESENTED TO BOTH HOUSES OF PARLIAMENT PURSUANT TO SECTION 23 (3) OF THE HEALTH ACT 1958.
Death of Francis John Cutts, J.P.

It is with deep regret that the Commission records the death of Francis John Cutts, J.P., who rendered valuable service as a member of the Commission over a period of eight years.
FORTY-FIRST REPORT OF THE
COMMISSION OF PUBLIC HEALTH 1962-63

To the Honorable Ronald Mack, 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 30th June, 1963.

IMMUNIZATION.

During the year under review several episodes have drawn attention to immunization against infectious diseases in the community and have shown quite clearly that it is necessary to maintain at a high level the immunization status of the population.

(a) Outbreak of Diphtheria.

Early in the year an outbreak of diphtheria occurred and up to the end of June was responsible for 131 cases. Prior to this and for some years it was considered that diphtheria was well under control, but it is apparent that the public has been too complacent, immunization has been neglected and this latest episode illustrates clearly the capacity of this disease to strike whenever immunization is neglected. Following this outbreak the Commission urged all municipal councils to ensure that, not only are children immunized with Triple Antigen in infancy, but that all are offered a "booster" dose of combined diphtheria and tetanus antigen in the first year at school.

(b) Apathy of the Public.

The apathy of the public in response to Salk poliomyelitis campaigns is also a matter of concern. Despite the fact that immunization against poliomyelitis is freely available the numbers offering for immunization are most disappointing. Recently, on the recommendation of the Consultative Council on Poliomyelitis, the Commission of Public Health approved of the introduction of a fourth or booster dose in Salk immunization programmes. This recommendation has been forwarded to all municipal councils and is being brought to the notice of all medical practitioners in the State.

These two instances again emphasize the importance of immunization for the protection of the community against infectious diseases.

POLIOMYELITIS.

Fourteen cases of poliomyelitis, one of these being non-paralytic, were reported during the period. One had received three Salk vaccine injections three years before contracting poliomyelitis, and another had one Salk vaccine injection two years before the onset of the disease; the other twelve cases had not received any Salk vaccine. This is the second lowest incidence of poliomyelitis since 1945; in 1957 there were twelve cases.

The age group incidence of the fourteen cases is:

<table>
<thead>
<tr>
<th>Years</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5</td>
<td>6</td>
</tr>
<tr>
<td>6-15</td>
<td>0</td>
</tr>
<tr>
<td>15-25</td>
<td>4</td>
</tr>
<tr>
<td>26 and over</td>
<td>4</td>
</tr>
</tbody>
</table>

The youngest case was aged 13 months and the oldest 36 years. There were no deaths from poliomyelitis.
Polio myelitis virus was recovered from twelve of the cases. Of the others, no virus was recovered from one case, but polio myelitis blood antibody levels indicated Type I virus as the infecting agent. All laboratory tests proved negative for the other, a boy aged 4 years, who had had three doses of Salk vaccine.

The types of polio myelitis virus recovered were:—

<table>
<thead>
<tr>
<th>Type</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type I</td>
<td>8</td>
</tr>
<tr>
<td>Type II</td>
<td>1</td>
</tr>
<tr>
<td>Type III</td>
<td>3</td>
</tr>
</tbody>
</table>

The Type II. virus was recovered from a patient, aged 3 years, from Mildura. The last time Type II. virus was recovered in Victoria was in 1956 when there were eleven cases of polio myelitis from which Type II. virus was recovered from March to June of that year.

The recovery of the Type II. virus indicates that all three types of polio myelitis virus are present in the community.

Seven of the cases were from country areas, and seven cases from the metropolitan area. There were no two cases from any one area, except Box Hill, where there was an interval of eight months.

The incidence of polio myelitis since 1956 (the year in which Salk vaccine was introduced into this State) has been:—

<table>
<thead>
<tr>
<th>Year</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>1956</td>
<td>252</td>
</tr>
<tr>
<td>1957</td>
<td>12</td>
</tr>
<tr>
<td>1958</td>
<td>60</td>
</tr>
<tr>
<td>1959</td>
<td>30</td>
</tr>
<tr>
<td>1960</td>
<td>23</td>
</tr>
<tr>
<td>1961</td>
<td>68</td>
</tr>
<tr>
<td>1962</td>
<td>20</td>
</tr>
<tr>
<td>1963 (to 30th June, 1963)</td>
<td>7</td>
</tr>
</tbody>
</table>

The Salk vaccination status of the community in Victoria as at 30th June, 1959, to 30th June, 1962 was:—

<table>
<thead>
<tr>
<th>Group</th>
<th>As at 30th June, 1959</th>
<th>As at 30th June, 1960</th>
<th>As at 30th June, 1961</th>
<th>As at 30th June, 1962</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 months to 4 years</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>5 years to 14 years</td>
<td>70</td>
<td>79</td>
<td>70</td>
<td>67</td>
</tr>
<tr>
<td>15 years to 44 years</td>
<td>69</td>
<td>74</td>
<td>77</td>
<td>78</td>
</tr>
</tbody>
</table>

These percentages reflect the apathy of the public to the Salk immunization programme and are not considered satisfactory to prevent cases of polio myelitis occurring, or the spread of the virus in the community. If this disease is to be completely controlled in Victoria, as it can be, the public response to this immunization must be increased.

As only fourteen cases occurred during the year it could be falsely presumed that with the present Salk vaccination status the disease is controlled, but with this level of community vaccination it is still possible for epidemics to occur.

On the recommendation of the Consultative Council on Polio myelitis, the Commission authorized the introduction of the fourth or “booster” dose in the Salk immunization programme. Although Salk vaccine as manufactured by the Commonwealth Serum Laboratories is regarded as one of the most potent in the world, the National Health and Medical Research Council recently expressed the view that immunity could be further improved by an additional inoculation, particularly as the Type III. strain is a weaker antigen than the other two types in the vaccine. This opinion is supported by the Queensland experience of 1961–62 when there was an apparent degree of breakthrough of the Type III. strain in vaccinated areas.
5

TUBERCULOSIS.

The tuberculosis services are comprehensive and are provided almost entirely through the Tuberculosis Branch of the Health Department and the Repatriation Department.

A review of the statistics for recent years shows that there has been a marked reduction in the death rate. In 1962, the rate of 3.35 per 100,000 was the lowest on record, the average age at death was 64.6 years.

The notification of new cases over the past five years has ceased to fall.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of New Cases</th>
<th>Rate per 100,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>1958</td>
<td>776</td>
<td>28.32</td>
</tr>
<tr>
<td>1959</td>
<td>862</td>
<td>30.32</td>
</tr>
<tr>
<td>1960</td>
<td>863</td>
<td>29.50</td>
</tr>
<tr>
<td>1961</td>
<td>658</td>
<td>23.32</td>
</tr>
<tr>
<td>1962</td>
<td>773</td>
<td>25.65</td>
</tr>
</tbody>
</table>

This indicates that there are still undiagnosed cases of active tuberculosis in the community and every effort must be made to concentrate on case finding. This must be the initial point in tuberculosis control—find the active case to treat. Cases occur in all age groups, the highest incidence being in the older age groups, especially males; particular attention may have to be paid to case finding in this group.

Of the 773 cases of pulmonary tuberculosis notified, 72 per cent. were proven bacteriologically and 91 per cent. were admitted to institutions for treatment.

Clinics.

The work of the clinics is increasing in quantity and importance. Tuberculosis Bureaux are established in Melbourne, Prahran, Ballarat, Bendigo and Geelong. In addition, regular clinics are held in association with the chalets at Hamilton, Horsham, Mildura, Moorpoopna, Sale, Wangaratta and Warrnambool. Medical staff from the Central Chest Clinic conduct clinics at Traralgon, Yallourn and Wonthaggi. Plans are being developed to increase this work. Total attendances at Metropolitan and Country Clinics were 61,334.

Division of Chest X-ray Surveys.

Mass chest X-ray surveys continued on a voluntary basis and 456,000 people were examined and 185 active cases of tuberculosis were found.

Three new caravans housing “Nanaphos” X-ray units with 70 mm. “Odelca” cameras were purchased and began operations in July. These have proved far superior in all ways to the obsolete 35 mm. lens camera transportable units which form the remainder of the equipment at the Division of Chest X-ray Surveys.

From July to September, 1962, an intensive tuberculosis survey was carried out in the municipalities of Coburg and Essendon, the objective being to X-ray the chests of 90 per cent. of the adults in the area. The survey failed to achieve the objective and 58 per cent. of the eligible population in the area was X-rayed. The incidence of active or possibly active tuberculosis per 1,000 X-rays during the initial part of the survey was twice that usually discovered in routine mass X-ray surveys in this State and during the re-visit to the area four times that usually discovered.

Mass X-ray surveys have been done on a voluntary basis since their inception in 1948, but attendances have been disappointing during the last few years with only about 25 per cent. of the eligible population (i.e., those aged 13 years and over) in an area attending for X-ray. The retention of voluntary surveys has been reviewed periodically over the years and although the method of voluntary attendance was retained, the position has always been regarded as open for further review from time to time.

The Coburg-Essendon survey with extensive advertising, publicity to educate the public, concentration of units and revisiting the area with units after the initial survey resulted in disappointing attendances. The greatest incidence of possibly active cases was found during the re-visit, i.e., following the examination of those people who showed some reluctance to attend.
In view of these results the Government has decided to introduce compulsory chest X-rays and the first survey on a compulsory basis will commence in Mildura on 14th October, 1963.

Sanatoria.

Specialist investigation and treatment including surgery, for pulmonary tuberculosis continues at the Austin Hospital which also cares for most of the patients with bone and joint tuberculosis. Children who have tuberculosis are cared for in a separate block at the hospital and full school facilities are available with a teacher from the Education Department. The two departmental sanatoria in the metropolitan area, Gresswell and Heatherston, continue to carry out routine care of patients. In the country, institutional treatment is provided at ten chalets attached to base hospitals. A ward of six beds is available at the Royal Women's Hospital for midwifery in tuberculous women. The average length of stay in hospital was 162 days for sanatoria and 61 days for the Austin Hospital patients. Thoracic surgical treatment was carried out on 3.6 per cent. of tuberculous patients admitted to sanatoria.

During 1962, the use of "second line" drugs for treatment of tuberculosis was intensified, and in many cases the use of "multiple drugs" was employed. It is encouraging to report that approximately 20 per cent. of patients with old chronic infectious diseases have become non-infectious on these regimes.

Bacteriology Laboratory.

All drug sensitivity testing and other bacteriology for tuberculosis are carried out at the Fairfield Hospital. During the year, the technique for carrying out sensitivity testing was changed from liquid to solid media.

Tuberculin Surveys.

Tuberculin testing of school children of 11 years and over was continued and six children were found to have active tuberculosis. B.C.G. vaccination was offered to the negative reactors and 46,043 were vaccinated. Comparison of the natural positive reactor rates obtained from school children shows a satisfactory decline. In areas examined in 1958 and again in 1962, there was a reduction in the reactor rate from 7.06 per cent. to 3.36 per cent.

Rehabilitation.

With modern treatment there is little difficulty in returning the majority of tuberculosis sufferers to remunerative employment. The exceptions are those who have other disabilities, e.g., age, lack of skill, and psychopathology including alcoholism, either alone or in combination.

Rehabilitation training was undertaken by 25 patients and advice and assistance given to those seeking employment after discharge from sanatoria.

Almoner.

The services of a full-time almoner are available to those in need of help.

EPIDEMIOLOGICAL REPORT.

Diphtheria.

Diphtheria notifications which include both cases and carriers totalled 131 at the end of June, 1963. This is the highest incidence since 1953 and cases were still occurring at the time of preparation of this report.

The majority of these notifications stem largely from two separate outbreaks in the metropolitan area. In October, 1962, a number of cases occurred in a special school for mentally retarded children where the level of immunization was low; the organism responsible was C. diphtheriae gravis type Nadjerian.

The second and by far the largest outbreak began in Collingwood during April, 1963, and by June involved ten metropolitan municipalities of which St. Albans (Keilor City) was the most affected. A direct extension to South Lyndhurst (Cranbourne Shire) resulted in a small number of cases in a group of non-immunized persons through some contacts of the St. Albans outbreak. Ten cases have been reported from a circumscribed area in Norlane (Corio Shire) of which one death occurred in a non-immunized child.
The majority of the patients had no history of prophylactic inoculations against the disease; a small number had incomplete courses and very few had been completely immunized. In the latter group the disease was very mild.

Although the main responsibility to ensure that children receive adequate protection rests with parents, it is also incumbent on municipalities to make available regular clinics and campaigns. These recent episodes have revealed some serious shortcomings mainly in respect of providing "booster" inoculations at or about the age of five years when children first attend primary schools.

**Infectious Hepatitis.**

Notified cases of this disease for 1962 were 3,535 compared with 3,554 for the previous year. This is the third highest incidence since infectious hepatitis was proclaimed a notifiable disease in 1952. The year 1955 reached a peak of 3,776 notified cases.

There is no evidence that common vehicles of spread such as water and milk supplies are responsible for the majority of these cases. Person to person contact either direct or indirect appears the likely mode of transmission.

By analogy with poliomyelitis the effective control of this disease in the community will rest mainly on the discovery of an effective vaccine. As a basis to such a development, isolation of the causal virus is essential. Although some promising reports of isolation of a virus have occurred over recent years, to date these results have not been confirmed.

**Rubella.**

Rubella notifications were 1,565, an increase of 800 over the previous year. The clinical picture of this disease may be confused with other virus diseases such as certain of the E.C.H.O. group which may give rise to a rubella-like rash. These viruses have been very prevalent in the community, but do not appear to affect the unborn child such as occurs in a percentage of expectant mothers who develop rubella in the first three months of pregnancy.

During the year, the virus of rubella was isolated in the U.S.A. and later at Fairfield Hospital. This is a major advance towards evolving a vaccine which would protect against the disease, and subsequent foetal abnormalities.

**Influenza.**

Although the incidence of respiratory virus illnesses was high during the winter, virus influenza played an insignificant part. As influenza vaccine contains antigens which are capable of conferring a reasonably high protection only against virus influenza, it is obvious that influenza-like illnesses may occur in vaccinated persons. If this fact is not appreciated, influenza vaccine may be discredited.

**Measles.**

There is an epidemic of measles current at the time of preparing this report. This disease is not notifiable but from admission to Fairfield Hospital the incidence to date is the highest for several years.

This epidemic has no particularly unusual characteristics insofar as virulence of the organism and complications are concerned.

**Q. Fever.**

A limited outbreak of Q. fever involving four employees at a small animal by-products works in Melbourne during November, 1962, is the first recorded instance of this disease being naturally acquired in Victoria. The only other cases have occurred among laboratory workers where accidental infection has been contracted during research into this organism.

The reservoirs of infection are widely dispersed over a variety of animals, particularly cattle, sheep and goats. Contaminated dust from environments where animals are housed or slaughtered has been incriminated in several outbreaks, presumably by inhalation. Certain occupations involving the handling of animals and their products are prone to develop Q. fever.
Although this disease has occurred in other States over a period of years, notably Queensland, absence in Victoria has been a puzzling feature. It is possible that isolated cases have occurred but have not been diagnosed as Q. fever. This is understandable as the symptoms are not specific, consisting usually of fever and atypical pneumonia. A considerable volume of interstate trading in domestic animals has been a feature for many years.

In an effort to determine the presence of infection among abattoir workers, officers of the Department have obtained several hundred blood samples in recent years. Only 6 per cent. evidenced specific antibodies mainly in low titres which could well have been acquired without necessarily being associated with clinical illness.

Following this small outbreak a further case was reported from Fairfield Hospital in a male whose occupation was wool sorting.

**Botulism.**

The first human case of botulism poisoning recorded in Victoria occurred during April in a woman who tasted some home preserved cantaloupe. After a short illness the patient died from circulatory failure. *Clostridium botulinum* type A toxin was isolated from the incriminated jar of melon.

This occurrence has focussed attention on the potential hazard of certain home processed foodstuffs. Under anaerobic conditions the spores of *C. botulinum* produce a highly lethal toxin (case fatality rate ranges between 60 to 70 per cent.) which frequently does not evidence any colour, odour or flavour changes, depending on the particular food. These spores have a high degree of heat resistance, requiring 330 minutes at 100° C. (212° F.) to destroy them. As many foods are adversely affected by such prolonged cooking it is apparent that most home processed products do not meet these criteria. The toxin is rendered harmless by subjecting to heat (minimum 100° C. for 5 to 10 minutes, hence boiling or cooking these preserved foods just prior to consumption is a safety factor.

The higher the acid content the less the risk of toxin production; acid foods such as tomatoes and rhubarb are usually safe. Vinegar, when added to certain non-acid vegetables, for example, beetroot, minimizes the risk. Commercial canning under modern scientific control is seldom incriminated in botulism poisoning.

Following on this case, the Commission issued a warning on the hazard of underprocessed home products, particularly non-acid or weak acid foods which are not normally subject to cooking prior to consumption.

**Redfin Fish Poisoning.**

During September, 1962, an outbreak of food poisoning in Shepparton following the consumption of redfin fish (English perch) was one of several similar episodes in various parts of Victoria involving at least one hundred persons. In every instance the fish were caught in the Lake Victoria-Rufus River complex in south-western N.S.W., usually in the upper reaches of the river just below the Lake Victoria regulator. This lake is fed from the Murray River through Frenchman’s Creek; the overflow returns to the Murray via Rufus River.

Both commercial and amateur fishermen fish these waters for redfin, bream, Murray perch (yellow belly) and cod. Redfin is by far the most prolific species, being a voracious feeder with a large variety of foods. The bulk of the commercial catch goes to the Melbourne Fish Market through Mildura.

The symptoms are compatible with an enteroxic poison consisting of abdominal pains, nausea, vomiting, shock in severe cases and not uncommonly diarrhoea. The onset ranged from one half to eighteen hours following ingestion. Recovery was the rule over a period of several hours to days. Many patients were acutely ill and prostrated requiring hospitalization in several instances.

In collaboration with the Department of Public Health of N.S.W., an investigation was initiated in the Rufus River area but no definite conclusion could be reached as to the causation of the condition.

Some facts were accumulated, namely:—

1. Redfin to the exclusion of all other species of fish from the Lake Victoria-Rufus River area was incriminated.
2. There was no evidence that the water was contaminated from outside sources such as "1080" rabbit poison, weedicides, &c.

3. Cases of poisoning occurred irrespective of—
   (a) the methods by which the fish had been caught;
   (b) the length of time between the death and consumption of the fish, whether cooked immediately after catching or for varying periods in deep freeze.

4. Affected fish evidenced no abnormal appearance, odour nor taste changes.

5. Methods of cooking had no correlation.

A quantity of Rufus River redfin including leftover portions of incriminated fish were examined at the Public Health Laboratory, State Laboratory, Fisheries and Wildlife Department and the School of Pharmacology, University of Melbourne. The results of these tests were essentially negative and gave no real clue as to the causation of the symptoms in humans.

The evidence favours some environmental factor peculiar to redfin in this particular area. This may be some form of vegetation or food consumed by this species but rejected by other fish, which does not affect the redfin yet makes the flesh toxic to humans.

The Commission on 5th March, 1963, warned the public of the danger of eating redfin from the Lake Victoria-Rufus River waters and further requested the N.S.W. authorities to erect warning notices in this area. A request was made to the Department of Fisheries and Wildlife to investigate this problem either by itself or in collaboration with the N.S.W. Department of Fisheries.

Venereal Disease.

During the year, 2,542 males and 560 females (total 3,102) attended the Government Clinic for venereal disease. Included in this were 171 men and 104 women who came for a blood test to conform with American visa requirements.

The number of cases of gonorrhoea and syphilis found among this group of 3,102 persons is as follows:

<table>
<thead>
<tr>
<th></th>
<th>Gonorrhoea</th>
<th>Syphilis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>742</td>
<td>43</td>
</tr>
<tr>
<td>Women</td>
<td>225</td>
<td>3</td>
</tr>
</tbody>
</table>

The amount of gonorrhoea seen at the Clinic is about the same as in previous years. The number with syphilis is still declining.

Leukaemia Survey.

1. General.—This report outlines some information obtained on cases of leukaemia occurring in Victoria from 1st January, 1962, to 31st March, 1963. It is based on Blood Summary Case Histories and notifications and summarizes briefly the progress of the survey.

   A register of cases of leukaemia has been kept and the total number of cases registered is 209. This includes some retrospective notifications about which it is impossible to obtain further information. The number of Blood Summary Case Histories on hand is 132. This is the effective component of the survey and is reasonably satisfactory at this stage of the survey but leaves much to be desired when it is considered that approximately 180 cases of leukaemia occur annually in Victoria.

   Deaths occurring in the period under review are not known but the number of deaths with completed summaries is 33.

   The distribution of the source of the case histories is of some interest:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Metropolitan Hospitals</td>
<td>116</td>
</tr>
<tr>
<td>Country Hospitals</td>
<td>4</td>
</tr>
<tr>
<td>Private Medical Practitioners</td>
<td>12</td>
</tr>
<tr>
<td>Total</td>
<td>132</td>
</tr>
</tbody>
</table>
The approximate incidence of leukaemia in Victoria has been estimated in the past from mortality figures and no exact information exists on morbidity. Neither notifications nor case histories submitted in the course of the survey give any real indication of resolving this basic question. As it is regarded as being of fundamental importance to establish a base year of incidence, a personal approach is being made to all possible sources of cases of leukaemia for the year 1962.

2. Analysis of Records.—Sufficient information is available in 195 cases of leukaemia and allied diseases for the diagnosis, in relationship to type of leukaemia and age distribution, to be presented in tabular form. The table is self explanatory but the relative incidence of acute leukaemia, especially in the older age groups, is worthy of notice.

When cases of leukaemia and aleukæmia are classified into broader age groups, it is found that 18.4 per centum of cases occur under 15 years of age, 24.2 per centum between 15 years and under 50 years and 57.4 per centum at 50 years of age and over. This pattern in the age incidence of leukaemia in Victoria is very similar to the findings of a New Zealand survey.

**LEUKAEMIA AND RELATED DISEASES.**

*Type and Age Distribution.*

(1st January, 1962, to 31st March, 1963.)

<table>
<thead>
<tr>
<th>Type and Age Distribution</th>
<th>Total for All Groups (Years)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0-4</td>
</tr>
<tr>
<td>1. Leukaemia and Aleukæmia—</td>
<td></td>
</tr>
<tr>
<td>A.—Acute Leukæmias†</td>
<td>102</td>
</tr>
<tr>
<td>B.—Chronic Lyeloid</td>
<td>30</td>
</tr>
<tr>
<td>C.—Chronic Lymphatic‡</td>
<td>46</td>
</tr>
<tr>
<td>Sub Totals</td>
<td>178</td>
</tr>
<tr>
<td>2. Lymphosarcoma</td>
<td>5</td>
</tr>
<tr>
<td>3. Multiple Myeloma and Myelosclerosis</td>
<td>12</td>
</tr>
<tr>
<td>Totals</td>
<td>195</td>
</tr>
</tbody>
</table>

* The figures do not represent the incidence of the disease and refer only to those cases for which records exist.
† Including one case of erythroleukæmia, one acute leukaemia with polythæmia and three cases of subacute leukaemia.
‡ This figure includes three cases also recorded as lymphosarcoma.

**SUMMARY OF IMMUNIZATION.**


<table>
<thead>
<tr>
<th>Material</th>
<th>1961-62</th>
<th>1962-63</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Quantity</td>
<td>Doses</td>
</tr>
<tr>
<td>Salk Vaccine</td>
<td>236,146</td>
<td>472,292</td>
</tr>
<tr>
<td>Triple Antigen</td>
<td>161,519</td>
<td>161,519</td>
</tr>
<tr>
<td>Combined Diphtheria and Tetanus Toxoids</td>
<td>36,286</td>
<td>72,572</td>
</tr>
<tr>
<td>Purified Tetanus Toxoid (A.P.A.)</td>
<td>17,540</td>
<td>35,080</td>
</tr>
<tr>
<td>Smallpox Vaccine</td>
<td>3,107</td>
<td>3,107</td>
</tr>
<tr>
<td>Diphtheria Prophylactic (P.T.A.P.)</td>
<td>2,127</td>
<td>5,873</td>
</tr>
<tr>
<td>Schick Test Toxin</td>
<td>923</td>
<td>4,615</td>
</tr>
<tr>
<td>Tetanus Prophylactic (Formalinized Toxoid)</td>
<td>120</td>
<td>120</td>
</tr>
<tr>
<td>Mixed Pertussis and Diphtheria Antigen</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Pertussis (Phase I)</td>
<td>60</td>
<td>120</td>
</tr>
</tbody>
</table>

* From 1st November, 1962, the dose size of Triple Antigen was changed from 1 cc. to 1 cc.
Whilst 1962 has been difficult for the laboratory in terms of internal staffing and organization, it is pleasing to record that 21,222 examinations were made, an increase of over 11 per cent. on the previous year. There have been some changes in the distribution of specimens examined, significant increases in the examinations for brucellosis and neisserian infections and a decrease in the numbers of faecal specimens being recorded (see table). However, these changes do not necessarily reflect any lessening in the importance of enteric infections nor indeed marked increases in the incidence of brucellosis or gonorrhoea in the community.

The most significant features of the year’s work have been in the following areas:

1. **Enteric Infections.**
   (a) *Salmonella* Infections.—The total number of *Salmonella* strains isolated during 1962 was 209 (c.f. 210 for the year 1961). As usual, *Sal. typhimurium* comprised approximately 70 per cent. of the total whilst *Sal. newport*, *Sal. derby* and *Sal. adelaide* were seen in greater numbers than usual. A species new to this community has been identified from at least ten cases, all of whom were sufficiently sick to be admitted to hospital. This species, *Sal. havana*, is found rarely in humans (4 cases have been reported elsewhere throughout the world from 1959–62) and is, therefore, of considerable epidemiological interest.
   (b) *Shigellosis.—*Little change in the incidence of *Shigella* infection in the general community has occurred. The Children’s Cottages at Kew have provided the bulk of these organisms and it seems that in addition to *Sh. sonnei* and *Sh. flexneri 4a*, *Sh. dysenteriae* Type 2 has again appeared in the institution.
   (c) *Food Poisoning.—*Staphylococcal food poisonings have provided some of the most interesting epidemiological studies during this year. Two major outbreaks occurred and imported fish was incriminated as the source of the enterotoxic Staphylococci. By far the most perplexing problem has been the sporadic outbreaks of food poisoning associated with the consumption of the fresh water fish “redfin”. The symptomatology of the “infection” is not unlike Staphylococcal enterotoxaemia. However, in spite of an examination of a large number of these fish, it has not been possible to isolate Staphylococci or, indeed, any other organisms which might be incriminated. (Refer to Epidemiological Report.)

2. **Brucellosis.**

Reference to the appended table will show that there has been a marked increase in the number of serological examinations for *Brucella* infection in the past year. In part, this figure has been boosted by a large survey of sera from abattoir workers; while not yet completed, the results have been quite interesting in that a number of unsuspected *Brucella* infections have been diagnosed in this group of people. A total of 73 new cases of Brucellosis have been diagnosed serologically in the past year, stressing the importance of the disease in this community. It is pleasing to note that many more general practitioners are aware of the possibility of this disease in certain patients and now request *Brucella* serological examination routinely.

3. **Diphtheria.**

The dearth of diphtheria infection since 1957 has perhaps led us to believe that this disease should no longer present problems in this community. Three outbreaks of diphtheria in Melbourne and one in Wangaratta over the past twelve months have shown this to be very far from the truth. Twelve strains of *C. diphtheriae* were isolated in this laboratory, eleven of them being *Gravis* strains. The most severe outbreak with which we were associated occurred in a school for mentally retarded children.
ANNUAL EXAMINATIONS.
A Comparison of Numbers for Years 1960–62.

<table>
<thead>
<tr>
<th>Examination</th>
<th>1960</th>
<th>1961</th>
<th>1962</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Upper Respiratory Tract Infection—</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Diphtheria (culture)</td>
<td>2,975</td>
<td>2,472</td>
<td>2,987</td>
</tr>
<tr>
<td>(b) Haemolytic Streptococci—</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(i) Culture</td>
<td>3,783</td>
<td>3,442</td>
<td>3,604</td>
</tr>
<tr>
<td>(ii) Groupings</td>
<td>745</td>
<td>577</td>
<td>498</td>
</tr>
<tr>
<td>(iii) Anti Streptolysin Titre</td>
<td>722</td>
<td>819</td>
<td>825</td>
</tr>
<tr>
<td>(c) Vincent's Infection (Smear)</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2. Enteric Infection (Salmonella and Shigella)—</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(i) Cultures</td>
<td>3,610</td>
<td>3,994</td>
<td>2,910</td>
</tr>
<tr>
<td>(ii) Identiﬁcations</td>
<td>429</td>
<td>405</td>
<td>394</td>
</tr>
<tr>
<td>(iii) Widal Agglutinations</td>
<td>687</td>
<td>382</td>
<td>424</td>
</tr>
<tr>
<td>3. Serological Investigations—</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Brucellosis</td>
<td>780</td>
<td>822</td>
<td>2,305</td>
</tr>
<tr>
<td>(b) Glandular Fever</td>
<td>316</td>
<td>337</td>
<td>345</td>
</tr>
<tr>
<td>(c) Leptospirosis</td>
<td>172</td>
<td>131</td>
<td>150</td>
</tr>
<tr>
<td>(d) Typhus Fever</td>
<td>56</td>
<td>81</td>
<td>69</td>
</tr>
<tr>
<td>(e) Toxoplasmosis</td>
<td>163</td>
<td>144</td>
<td>31</td>
</tr>
<tr>
<td>(f) Miscellaneous</td>
<td>141</td>
<td>228</td>
<td>26</td>
</tr>
<tr>
<td>4. Gonorrhoeal and Related Infection—</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Gonorrhea</td>
<td>632</td>
<td>543</td>
<td>623</td>
</tr>
<tr>
<td>(i) Smear</td>
<td>1,741</td>
<td>659</td>
<td>2,653</td>
</tr>
<tr>
<td>(ii) Culture</td>
<td>19</td>
<td>32</td>
<td>16</td>
</tr>
<tr>
<td>5. General Bacteriological Examinations including endogenous infections, food-poisoning outbreaks, micro-biological examination of food, milk, &amp;c.—</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(i) Cultures</td>
<td>1,015</td>
<td>774</td>
<td>738</td>
</tr>
<tr>
<td>(ii) Drug Sensitivities</td>
<td>2,766</td>
<td>2,904</td>
<td>2,494</td>
</tr>
<tr>
<td>6. Water Examinations</td>
<td>247</td>
<td>336</td>
<td>278</td>
</tr>
<tr>
<td>7. Medical Mycology (Microscopic and Culture)</td>
<td>424</td>
<td>287</td>
<td>238</td>
</tr>
<tr>
<td>Totals</td>
<td>21,424</td>
<td>19,071</td>
<td>21,222</td>
</tr>
</tbody>
</table>

CHEMICAL LABORATORY.

During the past year, the Health Laboratory has operated satisfactorily, handling a large variety of samples. The number of samples analyzed was 1,945, a slight increase over the figure for the previous year. The majority of the samples consisted of municipal food samples, the remainder being mainly from departmental sources.

Eleven per cent. of the food samples submitted failed to comply with Food and Drug Standards Regulations, as compared with 13 per cent. in 1961–62.

Laboratory staff members were summoned to give evidence in ten prosecutions under the Health Act.

A summary of the work for the year is given below.

**Dairy Products.**

<table>
<thead>
<tr>
<th>Food</th>
<th>Number of Samples submitted</th>
<th>Number not complying with Regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milk</td>
<td>454</td>
<td>2</td>
</tr>
<tr>
<td>Cream</td>
<td>10</td>
<td>Nil</td>
</tr>
<tr>
<td>Butter</td>
<td>35</td>
<td>2</td>
</tr>
<tr>
<td>Cheese</td>
<td>15</td>
<td>1</td>
</tr>
</tbody>
</table>

Both non-complying milk samples were deficient in total solids, one was deficient in milk-fat, and one had added water. One sample of butter was deficient in fat, and one contained excess water. A sample of cheese was deficient in milk-fat.
Meat and Meat Products.

There has been a small, but welcome improvement in the quality of certain types of meat products, although the use of sulphur dioxide in non-permitted foods is still prevalent. The break-down is given below:

<table>
<thead>
<tr>
<th>Food</th>
<th>Number of Samples Submitted</th>
<th>Number Not Complying</th>
<th>Proportion Not Complying in—</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meat—</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fresh</td>
<td>123</td>
<td>15</td>
<td>12</td>
</tr>
<tr>
<td>Chopped</td>
<td>249</td>
<td>56</td>
<td>22</td>
</tr>
<tr>
<td>Manufactured</td>
<td>66</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Canned</td>
<td>1</td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>Sausages and Sausage Meat</td>
<td>399</td>
<td>48</td>
<td>12</td>
</tr>
<tr>
<td>Tripe</td>
<td>11</td>
<td>5</td>
<td>45</td>
</tr>
<tr>
<td>Meat Pies</td>
<td>21</td>
<td>4</td>
<td>20</td>
</tr>
</tbody>
</table>

Other Foods.

Three samples of whisky, alleged to be Scotch whisky, were submitted under the Goods Act and found not to be Scotch whisky.

Thirty-nine samples of margarine were analyzed under the Margarine and Health Acts and all were found to comply.

One sample of coffee failed to comply with the regulations.

Miscellaneous.

In view of the belief by certain authorities overseas, that formaldehyde developed in certain types of fish on storage, three samples of fresh barracouta, flathead and gummy shark were obtained, and divided into portions which were placed in cold storage. Samples were tested at 3, 6, 9 and 12-monthly intervals for the presence of formaldehyde. Negative results were obtained in all cases.

Survey of Pre-cooked Frozen Foods.

A survey of the microbiological quality of the above type of frozen foods was carried out during the year. Samples were obtained from city and suburban stores. The results indicated that a large degree of variation in processing hygiene exists among the various manufacturers of these foods.

Mixed Meats.

An interesting phase of the laboratory activities was the work done on the detection of kangaroo and horse meats in raw meat, by serological methods. Several samples of inspected meat were tested, and found to be true beef. It is planned to carry out analyses of raw meat from various meat pie manufacturers in the near future for the presence of kangaroo or horse meat.

FOOD STANDARDS COMMITTEE.

The Food Standards Committee held three meetings during the past year, the major business under discussion being a number of proposed draft standards promulgated by the Commonwealth Food Standards Committee for uniform adoption by all States, and recommended by the National Health and Medical Research Council. Steady progress is being made in this endeavour to achieve a uniform code of food standards throughout the Commonwealth.

Apart from consideration of a number of standards in preliminary draft form, approval was given for the adoption of final draft standards for several classes of food and food additives. The more important ones dealt with the addition of minerals and vitamins to foods, a new list of approved food colours, skim milk, condensed milk, malted milk powder, marzipan, and the use of sorbic acid as an alternative preservative to benzoic acid.
Matters still under discussion include the question of the use of saccharin in soft drinks, the artificial colouring of cherry jam, and the continued illegal use of sulphur dioxide in chopped meat. In regard to the last named, it is anticipated that an amended regulation about to be gazetted will aid the enforcement of this provision.

**PROPRIETARY MEDICINES ADVISORY COMMITTEE.**

Since publication of the first Proprietary Medicines Register on the 14th July, 1955, a further 7,102 proprietary medicines have been registered. This increased the number of preparations registered for sale in Victoria to 10,959 as at the 30th June, 1963. During the past twelve months, 772 applications for registration have been received bringing the overall total to 13,464.

During the year, a Supplementary Register was published which not only showed additions to the Register, but also contained a list of preparations for which the registrations have been cancelled.

**THE HOME HELP SERVICE.**

There has been no change in the subsidy rate or in the conditions of subsidy during the last twelve months.

The service has continued to expand, mainly in regard to the number of householders assisted rather than in the number of services operating. The municipal councils granted subsidies in respect of Home Help Services during the last twelve months were rural ones, many of which have not been able to commence a service owing to inability to obtain staff.

The maximum period of three weeks full time home help assistance continues to be sufficient help for the large majority of young families. At the same time, an increasing number of requests have been made for permission to extend the assistance over a much longer period on either a full time or a part time basis. The types of cases needing this assistance are young families where the mother is suffering from an illness of a long duration such as mental illness, cancer or muscular dystrophy and it has been possible in many instances to provide relief.

The number of councils willing to provide hourly assistance to the aged and infirm over long periods has increased. There is no doubt that without this hourly assistance many aged persons would have to seek institutional care, some immediately and others as a result of declining health caused by physical exertion and mental insecurity. For this reason it is regrettable to know that this type of service is still lacking in many districts where a Home Help Service is operating.

The following subsidies were granted during the 1962-63 financial year:—

<table>
<thead>
<tr>
<th>Subsidies</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintenance subsidies for new services</td>
<td>12</td>
</tr>
<tr>
<td>Special grants in respect of private transport (including two upward revisions)</td>
<td>11</td>
</tr>
</tbody>
</table>

Subsidies regarding the Home Help Services are as follows:—

<table>
<thead>
<tr>
<th>Subsidies</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of councils granted subsidies for Home Help Services</td>
<td>142</td>
</tr>
<tr>
<td>Number of Services at present operating</td>
<td>120</td>
</tr>
<tr>
<td>Home Helps engaged—</td>
<td></td>
</tr>
<tr>
<td>337 Full time</td>
<td>1,251</td>
</tr>
<tr>
<td>451 Part time</td>
<td></td>
</tr>
<tr>
<td>463 Hourly</td>
<td></td>
</tr>
</tbody>
</table>

Total number of householders assisted for six months period ending 31st December, 1962, 8,389 (over 28 per cent. of the cases assisted were elderly).

A further 307 householders applied for assistance during the six months period but none was available.

Total cost to the Government for twelve months period, £288,006.
SUBSIDIES APPROVED 1962-63.

Maintenance Subsidies Granted to Twelve Councils—

- Broadford Shire
- Metcalf Shire
- Colac Shire
- Seymour Shire
- Karkaroo Shire
- Hampden Shire
- Mansfield Shire
- Walpeup Shire
- Bulla Shire
- Flinders Shire
- Bright Shire
- Warrnambool Shire.

Special Subsidies in Respect of Private Transport: 11—

- Doncaster Shire (an increased amount)
- Grenville Shire
- Strathfieldsaye Shire
- Croydon Shire
- Cranbourne Shire (an increased amount)
- Metcalfe Shire
- Bulla Shire
- Frankston Shire
- Seymour Shire
- Lowan Shire
- Oakleigh City.

Total number of Councils now granted Maintenance Subsidies—142.

Total Number of Special Subsidies for Private Transport—70.

ELDERLY CITIZENS' CLUBS.

During the year, eight municipal councils have applied for and been granted subsidies towards the cost of establishing or maintaining new Elderly Citizens' Clubs. In addition, eleven councils were granted capital or maintenance subsidies for clubs previously granted a subsidy.

The subsidies granted are as follows:

13 Capital Grants . . .

- 7 new clubs
- 3 additional capital grants
- 3 already receiving a maintenance subsidy.

6 Maintenance Subsidies

- 1 new club
- 5 clubs granted capital subsidies.

Total number of clubs now granted subsidies:

- Capital and/or Maintenance Subsidies . . . . . . . . . . 102
- Total Capital Grants approved . . . . . . . . . . 93
- Total Maintenance Subsidies approved . . . . . . . . . . 76
- The Capital Expenditure for twelve months period . . . £43,304
- The Capital Commitment at end of period . . . . . £56,834
- Maintenance Expenditure for twelve months . . . . . £33,187
- Total Cost to Government . . . . . . . . . . . . . . . . £76,491

The additional cost to the Government has been in regard to capital expenditure. There has been a slight drop in the maintenance costs during the year which, considering the additional number of clubs, would indicate that a number of them are becoming more self-supporting.

There are now 68 clubs operating in either specially built clubrooms or remodelled premises, whilst a further 17 have received capital grants in respect of permanent buildings many of which will be completed shortly.

Applications have also been received for grants towards the cost of establishing clubrooms for another five clubs and these applications are now being considered.
Clubs are encouraged to provide a pleasant meeting place so that the elderly may be brought together in a happy atmosphere and then when established to provide services which will help the elderly to retain, or regain their health so they may continue to live independently in their own homes as long as possible. Such services include the provision of hot dinners, which may be served at the club and/or delivered to the homes of the housebound, foot clinics, handicraft classes to relieve boredom and give people a feeling of usefulness, visiting services, and club libraries.

There are known to be over 14,000 elderly persons taking advantage of club facilities as well as those who receive “meals on wheels” and are contacted through visiting services.

INDUSTRIAL HYGIENE DIVISION.

Spillage of Tetra Ethyl Lead on a Ship in the Port of Melbourne.

During unloading operations a drum of Tetra Ethyl Lead was damaged and a large quantity was spilt in the hold of the ship. The extremely high toxicity of this substance combined with extreme volatility necessitated an investigation by the Division. As a result of this investigation, the Commission of Public Health required the ship's agents to decontaminate or destroy the nuisance to the satisfaction of the Industrial Hygiene Division.

Conciliation and Arbitration Commission—Safety Matters Arising in Industrial Disputes.

A request was received from a Conciliation Commissioner for the advice of the Division on a matter where safety had arisen as an issue in an industrial dispute. The Commission has agreed that the Industrial Hygiene Division will, on request, advise Conciliation Commissioners on safety health matters in regard to industrial disputes.

Radiation.

The number of licences issued to various sections of the community with respect to the possession and use of irradiating apparatus and radio-active substances under the Irradiating Apparatus and Radio-Active Substances Regulations for the period covered by the report are as follows:

<table>
<thead>
<tr>
<th>Irradiating Apparatus—</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>372</td>
</tr>
<tr>
<td>Dental</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>439</td>
</tr>
<tr>
<td>Industrial</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>57</td>
</tr>
<tr>
<td>Chiropractor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>40</td>
</tr>
<tr>
<td>Educational</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>22</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Radio-active Substances—</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical</td>
<td></td>
<td></td>
<td></td>
<td>47</td>
</tr>
<tr>
<td>Industrial</td>
<td></td>
<td></td>
<td></td>
<td>111</td>
</tr>
<tr>
<td>Educational</td>
<td></td>
<td></td>
<td></td>
<td>32</td>
</tr>
</tbody>
</table>

Film badge reports have been forwarded per medium of the Commonwealth X-ray and Radium Laboratories from some 120 radiation installations.

On the industrial side, an unusual number of applications for high activity Cobalt sources were received from industrial radiographers. These resulted from the necessity to radiograph a number of extremely large castings associated with the work of the Snowy Mountains Authority. Stringent requirements were laid down to ensure safe use of these isotopes.

In general radiography work, radiation doses to radiographers have been considerably reduced, due to the use of remote handling equipment.

In the medical field, an incident of note was the loss of a radium source; fortunately the source was promptly recovered by Officers of the Division using radiation detection equipment. The loss of the source did not result in a significant radiation dose to any person.

During the year, the National Health and Medical Research Council, through its Radiotherapy Advisory Committee, published a code of practice for the control and safe handling of sealed radio-active sources used in radiation therapy. The code has already proved of great assistance to the Division in this field and is being distributed to all medical practitioners using these sources.
During the year, the question was raised of radiation levels in rooms adjacent to installations involving superficial X-ray therapy equipment. A radiation survey of a small number of superficial X-ray therapy installations showed that radiation levels in rooms adjacent to one installation were somewhat excessive. It is intended to carry out radiation surveys of all such installations to check the levels in adjacent rooms. A standardized approach to such installations may be desirable.

**Occupational Health Problems in the Stevedoring Industry.**

The Division has, in the past, been called upon to make recommendations on occupational health problems in the stevedoring industry. Recently, endeavours were made to put this service on a more formal basis and the interested parties agreed to channel all such requests for advice from this Department to the Australian Stevedoring Industry Authority as from 1st May, 1963. A roster of scientific officers has provided a 24-hour service for this purpose.

**Pesticides.**

**Organic Phosphates.**—The service afforded by the Division in respect to determination of blood cholinesterase levels is being used to an ever-increasing extent by hospitals and medical practitioners in the fruit and vegetable growing areas. These tests are also being done on a regular basis for certain organizations doing experimental work on organic phosphates and for firms engaged in the packaging of these substances.

A survey of the berry growing areas was conducted in November, 1962; a total of 39 growers was tested leading to the diagnosis of 2 cases of poisoning.

Altogether 147 blood cholinesterase determinations were carried out during the year leading to the detection of 3 cases of poisoning.

A significant modification of the old method for estimating blood cholinesterase has been developed by the scientific staff and is now in routine use. The new method sacrifices nothing in accuracy, but allows the determination to be carried out on blood obtained from a finger prick and thus greatly facilitates its use in the field.

**Arsenic.**—During the year, six persons have been tested for suspected arsenic poisoning and the tests have included 15 in hair, 2 in nails, and 12 in urine.

Three of these persons were found to have excessive arsenic; but investigations failed to reveal any industrial exposure as a source for it.

**Mercury.**—Six persons were tested for suspected mercury poisoning. In one, the mercury level was found to be raised, but not sufficiently raised to be indicative of poisoning.

Ten determinations for mercury in the air of work places were carried out and, of these, only one showed a concentration in excess of the maximum recommended for occupational exposure.

**Benzene and Other Solvents.**—It is considered that the hazards presented by the use of benzene in industry are being adequately controlled with the help of the Benzene Regulations, 1950.

No cases of benzene poisoning were brought to notice during the year and no hazardous concentrations of benzene vapour were discovered in industry.

Over the last few years isophorone has been used more widely as a solvent in the lacquer and plastics industry and is recognized as being one of the more toxic solvents in the ketone series.

Investigations of the concentration of this substance in certain factories have been made, so far without disclosing any hazardous situations.

**Lead.**—During the year, 5,705 reports were received under the Lead Workers (Medical Examination) Regulations. These reports covered 1,802 lead workers and of these 42 were certified as lead poisoned.

The Lead Workers (Medical Examination) Regulations require the examination of the blood and urine of lead workers at statutory periods and a large number of blood examinations are obviously involved. The blood examinations for 2,748 of the 5,705 reports received were performed in the laboratory of this Division.
In addition, the Division examined 458 urine specimens for evidence of excessive lead absorption. This involved 392 determinations of coproporphyrins and 187 determinations of urinary lead. Of the 458 urine specimens examined, 287 were directly associated with the administration of the Lead Workers (Medical Examination) Regulations. The remaining 171 specimen examinations resulted from requests from hospitals and private doctors for assistance in the diagnosis of possible cases of lead poisoning. Requests of this type also resulted in 56 stipple cell counts being performed on persons referred by private doctors.

Thirty-two analyses were made of non-biological material to determine its lead content. These consisted of 12 samples of lead dust collected from air, and 21 other samples, mostly paints.

General haematological work not associated with lead resulted in 69 full blood examinations.

ENGINEERING DIVISION.

Sewerage.

Sewerage schemes were brought into operation in thirteen new provincial towns during the year, namely Bacchus Marsh, Camperdown, Casterton, Euroa, Korumburra, Lorne, Sale, St. Arnaud, Terang, Werribee, Wodonga and Yarram. The total number of provincial authorities now in operation is 52. Additional authorities constituted during the year were Chelsea and Coleraine. Construction commenced at Mooroopna, Tatura and Red Cliffs.

Officers of the Engineering Division attended public meetings during the year at Alexandra, Foster, Lang Lang, Orbost and Rosebud to advocate the installation of sewerage systems for these townships.

The treatment plants of all operating authorities were inspected during the year and samples collected for analysis, the total number of inspections carried out being 93. Due to staff shortage it has not been possible for many years to carry out quarterly inspections of provincial sewage treatment works.

An investigation was commenced in December at Bacchus Marsh sewage treatment works involving weekly inspection and collection of samples for chemical and bacteriological analyses and for examination for algae content and crustacea. Bacchus Marsh sewage treatment plant is based solely on the lagoon method of treatment and it is expected that the investigation will show the degree of purification of the effluent both from the chemical and bacteriological qualities.

Septic Tank Installations.

Plans examined for new individual septic tank installations numbered 260. In addition, 9 installations serving public hospitals and 6 municipal schemes involving mass installations in townships were approved. Inspection of completed installations numbered 285.

The use of septic tank installations appurtenant to public buildings is increasing in popularity and many new proposals include this facility. In addition, a large number of existing public buildings are converting existing pan toilets into sewered blocks.

In connexion with schemes known as mass septic tank schemes approved by the Commission under the provisions of the Local Government Act, a total number of 128 has now been considered by the Commission. Of these, the majority have not been proceeded with but 34 have been completed.

Stream Pollution.

Approval for disposal of trade waste from new industries to streams issued by the Commission in accordance with the provisions of Section 82 of the Health Act numbered 5. Inspections of completed systems numbered 3.

In relation to stream pollution, the greatest offender has been the milk factory. In two areas samples were collected for legal proceedings against the offenders. However, the evidence was insufficiently complete and it is proposed to carry out further investigations in connexion with these factories in the forthcoming Spring.
Public Buildings.

The number of approvals of plans and specifications of public buildings was higher than any previous year, numbering 1,127; the figure for new buildings was 656 and for alterations and additions to existing public buildings 471. The figure for new pre-school and infant welfare centres was again high at 158, and plans for 14 elderly citizens' clubs were also examined. Plans examined for new day schools numbered 56 and for alterations and additions to existing day schools 114.

As usual, the highest category for new buildings was “public halls, churches and Sunday schools”, figures for new buildings being 217 and for alterations and additions 260. Plans for new proposals in the Side Show category numbered 85. In addition, Certificates of Safety renewed for this type of building numbered 110. Day inspections of public buildings numbered 5,213 and during public occupation 869.

Swimming Pools.

The proportion of swimming pools incorporating filtration and chlorination is steadily increasing. Over recent years the method known as break point chlorination in slightly alkaline water has been recommended and its use is now almost universal throughout Victoria.

The use of this method enables:

(i) The continual removal of amine and chloramine impurities which have been shown to cause taste and smell problems together with chemical irritation of the eyes and throat.

(ii) As a result of amine elimination, a free chlorine residual to be maintained throughout the day providing far more rapid sterilization of harmful organisms.

(iii) The provision of a pleasant appearance in that free chlorine inhibits algae and also bleaches natural colour from the water.

The former method known as marginal chlorination, was basically the maintenance of a concentration of 0·5 p.p.m. chloramine in neutral water allowing a build-up of urine impurities.

In the new method the free chlorine residual is raised to a high level overnight and chemical oxidation of impurities is accomplished quickly in the absence of swimmers. This is quite economical in the absence of sunlight. The water remains in good condition for most of the day and the object is to maintain a chlorine dosage to provide the free chlorine residual for sterilization during periods of swimming.

This year has seen the sudden growth of heated indoor pools throughout Melbourne and the control of these is generally satisfactory.

During the year, 84 pools were inspected. Control of the water was generally found to be satisfactory and chlorinator equipment, safety precautions and test equipment were adequate.

Water Supplies.

Thirty-six inspections of chlorinated water supplies were carried out during the year and advice regarding chlorinator design, dosage and testing procedures was given to Water Trusts. In some cases minor construction alterations had proved effective and where extensive alterations were required discussions were held with officers of the State Rivers and Water Supply Commission.

The standard of complete water treatment plants which have commenced operation during the year was found to be good and chlorination is effective. Where chlorination is carried out on unfiltered raw water its effectiveness varies with turbidity and control is accordingly difficult.

Air Pollution Control.

The Clean Air Section now operates 58 deposit gauge stations and 10 smoke density and sulphur dioxide monitors.

Two hundred and twenty-two inspections were carried out, including investigations and complaints, stack testing, site inspections and visits to industrial plant. During the year, 36 new industrial plants and plant units were approved under the provisions of the Clean Air Regulations 1961, including 14 boiler plants, 2 new ceramic works with tunnel kilns, and a large aluminium smelter and fabrication plant.
Machinery has been created to maintain a high degree of standardization of air pollution measurements between the various states and New Zealand and to extend it as far as practicable to the administration of the relevant legislation as regards emission standards, chimney heights, and similar matters.

The first Annual Technical Conference on Clean Air of officers in the various States concerned with air pollution control took place in Sydney at which the Department was represented.

**Poisons Information Centre.**

This Centre commenced in the Royal Children's Hospital on the 13th August, 1962, and to the end of 1962, 627 enquiries were received during office hours, an average of 6 to 7 per working day. It is estimated that calls received after hours would increase the daily average to approximately 10.

The great majority of calls concerned children of about 2 years of age which again emphasizes the necessity of parents taking great care in the handling and storage of harmful materials in their homes. Enquiries received from medical practitioners varied from 30 per cent. to 40 per cent. of the total each month and calls from doctors' receptionists, pharmacists and nursing sisters brought the number of "professional calls" to about 40 per cent. to 50 per cent. of the total. Most of the remaining enquiries came from parents.

Causes of enquiries are summarized as follows:

<table>
<thead>
<tr>
<th>Cause</th>
<th>Percentage of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household cleaning and related products</td>
<td>24</td>
</tr>
<tr>
<td>Medications and cosmetics</td>
<td>30</td>
</tr>
<tr>
<td>Pesticides and weed killers</td>
<td>15</td>
</tr>
<tr>
<td>Solvents and petroleum distillates</td>
<td>6</td>
</tr>
<tr>
<td>Plants</td>
<td>4</td>
</tr>
<tr>
<td>Bites and stings</td>
<td>2</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>19</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

The fact that the Centre is located at the Royal Children's Hospital is a great advantage. The action of the Board of Management of the Hospital in making available the Director is very much appreciated by the Commission.

**CIVIL DEFENCE—STATE DISASTER PLAN.**

The Commission's officers have been engaged from time to time on liaison activity with the State Civil Defence Planning officers on questions to do with municipal health organization designed to deal with major civil disaster.

The above work is at present concerned with ascertaining to what extent individual councils have set up committees or drawn up plans to cope with bush fires, floods, &c.

A circular was sent to all municipal councils in April, 1963, pointing out that the Commission will be responsible for co-ordinating health services in any widespread emergency.

Attention was directed to the role of the District Health Officer who through association with the Medical Officer of Health could further local plans towards the aim of achieving disaster control on a regional basis.

Replies to Commission's circular have been received from the majority of councils. This information is being summarized.

The Commission's officers have attended two important exercises arranged by the State Committee to test casualty clearance (plane crash City of Coburg) and the emergency evacuation of a large city building (I.C.I. House, Albert-street).

Department of Health staff have been sent to the various courses conducted at the Commonwealth Civil Defence School, Macedon.
FREE TRAVEL.

The Department provides free travel to pensioners and persons of similar limited means who are required to attend public hospitals for treatment.

During the year, a total of 16,039 applications for free travel were received and of this number 15,789 were approved at a total expenditure of £29,907 9s. 4d.

FLY CONTROL.

In previous reports, reference was made to the fly problem in Victoria and the formation of a Fly Control Committee to advise the Commission on this subject.

Following reports by the Committee the Commission recommended the appointment of an entomologist to advise on control measures and to undertake special research and considered that this appointment was essential in order to achieve any worthwhile degree of fly control in the State. This appointment has not yet been made and in repeating its previous recommendation the Commission points out that expert knowledge and advice should be available to assist in solving problems connected with fly breeding.

During the Summer and Autumn months of 1962-63, a pilot survey was continued in the City of Moorabbin. As a result of the past publicity used the residents of this city have become fly conscious and fly complaints have been considerably reduced. Fly breeding, however, was still noticeable on poultry farms which used the battery laying cage system and in offensive trade premises.

The results achieved in Moorabbin could possibly be attained on a State-wide basis if sufficient funds are available to conduct publicity campaigns throughout Victoria so that the part flies play in the spread of disease and the methods of their control can be brought before residents of the whole State.

At the time of the survey mentioned above, a limited amount of publicity was carried out throughout the State and the assistance rendered by municipal councils and other organizations is gratefully acknowledged.

LEGISLATION.

During the year, the following legislation was given Royal Assent:—

**Health (Amendment) Act 1962 (No. 6967).**

This Act extends the provisions of Part XII. of the **Health Act 1958** by the inclusion of a new Division—Food Vending Machines. As well as requiring the registration of food vending machines, the Governor in Council has been empowered to make regulations for their control. The Eleventh Schedule of the Principal Act has also been amended to provide for maximum annual registration and transfer fees of two pounds and two shillings and sixpence respectively for food vending machines.

Section 94 of the **Health Act 1958** was also amended to permit the revocation or variation of any Order dealing with the extension of the offensive trades provisions (so far as those provisions are applicable to piggeries) to any shire or any part of a shire.

**Health (Amendment) Act 1963.**

This Act extends to the Latrobe Valley Water and Sewerage Board the provisions of Section 83 of the **Health Act 1958** dealing with the removal of cattle from the land of a Sewerage Authority and also prohibits the administration of oestrogens to any animal or bird except under the prescription of a legally qualified veterinary surgeon.

The following regulations were also approved:—

**Labelling of Poisonous Household Substances (Amendment) Regulations 1962.**

These regulations extend the requirements of the principal regulations so as to prohibit any person from including in labels any false or misleading statements concerning poisonous household substances contained in packages of one imperial quart or less.

These regulations consist of a consolidation of the previous Boarding and Lodging House Regulations which were approved in 1939. As well as correcting anomalies, requirements dealing with lighting, ventilation, and the provision of baths and/or showers have been varied for all buildings and in the case of those situated more than 4,200 feet above sea level, special requirements as to floor area and cubic space per person have been included. The Uniform Building Regulations were used as a guide for those clauses in the new regulations dealing with construction.

Pesticides (Use of) Amendment Regulations 1963.

As it was considered that the provisions of Clause 3 of the principal regulations were unduly restrictive in respect to the wearing of protective clothing and the provision of equipment, the amending regulations authorize the Chief Health Officer to prescribe alternatives.

Proclamations and Orders in Council.

The previous meat area in the Shire of Morwell which included only a portion of the municipality was extended during the year to the whole of the shire.

The offensive trades provisions of the Health Act 1958 (so far as those provisions are applicable to piggeries) were extended to the whole of the Shire of Ripon, and to portions of the Shires of Mortlake and Grenville. In addition, an existing order affecting the Shire of Deakin was varied.

Meat pies, canned meat and canned meat products were specified for the purposes of the Health (Sampling) Act 1962 which provides for an alternative sampling procedure.

An Order in Council was issued discontinuing burials in the Old Casterton Cemetery and the trustees of the Western Suburbs Memorial Park were authorized to borrow £25,000 for developmental works.

Respectfully submitted,

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