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

1967–68

VICTORIA

FORTY-FIFTH REPORT

OF THE

COMMISSION OF PUBLIC HEALTH

FOR THE

YEAR ENDED 30TH JUNE, 1967

PRESENTED TO BOTH HOUSES OF PARLIAMENT PURSUANT TO SECTION 23 (3) OF THE HEALTH ACT 1958.

By Authority:
A. C. BROOKS, GOVERNMENT PRINTER, MELBOURNE.

No. 29.—8927/67.—30 cents

COMMISSION OF PUBLIC HEALTH

RALPH JOSEPH FARNBACH, M.B., B.S., D.P.H. ..	Chief Health Officer (Chairman).
WALTER ERNEST SUMMONS, O.B.E., F.A.M.A., M.D., D.P.H.	Retired 30th June, 1967
HENRY MCLORINAN, C.B.E., F.R.A.C.P., M.B., B.S., D.P.H.	
STANLEY WILLIAM WILLIAMS, F.R.A.C.P., M.D. ..	Appointed 1st July, 1967
ALBERT KEITH LINES, O.B.E., *J.P.*	Representing Metropolitan Municipalities.
CR. THOMAS RICHARD FLOOD, *J.P.*	Representing Cities, Towns and Boroughs other than Metropolitan Municipalities.
CR. ARTHUR SYDNEY THOMSON, *J.P.*	Representing Shires other than Metropolitan Municipalities
CR. ALAN CROCKER PITTARD, *J.P.*	

FORTY-FIFTH REPORT OF THE COMMISSION OF PUBLIC HEALTH 1966-67

To the Honorable Vance Oakley Dickie, 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, 1967.

In presenting the report, the Commission has reviewed major events in the field of public health which have occurred in the State over the past year. Generally, the state of the public health in Victoria can be regarded as satisfactory, However, this does not mean that there should be an attitude of complacency, or that the basic principles associated with preventive medicine and public health can be neglected.

In the field of infectious diseases we have seen the almost complete disappearance of some diseases which have given considerable concern to public health authorities in the past. In some cases this has been due to the adoption of immunization programmes, the carrying out of well known methods of isolation, the searching for carriers and contacts and attention to general measures of hygiene. There can be little doubt that this has also been assisted by the development and use of modern drugs and treatment.

However, where immunization has been neglected, outbreaks of disease still occur. This has been clearly demonstrated in this State in recent years by localized outbreaks of diphtheria in communities where immunization has not been maintained.

Some infectious diseases, such as rubella, measles and infectious hepatitis, continue to create major problems, and it appears that only by the development of some form of immunization will these diseases be brought under adequate control.

The association of cigarette smoking and lung cancer and the continued advertising of cigarettes both on television and radio are still viewed with concern. The Commission considers that further measures should be taken to control the advertising and sale of cigarettes. Co-operation has been extended to the Anti-Cancer Council and the Education Department in educational campaigns to bring to the notice of children and others the hazards associated with cigarette smoking and the early signs of cancer.

On the environmental side, the metropolis of Melbourne has grown faster than the Board of Works has been able to extend the sewerage system, and as a consequence, there are in the Metropolitan Area some 81,000 dwellings, of which 58,000 have pan closets, still to be connected to the sewerage system. This situation is to be deplored, as sewerage is regarded as an essential amenity and an adjunct to health.

Regarding other items coming with the sphere of the Commission's activities, such as industrial and community health, hazards of radiation, the development of social services and the control of poisons and air pollution, the Commission is of the opinion that these matters are dealt with as effectively in Victoria as in any other State of the Commonwealth..

The basic principles of health administration in this State rest with municipalities, and the Commission wishes to record appreciation of the co-operation given by Councils in carrying out their statutory obligations under the Health Act.

EPIDEMIOLOGICAL AND INFECTIOUS DISEASES REPORT.

TUBERCULOSIS.

The notification of new cases of tuberculosis reported during 1966 was the second lowest recorded total since notification was introduced throughout the State in 1909 and was the lowest recorded rate per 100,000. In a population of 3,218,000 there were 649 new cases notified, a rate of 19·98 per 100,000.

For four successive years there has been a decline :—

1963	.. ..	888 cases, rate 28·8 per 100,000
1964	.. ..	820 cases, rate 25·9 per 100,000
1965	.. ..	790 cases, rate 24·5 per 100,000
1966	.. ..	649 cases, rate 19·98 per 100,000

This figure is encouraging, for the number of people screened for tuberculosis by various means has reached record levels :—

662,576 people were X-rayed by the Division of Mass X-ray Surveys.

102,148 people were tuberculin tested by the B.C.G. Division.

69,093 people were examined at State Chest Clinics

An initial reaction of optimism for the future is understandable, and probably is justified as the tuberculosis control programme over the years is beginning to show definite rewards. However, closer analysis suggests caution in predicting the future. A review of notification rates shows similar fluctuations previously only to be followed by increases again.

Unlike most other infectious diseases, which are shortlived in the human host, tuberculosis infection, even without developing into disease directly, may remain dormant throughout a lifetime and can at any stage be stirred into activity by stress.

Further, having active tuberculosis and recovering from it tends to increase rather than diminish the likelihood of having the disease again. It is believed that drug treatment taken over a long period reduces this risk, but at the same time, this requires full co-operation from the patient.

For instance, there are approximately 20,000 people living in Victoria who have been " notified cases " of tuberculosis. During 1966, there were 111 of these persons whose disease again became active and this figure is about the same each year.

Again, a study of the tuberculin reactor rates, which is a sensitive indicator of the amount of infection occurring in the community, shows only a slow decline in recent years. At present there appears to be an infection rate of ½ to 1 per cent. annually between the ages of 14 and 20 years and this is unlikely to be less in older age groups. In our population this could be calculated to produce 12,000—20,000 persons infected each year—people who can later in life develop active disease as a result of this infection.

The number of new cases of extra-pulmonary tuberculosis discovered this year has shown an appreciable drop to 78 cases, compared with 116 in 1965 and 141 in 1964.

Whilst the above discussion must emphasize caution regarding undue optimism for quick returns, it must be pointed out that there are definite indications of a trend for improvement seen in this State—a reward for the control measures introduced and carried out over the years.

Notifications.—There were 649 new cases of tuberculosis notified during 1966, a rate of 19·9 per 100,000. Of these 571 cases (88 per cent.) were pulmonary and 78 cases (12 per cent.) were extra-pulmonary : 65 per cent. were proven bacteriologically—68 per cent. of the pulmonary cases and 50 per cent. of the extra-pulmonary. There were 415 males 64 per cent. and 234 females 36 per cent.

Age Groups.—Seventy-one per cent. of all new cases were 35 years of age or over and for pulmonary cases 54 per cent were males over 35 years and 49 per cent were persons over 50 years of age.

Tuberculosis in children remains relatively high, and accounted for more than 10 per cent. of the total notifications (66 cases). Many of these children had extensive pulmonary disease and the probable source of infection was almost invariably known—usually a parent or close relation.

Migrants.—Twenty-nine per cent. of the year's notifications were from persons born outside Australia. There were 187 such cases, 80 British and 107 non-British. 16 persons were diagnosed within 1 year of arrival and 31 within 1–5 years. Of the 78 extra-pulmonary cases, 42 occurred in this group. This pattern has been fairly consistent for a number of years.

Extra—Pulmonary tuberculosis.—There were 23 new cases of tuberculosis of lymph glands most common in children, but scattered through all age groups. A number of these cases reported probably are the result of a typical-type myco-bacterial infection.

Tuberculosis of the renal and genital organs continues to be relatively common—34 cases during the year. However, this number is less than encountered in recent years which has been about 60 cases annually.

There were 12 cases of bone and joint tuberculosis, and 4 cases of meningitis (2 adults, 1 adolescent and 1 child).

Source of Notification.—Mass X-ray Surveys continue to be particularly rewarding in case finding and contributed 242 cases, 42 per cent of the total pulmonary cases. However, a large number of notifications arise from private practitioners (130—20 per cent. of total) and general hospitals (126—19·4 per cent. of total). These patients almost invariably have become sick before presenting, and emphasise the important role of the private doctor or general hospital in tuberculosis control. State Clinics were directly responsible for locating 100 cases of tuberculosis (15·4 per cent. of total) and most of these were the result of examination of contacts of new cases.

Seven cases were discovered in Mental Hospitals where admission X-rays of new patients are proving useful.

There were five cases, not previously known, reported by death certificate notification.

Reactivation.—There were 78 people, previously notified cases, who developed reactivation of their tuberculosis after having had inactive lesions for 3 years or longer—63 pulmonary and 15 extra-pulmonary and of these three quarters were bacteriologically proven at reactivation.

Case Register.—The Case Register at 31st December, 1966, had listed 3,547 cases of whom 3,141 were pulmonary and 406 were extra-pulmonary. 805 names were removed during the year.

Chronic Positive Cases.—A record is maintained of patients who are known to have had active disease with positive bacteriological examination for twelve months or longer. At the 31st December, 1966, there were 59 "chronic positive" cases, including Repatriation patients.

Deaths.—The figure supplied by the Commonwealth Bureau of Statistics is 128 which gives a rate of 3·94 deaths per 100,000 of population. However, on analysis, it is found that many of these listed died of conditions unrelated to tuberculosis which was inactive at the time of death. Active tuberculosis was present at death or within 6 months in only 54 of the cases reported.

Tuberculosis Allowances.—At 31st December, 1966, there were 223 persons being paid the Tuberculosis Allowance, compared with 292 at the end of 1965. Of these 223 people, 180 were men and 43 were women. There were 172 (77 per cent.) in receipt of the allowance for less than 1 year, 28 (13 per cent.) between 1 and 2 years and 23 (10 per cent.) over 2 years.

Mass X-ray Surveys.—The first compulsory chest X-ray survey throughout Victoria of adults over 21 years which commenced in October, 1963, continued, and 25 State Electorates were visited during the year. 662,576 persons were X-rayed. This figure well exceeds that for any previous year, the next highest being 596,994 in 1965.

The first survey of country districts was completed in June and it is anticipated that the metropolitan area will be covered by September, 1967. The second survey is planned to follow on immediately.

Attendances at surveys have been very satisfactory and indicate that the public accept willingly the idea of compulsion in an endeavour to bring tuberculosis under greater control.

Results of the Surveys during the year are summarized below:—

Persons X-rayed at Mass X-ray Surveys During 1966. Total 662,576 persons.

Abnormalities.	Persons.	Rate per 1,000.
Proved or Possibly Active Tuberculosis	252	·38
Healed or Inactive Tuberculosis	2,329	3·52
Non-T.B. Abnormalities	3,008	4·54
Includes—Carcinoma	185	·28
Sarcoidosis	67	·10

Of the 252 active cases discovered 182 were men and 70 were women.

Tuberculin Testing & B.C.G. Vaccination.—Tuberculin testing by the B.C.G. Division continues for schools or institutions teaching pupils above Grade 6, i.e., 11 years old and above, or teachers' colleges. B.C.G. vaccination is offered to the negative reactors. The present programme permits visiting all areas of the State each 3 years. Consent rates for pupils are over 90 per cent.

In addition "all-age" school pupil surveys were carried out in two areas—Latrobe Valley and Preston Municipality—involving 18,809 primary school children, who gave a natural reactor rate of 1·4 per cent. In all 90,643 school children were examined giving an overall natural positive reactor rate of 3 per cent. and 50,362 school children were given B.C.G. vaccine.

The Section has also tested 4,113 National Servicemen aged 20 years and given vaccination where necessary. These comprised four intakes from all States except Queensland. The natural positive reactor rate was 11·4 per cent.

Seven contact surveys of schools and other larger groups were carried out, comprising 1,781 persons. This has resulted in a few cases of active tuberculosis being discovered.

A pattern of infection emerges for the younger age groups :—

		Per Cent.	
Naturally infected age	4— 9 years ..	1	
	10—12 „ ..	2	
	14 „ ..	4	
	20 „ ..	10·1	(Victorian N.S. Trainees)

Bacteriology.—One cannot over emphasize the necessity of good bacteriological support in the management of tuberculosis, either for diagnosis or clinical review.

The need for these examinations to be carried out repeatedly must also be stressed both during treatment and for subsequent reviews over the years. Too often reliance on X-ray appearance is accepted, only to find that sputum examination has not been insisted upon.

The bacteriology section is giving very good support and during the year carried out :—

16,743 direct smear examinations

17,985 cultural examinations

552 animal inoculations

2,596 sensitivity tests

During the year isolations of tubercle bacilli were made from 530 patients. 371 isolations came from new cases. There were 4 cases of primary resistance detected—2 were from migrants.

Treatment.—Despite considerable discussion on the value of institutional treatment of patients with active tuberculosis, it is still present policy in Victoria to recommend initial treatment in sanatoria or allied institutions. Of the 649 new cases notified during the year, 86·3 per cent. spent some time in institutions. It is felt that even a short time spent in sanatorium has advantages for the patient and enables greater insight into the problems of his complaint, and frequently an easier introduction to chemotherapy. This latter can mean the difference between a quick and uncomplicated recovery or, at times, a prolonged and difficult course.

The average length of stay in sanatorium was just under 4½ months. Almost all new patients can be expected to be rendered non-infectious to others. Only 11 patients had surgical treatment for pulmonary tuberculosis.

Chemoprophylaxis.—Isoniazid alone or with P.A.S. is being used as a prophylactic agent against the development of active tuberculosis for certain groups of people known to have been infected. This is applied particularly for children or younger adults, who are contacts of new active cases of tuberculosis or for school children found to react strongly to tuberculin at the routine tuberculin surveys in schools. There are some other groups considered to be at greater risk of disease who are also offered this treatment. In all 568 persons commenced courses of chemoprophylaxis during the year.

Bureaux and Clinics.—The importance of the bureaux registers and the clinics in long-term control has been generally recognized, and no one can foresee a time when these will not be needed. They form the very heart of tuberculosis control and prevention.

For years our clinics have been crowded, but now that the Northern Suburbs Chest Clinic in Coburg is in full operation, the pressure of work is easing at the Central Chest Clinic. The Prahran Chest Clinic is still operating in temporary accommodation.

There were 10,700 attendances recorded for the year at the Northern Suburbs Clinic. It is very pleasing to see that private medical practitioners in the areas served by this Clinic are referring many patients for examination.

During the year a total of 69,093 attendances have been recorded at clinics, an increase of over 2,000 upon the previous year.

Visiting Sisters.—Much of the liaison work between patients and medical officers is carried out by the visiting nurses. This work forms an essential part of the establishment in the Victorian service, and the patients come to rely upon the sisters and look upon them as " general family advisors ". All areas of the State are covered by this service and during the year the visiting nurses carried out 22,271 home visits.

Social Worker.—In the social field, the social worker reports a considerably increased demand for financial assistance during the year, both in numbers of patients referred (new and old) and for more prolonged assistance. This may reflect a loss of real value of pensions and other social benefits and seems to apply particularly to those living alone—or families whose ability to " cope " is fairly precarious, even without health hazards. The payment of the Tuberculosis Allowance by the Social Service Department has generally been prompt and has not been the precipitating cause.

SUMMARY OF TUBERCULOSIS STATISTICS—VICTORIA 1966.

(Population 3,247,484.)

Year.	Notification of New Cases.		Deaths.		Tuberculosis Allowances Paid at 31st December.	Mass X-ray Surveys.		School Tuberculin Survey, (11 years and over).		No. of Beds Available at Sanatoria and Chalets.	Average Stay in Sanatoria (days).
	Number.	Rate per 100,000.	Number.	Rate per 100,000.		Number X-rayed.	Possible Active Tuberculosis.	No. Mantoux Tested (1 : 1,000 O.T.).	% +ve Reactors at Age 14.		
1948	677	32·37	641	30·65	1,368 (State Scheme)	150,000	..	..	..	735	252
1951	1,030	44·20	407	17·88	2,039	277,938	767	20,524	18·0	1,134	326
1954	1,046	46·59	245	9·99	1,453	463,210	621	17,869	10·3	1,172	285
1955	974	38·55	222	8·79	1,302	408,648	540	23,533	9·5	996	233
1956	885	33·98	194	7·37	1,121	388,765	413	20,946	6·8	1,050	164
1957	813	30·40	145	5·37	793	437,796	194	29,161	8·1	782	144
1958	776	28·32	145	5·23	582	413,932	184	44,269	7·4	744	140
1959	862	30·32	153	5·38	496	416,721	213	39,297	5·9	744	135
1960	863	29·50	138	4·70	444	380,598	194	40,400	6·9	744	141
1961	693	23·32	127	4·35	406	405,913	190	47,145	4·7	744	155
1962	781	25·65	101	3·35	411	456,559	185	47,338	3·9	744	160
1963	888	28·80	109	3·55	390	478,861	255	48,680	3·3	744	165
1964	820	29·93	121	3·84	290	428,306	286	75,897	4·1	729	138
1965	790	24·50	106	3·29	292	596,994	288	78,945	4·1	715	139
1966	649	19·98	128	3·94	223	662,576	252	90,643	4·0	705	132

POLIOMYELITIS.

Incidence.

In February, 1967 a sixteen-year-old girl living in the metropolitan area, contracted Poliomyelitis (Type 1 virus being isolated). She suffered severe paralysis especially in the lower limbs. The patient had not received any immunization against the disease. The last reported case prior to this occurred in March, 1964.

Salk vaccine was introduced into Victoria in 1956 and the following table showing the number of cases reported each year since 1954 illustrates the efficacy of this vaccine.

Year.	No. of Cases.
1954	569
1955	235
1956	252
1957	12
1958	60
1959	30
1960	23
1961	68
1962	20
1963	21
1964	5
1965	Nil
1966	Nil
1967 (to 30th June, 1967)	1

Salk Vaccine.

There has been no breakdown in supplies of Salk vaccine during the past twelve months and 354,487 doses were distributed to municipalities.

It is estimated that the vaccination status of the community is now as follows :—

Age Group.	Percentage of age group immunized (at least 3 Salk).
15 months to 4 years	60
5 years to 14 years	89
15 years to 44 years	50
15 months to 44 years inclusive	60

IMMUNIZATION MATERIAL ISSUED TO MUNICIPALITIES 1965–66 AND 1966–67.

Material.	Number of Doses.	
	1965–66.	1966–67.
Salk Vaccine	377,678	354,487
Triple Antigen	239,020	248,727
Combined Diphtheria-Tetanus	..	..
Prophylactic (B.P.C.)	106,170	95,251
Purified Tetanus Toxoid (A.P.A.)	37,937	44,870
Smallpox Vaccine (B.P.)	24,446	24,140
Purified Diphtheria Toxoid (Diluted)	3,900	8,564
Tetanus Toxoid (B.P.) (Purified)	2,500	4,338
Schick Test Toxin	790	2,200
*C.C.'S Diphtheria Prophylactic (P.T.A.P.) (Diluted for adults only)	8	1,420
Diphtheria Prophylactic (P.T.A.P.)	1,236	160
Pertussis Prophylactic (H.A.P.A.)	22	10

* Number of c.c.'s issued.

INFECTIVE HEPATITIS.

The notified figures of infective (infectious) hepatitis for 1966 were 2,137 of which 1,105 were from the Melbourne metropolitan area. The incidence is an increase over the previous year when 2,001 cases were recorded.

Since the disease became notifiable in 1952 two epidemic peaks have occurred, in 1955 (3,776 notifications) and again in 1963 (3,833). Subsequently a relative decline in incidence was noted over the ensuing two years culminating in 1965 (2,001) then a gradual build up which is continuing into 1967. In the first six months of 1967 there was an increase of over 500 notifications compared with the same period of the previous year.

If the epidemiological pattern of the disease follows previous years it is anticipated that the present upward trend will continue for the next four to five years unless a vaccine is evolved in the interim which is both safe and effective for widespread prophylactic administration.

It is unfortunate that concerted attempts to isolate the causal virus in several laboratories throughout the world have been unsuccessful. Until there is a breakthrough in this area of virology the prospects of developing a vaccine are very slender.

Passive immunity conferred by inoculations of human gamma globulins is usually reserved for household contacts of a case and in residential institutions, boarding schools, &c. Protection thus afforded lasts for approximately six weeks.

BRUCELLOSIS.

Although 43 cases of Brucellosis were notified, 15 of these patients were migrants suffering from the chronic form of the disease acquired abroad.

Of the locally infected persons (28), 16 were either dairy farmers or lived on dairy farms ; 3 were abattoir workers and of the remainder, a number could have become infected from drinking raw milk.

The infecting organism in Victoria is Br. abortus, an organism responsible for abortion in cows—infection is transmitted to humans through skin contact with infected tissues from cattle and ingestion, usually through milk. Pasteurization has reduced the reservoir of infection available to humans.

TETANUS.

There were 12 notified cases, 9 males and 3 females. Of the 12, 8 were over 50 years of age. The majority did not have a history of having received immunization against the disease.

A variety of injuries were responsible for the initial infections although in two instances no focus was detected.

The classical rusty nail injury was incriminated in two patients—wounds to a foot and hand respectively. Mechanical saws were involved in a further two cases where fingers were lacerated. Other injuries were, a meat bone in the foot ; thorn in the foot ; fall down stairs ; laceration of a finger on a piece of tin ; cut hand laying a pipe line and a doubtful focus from an ingrowing toenail.

The Commission reaffirmed previous warnings to the public on the necessity for tetanus toxoid inoculations particularly in those persons whose occupations or recreational pursuits carried a risk of soil contamination injuries.

Diphtheria.

Not one case of diphtheria was notified in 1966 contrasting with the outbreak in 1963 when 181 notifications (includes both clinical cases and asymptomatic carriers) were recorded. The figure for 1965 was 27.

The 1963 episode disclosed that the level of immunity in the community was declining as a result of neglect and indifference at various levels. The present situation reflects to a large degree the impetus to immunization which followed the lesson learned from this outbreak. It should be appreciated that diphtheria organism is ever present with the capacity to cause a resurgence of the disease when active immunization is not maintained at a high level.

In the period January–June 1967, three cases have occurred in non-immunized persons. Two were from widely separated country areas where the disease has been absent for many years.

Whooping Cough.

The incidence of whooping cough receded in 1966 after two years of significant peaks in notifications. The figures for 1964, 1965 and 1966 were 663, 761 and 158 respectively.

The reported cases for the first six months of 1967 are less than one third of the notifications for the corresponding period in 1966.

Q. Fever.

Only a small number of sporadic cases of Q. fever have come to attention since the outbreak among Melbourne abattoir workers in 1964.

Owing to the non-specific nature of the symptoms accurate diagnosis must of necessity rely on laboratory tests. There is little doubt that this disease is frequently diagnosed as influenza ; consequently, more cases than come to notice could be occurring in those persons exposed to animals such as sheep and cattle.

This disease which is caused by a richettsial organism, Coxiella burneti, appears to be an asymptomatic infection in these and other animals ; consequently, inapparent sources of infection escape detection prior to slaughter.

Redfin Fish Food Poisoning.

Four cases of food poisoning following the ingestion of redfin fish were reported for the year. In all instances the location of the fish was traced to the vicinity of the regulator controlling the flow of water from Lake Victoria into the Rufus River area of south-western New South Wales.

This puzzling disease accounting for over 150 known cases of food poisoning in recent years is peculiar to the consumption of redfin fish caught only in the above locality.

Laboratory tests on these fish and from left-over portions of incriminated redfin have failed to establish the causal factor.

Respiratory Infections.

A total of 795 respiratory infections were admitted to Fairfield Hospital over four months from May to August, 1966. The categories of these infections were as follows, bronchiolitis and bronchitis (295) ; laryngo-tracheo-bronchitis (152) ; pneumonia (339) ; supraglottic cedema (4) and influenza (2).

The majority of these patients were admitted on account of the severity of their illnesses which gives some indication of the prevalence of respiratory infections in the community during the winter.

It is of interest to note the small number of influenza cases admitted, particularly in view of the predictions by certain authorities that this country would experience an epidemic of this disease.

Epidemic of Gastroenteritis.

During the winter an epidemic of gastroenteritis broke out in Melbourne and spread to certain country areas. Similar reports came from other States.

Approximately 600 babies and young children were admitted to Fairfield Hospital over a period of two months imposing considerable strain on the resources of the hospital.

Attempts to isolate a causal bacterium or virus were unsuccessful, however there were certain clinical and epidemiological features which suggested that the illnesses were due to an unidentified respiratory virus.

Reports from certain overseas countries indicated that this form of gastroenteritis was widespread.

Emergency Medical Cards.

The Commission has produced and made available an emergency medical details card in convenient wallet size with provision for inserting the blood group, sensitivities to antibiotics, drugs, sera, &c ; particular illnesses (diabetes, epilepsy, haemophilia) ; therapy (insulin, anticoagulants, cortisone) and tetanus immunisation.

It was considered that a need existed for such information to be carried by persons in the event of unconsiousness of loss of memory following accidents and medical emergencies.

Smallpox Isolation Facilities—Base Hospitals.

The Commission resolved that the matter of smallpox isolation facilities in country centres be referred to the Consultative Council on Quarantinable Diseases for advice on potential risks of smallpox occurring in Victoria and the size and number of special isolation facilities required in country centres and the disposal of diagnosed cases.

This recommendation was considered by the Consultative Council on Quarantinable Diseases when it was resolved that a survey of the Victorian base hospitals be undertaken with a view to assessing isolation facilities in suitable centres for suspected smallpox cases. This survey, conducted by district health officers, has been referred back to the Consultative Council on Quarantinable Diseases for consideration.

Vaccination against Measles.

The Commission has noted with interest the dramatic drop in the incidence of measles overseas following the introduction of a safe and effective vaccine. The Commission would support a similar campaign in Victoria and the Commonwealth has been requested to make available vaccine under similar terms and conditions at present applying with other immunising materials.

Venereal Disease.

During this period 3,066 males and 1,139 females (total 4,205) attended the Government Clinic for examination. Of this number a total of 1,236 persons were found to be suffering from venereal disease and there were 189 males and 133 females who presented for the purposes of a blood test as required by the U.S.A. and other countries for visa purposes.

The following table shows the number of cases of gonorrhoea and syphilis detected at the Clinic with comparative figures covering recent years.

Year.	Total Patients.	Gonorrhoea.			Syphilis.		
		Male.	Female.	Total.	Male.	Female.	Total.
1966–67	4,205	832	379	1,211	22	3	25
1965–66	3,418	862	221	1,083	51	3	54
1964–65	3,080	702	207	909	27	2	29

It can be seen that there was a significant increase in the number of both males and females seeking investigation for V.D. This is considered to have resulted from the great publicity given to this subject in the past twelve months through the press.

The total number of reported cases from both diseases from all sources for each of the past two years is as follows :—

Notifications of V.D. for the Whole of the State.

Source.	Gonorrhoea.			Syphilis.		
	Male.	Female.	Total.	Male.	Female.	Total.
Government Clinic	832	379	1,211	22	3	25
Others—						
Metropolitan	432	89	521	15	5	20
Country	80	9	89	10	1	11
Totals—						
1966-67	1,344	477	1,821	47	9	56
1965-66	1,290	341	1,631	66	15	81

In view of the increase in the population of Victoria in the past twelve months, the figures are not considered abnormal and do not suggest that there is any cause for alarm. The upward trend of gonorrhoea infection is at least deplorable but it is noted that there is a marked decrease in the number of notifications of syphilis.

The Micro-Biological Diagnostic Unit detection of 169 cases of gonorrhoea is included in the notifications. The figures are in excess of previous isolations.

Cytology Service.—Smears from female patients were examined by the Victorian Cytology Service. Results have been beneficial as at least one curable malignancy was detected by this method.

Prisons.—Regular visits are now made to Pentridge Gaol and Fairlea where all new prisoners were surveyed for venereal disease.

Exotic Diseases Hospital, Fairfield.

The number of in-patients suffering from Hansen's disease (leprosy) remains at eight ; one female of Greek origin was admitted and one male was discharged.

Seven former patients are receiving drug treatment and routine examinations as out-patients.

The standard of medical and nursing care is of a high order and facilities are available for occupational and recreational pursuits.

Additions to the existing building are proceeding and should be completed before the end of 1967. This will facilitate the isolation of other exotic diseases such as smallpox should the contingency arise.

Microbiological Diagnostic Unit.

A detailed analysis of the number and type of examinations carried out in the year to 30th June, 1967, is provided in the appended table ; figures for the two previous years are provided as a compararison. It will be noted that a greater number of examinations for upper respiratory tract and enteric pathogens have been largely responsible for an overall increase of 8 per cent. in the total number of examinations carried out by the laboratory in the past twelve months. The most notable features of the year's work have been as follows :—

1. *Enteric Infections.*

Three separate outbreaks of typhoid fever, involving five cases, have occurred. In two of the three outbreaks, carriers have been detected by both serological and cultural methods ; in the third outbreak, involving a child living in the Western District, attempts to positively identify the origin of infection were unsuccessful. A case of paratyphoid fever was also detected and a human carrier, shown to possess the same phage type as the case was detected among a number of contacts who were examined.

Two hundred and seventy-five strains of *Salmonella*, isolated from Victorian cases were examined during the year. As anticipated, the greater proportion of these were *Sal. typhimurium*. The laboratory has recently received a complete set of bacteriophages, made available by the Central Public Health Laboratory, Colindale, U.K. which provide for an extended system of phage typing of this species. It is anticipated that more detailed epidemiological studies of outbreaks due to the organism will now be possible. Among the many strains submitted from interstate Laboratories for identification, two new specie (*Sal. cairns* and *Sal. yarrabah*) were recorded.

Shigellosis continues as a problem within children's institutions ; of the 395 strains examined over 300 were isolated from inmates of four different institutions. *Sh. flexneri* 3*A* has become the major endemic organism in one institution. As many strains isolated were resistant to many antibiotics, investigation is continuing of the possibility that the episomal drug-resistant transfer factor may be present in the organisms resident in the children of this institution. Several small outbreaks of enteropathogenic *Esch. coli* infections have also been examined during the past year.

2. *Upper Respiratory Tract Infections.*

Of the 3,600 specimens examined for *B. Haemolytic Streptococci*, 370 yielded *Strep. pyogenes*. Several outbreaks of streptococcal tonsillitis and pharyngitis were examined in institutions, including a maternity hospital.

Several strains of *C. diphtheriae* (some non-virulent) have been examined during the year ; 3 of these were from cases (confirmed clinically), 5 from carriers associated with these individuals. No cases were notified in 1966—3 during Jan.–June 1967. The findings confirm that this disease is by no means extinct in the community.

3. *Gonorrhoea.*

While there are no direct figures to substantiate it, Neisserian infections in this community seem to have increased significantly over the past few years. The number of specimens submitted by general practitioners over the past year (1,250) represents a marked increase over the normal figures, and among these, 270 positive cases were diagnosed, either by smear and/or cultural methods. The higher rate of detection observed this year is almost certainly due to the widespread use of Stuart's transport medium which is now routinely made available to general practitioners.

4. *Serological Studies.*

During the year to 30th June, 1967, 856 individual sera were examined for Brucellosis ; of these, 64 were shown to be *new* cases (including infections in migrants acquired abroad). As anticipated, the bulk of these cases occurred among farmers in dairying communities and abattoir workers. While 288 sera were examined for another epizootic disease known to occur here (Leptospirosis), none was found to be positive.

MICROBIOLOGICAL DIAGNOSTIC UNIT.

Annual Examinations.

A Comparison of Numbers for the Years, 1963–65.

Examination.	1964–65.	1965–66.	1966–67.
1. Upper Respiratory Tract Infections—			
(*a*) Diphtheria (cultures)	3,601	2,451	2,651
(*b*) B. Haemolytic Streptococci—			
(i) Cultures	4,302	3,357	3,636
(ii) Groupings	706	712	584
(iii) Anti-Streptolysin Titre Tests	947	1,073	987
(*c*) Vincent's Organisms	6	6	24
2. Enteric Infections (Salmonella and Shigella)—			
(i) Cultures	2,579	2,946	4,982
(ii) Identifications	702	735	1,008
(iii) Widal Agglutinations	348	529	236
3. Serological Investigations—			
(*a*) Brucella	916	1,128	856
(*b*) Glandular Fever	181	154	104
(*c*) Leptospirosis	208	123	286
(*d*) Typhus Fever	44	167	32
(*e*) Miscellaneous	32	14	22
4. General Bacteriological Examinations including endogenous infections, food poisoning out-breaks, microbiological examination of food, milk, &c.—			
(i) Cultures	790	831	935
(ii) Drug Sensitivities	5,355	6,184	4,860
5. N. Gonorrhoeae and Related Infections—			
(*a*) N. Gonorrhoeae—			
(i) Smear	593	591	1,140
(ii) Culture	2,464	2,725	3,284
(*b*) Trichomonas and Monilia	16	31	169
6. Medical Mycology (Microscopic and Cultures)	116	106	93
7. Water Examinations	305	336	242
Totals	24,211	24,199	26,131

CHEMICAL LABORATORY.

Although the number of samples examined, viz., 1,934, showed a slight decrease on the previous year's total, a great deal of additional work was involved due to the growing complexity of techniques being used, particularly in pesticide residue determinations, and additional tests resulting from the introduction of new standards. The proportion of those samples submitted by inspectors under the Health Act which failed to comply was 6 per cent., a repetition of last year's figure after the high level of 13 per cent. in 1964–65.

Once again a wide variety of samples has been examined. A summary of the more important work is given below.

Meat and Meat Products.

—	Number examined.	Number not complying.
Meat—		
Fresh	203	8
Chopped	210	13
Manufactured	92	0
Canned	2	1
Sausages and Sausage Meat	274	36
Tripe	5	0
Meat Pies	27	10

Despite maintenance of the overall improvement in recent years, there has been an increase in the proportion of meat pies contravening the regulations. All of the ten pies involved were deficient in meat content, compared with only one of twenty-six tested during the 1965–66 period.

One sample suspected of being horse flesh was found to be kangaroo meat.

Dairy Products (1965–66 *figures in parentheses*).

—	Number examined.	Number not complying.
Milk—		
Fresh	333 (306)	4 (6)
Powdered	1 (0)	0 (0)
Cream	24 (10)	2 (2)
Butter	53 (19)	0 (2)
Cheese	27 (18)	4 (2)
Ice-cream	17 (18)	7 (0)
Milk Ice	1 (0)	1 (0)

The general position has remained fairly static. The increase in ice-cream contraventions was largely due to a special investigation of half-gallon cans, when five of the six samples examined proved deficient in food solids. The milk ice contained less than the statutory 8 per cent. whole milk solids. Added water was detected several times in milk, in one instance to the extent of 24 per cent.

Pesticide Residues.

Extension of the analytical programme to include organochlorine compounds has been facilitated by the use of a gas chromatograph.

It would appear that organochlorine pesticide residues are quite common on fresh fruits and vegetables, and that several different compounds of this type can be expected together. As many as three have, in fact, been detected in a single sample. Arsenic and carbaryl residues have been found in the majority of apples tested for these pesticides, but all levels were below acceptable statutory limits. The only excessive residues—of endrin—were found in brussels sprouts.

A total of 264 determinations has been carried out on 156 samples, compared with 107 determinations on 88 samples during the preceding year, when it was necessary to spend a great deal of time on preparatory investigations.

Analyses made during the year are listed below :—

Nature of Sample.	Number.	Analyses Carried Out.*	Summary of Results.
Apples	37	6 for O.P.	Not detected
		6 for O.C.	Not detected
		15 for As.	11 positive, 4 not detected
		16 for Carb.	10 positive, 6 not detected
Beans (Navy type)	1	O.C.	Positive
Brussels Sprouts	14	11 for O.P.	Not detected
		14 for O.C.	8 positive, 6 not detected
Cabbages	5	O.C.	Not detected
Celery	12	All for O.P.	Not detected
		All for O.C.	Not detected
		All for Cu.	All positive
Cherries	15	All for O.C.	10 positive, 5 not detected
Grapes	21	12 for O.P.	Not detected
		21 for O.C.	4 positive, 17 not detected
		12 for As.	Not detected
		12 for Hg.	7 positive, 5 not detected
Lettuce	8	All for O.P.	Not detected
		All for O.C.	Not detected
Peaches	8	All for O.P.	Not detected
		All for O.C.	Not detected
Strawberries	9	All for O.P.	Not detected
		All for O.C.	3 positive, 6 not detected
Tomatoes	26	12 for O.P.	Not detected
		20 for O.C.	11 positive, 9 not detected

* *Legend* : O.P. .. Organophosphorus compounds
O.C. .. Organochlorine compounds
As. .. Arsenic
Carb. .. Carbaryl
Cu. .. Copper
Hg. .. Mercury.

The sample of Michigan Navy beans was part of a shipment which apparently became contaminated en route by paradichlorobenzene, a consignment of which was stored in close proximity. The adulterated beans were subsequently destroyed.

Work is at present proceeding on butter, celery, and on imported " mosquito coil " household insecticide preparations. It is intended to include various dairy products in the foods examined during the forthcoming year.

Foreign Substances in Food.

The number of samples containing foreign material was somewhat higher than usual, and findings are given hereunder.

Food.	Nature of contamination material.
Biscuit	Glass
Bread	Grease
"	Hairs
"	Rubber
"	Soil
"	Wood
Cake mix	Beetles
Coffee, instant	Glass
Fruit, dried	Yeast colonies
Fruit, mince	Glass
Jam	Feather
Meat	Extensive soil and mould
Meringues	Rodent faeces
Milk, bulk	Detergent
Peanut butter	Cardboard
Soft drink	Mould (3 samples)
"	Mould and vegetable matter
"	Mould, vegetable matter, grit, and human hair
"	Sand
"	Vegetable fibres and yeast
Whisky	Baking soda and washing soda
"	Tea (2 samples)

The stopper from a soft drink bottle contained a trace amount of a kerosene-like substance.

Metallic Contamination.

The necessity for continued vigilance against possible lead contamination was illustrated by cases of an imported butter dish containing 85 per cent. of lead, and a saucepan lid knob containing weights made of the same metal in circumstances whereby the food could come into contact with the metal.

Copper was encountered in two instances. In the more serious case, faulty design caused copper to be dissolved by the product in a drink vending machine with subsequent sickness after consumption.

Preservatives and Colourings.

Sulphur dioxide was illegally used in 23 of the meat samples mentioned previously, and was also found in vinegar. Benzoic acid had been added to preserve an imported jam which otherwise would not have kept, due to its low sugar content; this also represented non-compliance with the regulations. A dyestuff recently removed from the permitted list was being used in a syrup factory, and red-currant jam was also coloured contrary to requirements.

Waters and Effluents.

In addition to the routine checking of sewerage plant effluents, several trade wastewaters were examined for compliance with the Stream Pollution Regulations, and a number of these were found to contain excessive suspended solids. The effluent from an electroplating establishment contained 68 p.p.m. of nickel.

Miscellaneous.

Olive oil was found to be adulterated with teaseed oil on three occasions, vinegar was deficient in acetic acid, and three samples of spirits were low in proof spirit, presumably due to dilution with water. A canned fish sample was badly deteriorated.

A can of salmon contained struvite crystals, a harmless naturally-occurring constituent not often encountered since the use of additives to prevent its formation has been permitted.

Soluble aspirin and P.A.S. tablets were examined and found to meet British Pharmacopoeia standards.

FOOD STANDARDS COMMITTEE.

The Food Standards Committee held five meetings during the past year, the major business under discussion being a number of proposed draft standards recommended by the National Health and Medical Research Council on the advice of the Commonwealth Food Standards Committee, designed for uniform adoption throughout the various States.

Apart from a considerable number of amendments to existing drafts the following new uniform drafts were adopted :—

Non-dairy Coffee Whitener ;

Yoghurt ;

Labelling.

During the year a consolidation of the Food and Drug Standards Regulations was published and a number of loose-leaf editions were made available.

PROPRIETARY MEDICINES ADVISORY COMMITTEE.

During the past twelve months 648 applications for registration of preparations as proprietary medicines have been received by the Department. This brings the number of applications received since the inception of the scheme to 16,110, and the number which have been accepted for registration to 13,275.

One supplementary register was published during the past year containing a total of 450 products, and 660 deletions were made from the register for the same period.

During the past year 40 meetings of the Committee were held.

POISONS DIVISION.

Regulations introduced during the year have tightened control in several ways over narcotics, hallucinogenic drugs and " prescription only " drugs.

New regulations on restricted substances (" Prescription only " items) require medical detailers to be authorized by the Chief Health Officer before they may legally have possession of stocks of such drugs for the purpose of " detailing " to the medical profession. Higher standards are now required for the storage of drugs of addiction and for writing prescriptions

for both drugs of addiction and for restricted substances. The qualifications of persons who may actually dispense such drugs are now set out in the regulations. A new section is introduced in the regulations to control prescribing of narcotics for long periods and to provide penalties for persons attempting to obtain drugs of addiction under false pretences. All of these measures help to arrest the development of illicit traffic in these drugs.

New regulations have been introduced to control hallucinogenic drugs. These regulations prohibit the manufacture, distribution, use and possession of various hallucinogenic drugs, including the much-publicized L.S.D. (Lysergic Acid Diethylamide), except under strictly controlled conditions.

Enforcement of the drug control regulations is shared by the Department of Health and the Police Drug Bureau. During the year, the Division continued to maintain a close liaison with the Drug Bureau.

During the year 95 amendments to Victoria's Schedules were put into effect, after consideration by the N.H. & M.R.C. and the Poisons Advisory Committee. These included a number of adjustments in the scheduling of morphine, codeine, pholcodine, &c., to bring Victoria's controls into line with the recommendations of the United Nations Single Convention on Narcotic Drugs. Briefly, the revisions consist of placing preparations containing more than 2·5 per cent. of the active substance in Schedule Eight (Drugs of Addiction) ; placing preparations containing more than 1 per cent. and up to 2·5 per cent. in Schedule Four (Restricted Substances), and placing preparations containing 1 per cent. or less of the active substance in Schedule Two (sale without prescription). A revised set of Schedules, correct up to the 31st January, 1967, was issued for the convenience of the drug trade and others. It is planned to publish revised Schedules each year.

The Division continued to administer the licensing system laid down in the Act, the number of licences currently renewed being as follows :—

Licences to manufacture drugs of addiction		11
Licences to manufacture other poisons		178
Licences to sell drugs of addiction by wholesale		20
Licences to sell other poisons by wholesale		275
Industrial permits	Approximately	1,400
General dealers licences		322
Poisons licences	Approximately	4,800
		7,006

Drug authorities were issued to 223 hospitals where there were no pharmaceutical chemists and 477 persons were authorized by the Chief Health Officer to have possession of restricted substances for the purposes of medical detailing.

POISONS INFORMATION CENTRE.

During 1966, 2,805 inquiries were received during office hours. This represents an average of 11·4 calls per day and an increase of 19 per cent. over the total for 1965. The busiest day during 1966 was 19th October when 23 calls were received. There were several occasions when 17 to 21 calls per day were recorded.

The highest monthly total, since the inception of the Centre, occurred in October when 284 calls were recorded, giving a peak average of 13·5 calls per working day.

Eight hundred and eighty six inquiries from doctors were recorded, including 7 from interstate and 155 from other localities outside Melbourne. A further 472 inquiries came from nursing sisters, pharmacists and others associated with the medical profession, giving a total of 1,358 " professional " calls, an increase of 12·3 per cent over the corresponding figure of 1,209 during 1965. However the number of calls from the general public rose from 1,148 to 1,447. As a result of this the proportion of professional calls has slipped back below 50 per cent. again to 48·4 per cent. of the total, compared with 51·3 per cent. during 1965.

An interesting episode in 1966 was that involving 30 grammar school boys when a block of phosphorus burnt rapidly generating toxic fumes during a science lesson. The arrival of the boys at a hospital casualty department caused some consternation for a time but most were allowed to leave after examination.

1966 was marked also by the arrival of the first two volumes of the National Poisons Register Manual produced by the Commonwealth Department of Health.

Statistics of Inquiries Received.

	Total.
1. Salicylates, " baby "	31
Salicylates, regular	45
Barbiturates and other " sleeping " medications	32
Laxatives	26
Cough medicines	52
Other internal and parenteral medications	468
Sub-total	654
2. Camphorated oil	6
Mercurochrome	15
Potassium permanganate	7
Other external and topical medications	190
Cosmetics	147
Sub-total	365
3. Bleaches (hypochlorite, &c.)	68
Furniture polish	41
Other disinf. clean and polish, agents, deodor	546
Sub-total	655
4. Kerosene	24
Turpentine	39
Other solvents and petroleum distillates	88
Sub-total	151
5. Rodenticides	52
Fly sprays	46
Naphtalene	43
Other insecticides and related materials	121
Weed killers	25
Other pesticides	37
Sub-total	324
6. Plants	164
7. Bites and stings and their causes	46
8. Possible causes of symptoms	5
9. Miscellaneous	441
Grand Total	2,805

HOME HELP SERVICES.

The Home Help Service has become one of the most important health services in the community. It preserves the health and well being of families by providing household assistance in times of emergency. It assists the elderly to live happy, independent lives in their own homes long after they become too ill or infirm to properly attend to all their own household tasks.

The Home Help Service has continued to expand during the year. An additional four Municipal Councils have been granted subsidies to operate services and there are now 133 services functioning throughout the State. Even more would be functioning in rural districts if the Councils could obtain suitable home helps. During the 6 months period ending 31st December, 1966, a total of 9,693 householders received the service compared with 8,976 for the same period during the previous year.

Details regarding the subsidized Home Help Services are as follows :—

Total number of Councils granted subsidies to operate Home Help Services ..	157
Number of services operating	133
Total number of householders assisted during the first six months of this financial year	9,693

These were as follows :—

Mothers with young families	5,135	
Elderly	3,592	
Others	966	
Cases for whom no assistance was available		124

Home helps engaged :—

Full time	325
Part time	582
Hourly	661
	1,568

Total cost to the Government for twelve months' period. (includes $8,200 from Commonwealth Government) $701,365.

The majority of Councils conducting Home Help Services find that it is essential for the organizer to use her own transport and in rural districts it is often also necessary for the home help to do so.

ELDERLY CITIZENS' CLUBS.

Elderly Citizens' Clubs have now become almost as important to elderly people as Infant Welfare Centres are to infants. Loneliness and self neglect quickly leads to a deterioration in general health and all too frequently hastens senility. Clubs for the elderly provide a pleasant meeting place where the older generation can meet their contemporaries and where a variety of social amenities and activities can be enjoyed. In addition to social amenities more and more clubs are now providing one or more of the services such as chiropody, hot meals at the club and " meals-on-wheels " and handicrafts which assist the aged to retain or regain their health.

To encourage Elderly Citizens' Clubs the State Government has made subsidies available to Municipal Councils in respect of their establishment and maintenance. A condition of both subsidies is that the club must be open to all elderly people living in the district. When a capital grant is required towards the cost of establishing clubrooms the Council is required to hold the title of the property and to give an assurance to the Department of Health that the clubrooms will be for the exclusive use of the elderly.

During the year nine new clubs were granted subsidies through their municipal Councils making the total of 147 clubs now granted subsidies ; seven new clubrooms were opened and four more are under construction and will be completed shortly.

The success of Elderly Citizens' Clubs can be judged to some extent by the large number of aged persons who are members of the subsidized clubs, altogether 25,286. Many more receive benefits through the " Meals-on-Wheels " and visiting services.

Subsidies granted during the year were as follows :—

Capital Grants (30)—

For new clubs	9	(3 for equipment only)
Additional capital grants	21	(For 16 clubs) Two to establish new clubrooms

Maintenance Subsidies (13)—

Additional maintenances subsidies	10
For new clubs	3

Total Number of Councils Now Granted Subsidies 101 for 147 Clubs—

Capital and maintenance subsidies	99
Capital subsidy only	35
Maintenance subsidy only	13

Government expenditure during the year was as follows :—

	$
Capital expenditure	85,000
Maintenance expenditure	104,991
Total	189,991

Capital commitments at end of year $126,615.

More and more councils are realizing the importance of providing hot meals services and chiropody treatment as a part of the service of a club. During the last twelve months hot meal services were included as an expenditure of 10 more clubs and chiropody at 13 clubs.

The number of aged receiving these services has also increased considerably since last year. Approximately 1,400 more meals go out every week and 388 more chiropody treatments are provided each month.

Details regarding these services are as follows :—

Meal Services—

Clubs providing hot meals	66
Average number of meals provided weekly	10,974
at clubs	5,034
on wheels	5,940
Clubs serving meals at clubrooms	33
Clubs providing meals-on-wheels	58

Twenty-five of the clubs provide both services.

Chiropody Services—

Clubs conducting chiropody services	47
Average number of persons treated per month	1,147

Handicraft Classes—

Clubs conducting handicrafts classes	23

INDUSTRIAL HYGIENE DIVISION.

Medical Examinations.

During the year 53 persons were examined medically for evidence of excessive exposure to various substances.

They were categorized as follows :—

—	Suspected Exposure.	Established Poisoning Disease or Disability.
Dusts (Industrial)	30	19
Lead	10	5
Mercury	2	0
Pesticides	2	1
Solvents	8	2
Nitrogen Dioxide	1	1
	53	28

The 19 persons examined and found to be suffering from a pneumoconiosis were further subclassified as follows :—

Anthracosis	1
Asbestosis	5
Silicosis	13

Scientific Activities.

The scientific staff has continued to meet the ever-increasing demands from industry for scientific assessment and correction of various industrial hazards.

In particular, special attention was focused on the hazards arising from the following processes :—aluminium gas shielded arc welding, methyl bromide fumigation, zinc oxide fumes in non-ferrous foundries. The Ozone hazard associated with various ultra-voilet air-purifiers and in electric insulator testing work was investigated.

A special study of entomology in relation to insects causing bites, etc., was undertaken and proved beneficial in investigations relating to possible cases of industrial dermatitis.

As an adjunct to the routine work associated with stipple-cell counting in lead poisoning, a special haematological investigation was made of several persons suspected of having thalassaemia minor.

The scientific staff was also called upon to lecture and contribute at various scientific conferences and meetings.

Lead.

During the year 3,250 reports were received under the Lead Workers (Medical Examination) Regulations.

Nine workers were certified by the examining Medical Officer as "suffering from lead poisoning". In addition, 135 lead workers attended the Division laboratories for further medical and/or scientific tests to evaluate their lead exposure.

The following tests were performed :—

2,927 Stipple-cell counts

432 Coproporphyrin determinations

153 Urinary lead determinations

10 Blood leads

12 Haemoglobin determinations

33 Reticulocyte counts

Two cases of lead poisoning, not occupational in origin were investigated. One of them was due to the drinking of home-made wine. Seven chemical analyses were carried out on different batches of this wine and one particular batch was found to be heavily contaminated with lead. The second case which involved a child aged 22 months is still being investigated.

In addition to these biological tests, the concentration of lead in air was determined in 12 cases, and 9 determinations were made of the lead level in dried paint scrapings.

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 year is as follows :—

Medical	450
Dental	313
Industrial	167
Educational and Research	53
Government Bodies	49
Chiropractors	62
	1,094

The Commonwealth X-ray and Radium Laboratories now regularly provide the Division with film badge reports from some 200 installations where people are exposed to ionizing radiation.

The use of radio-active substances in medicine, research and industry is gradually increasing. In the industrial field the demand for gamma and X-ray radiography continues to increase, particularly for pipeline work associated with the advent of natural gas.

The Royal Melbourne Institute of Technology and the Australian Atomic Energy Commission have successfully employed radio-active tracer tests for industrial purposes.

A number of radiation incidents involving notifiable doses were investigated and appropriate recommendations made. Two incidents involving radio-active contaminations with the possibility of ingestion or inhalation of material, were investigated. The investigations indicated that insignificant amounts of material were absorbed and illustrated the necessity for careful monitoring in the handling of unsealed sources.

Benzene and Other Solvents.*

Three organizations were found to be selling benzene without warning labels on the containers as prescribed by the Regulations. Prompt action to rectify this was taken by the firms concerned.

Three bulk samples of industrial solvents were analysed for benzene content and in all cases the level was less than 5 per cent.

Inspections during the year revealed health hazards from the use of benzene in industry in two factories.

At one factory a less toxic solvent was substituted for benzene. Substitution was not possible in the second case so the firm was advised to reduce the excessive atmospheric concentration of benzene by means of mechanical exhaust ventilation. No cases of benzene poisoning were brought to notice.

A survey of the use of carbon tetrachloride in industry was undertaken. In all factories where carbon tetrachloride was used it was possible to replace this substance by a significantly less toxic solvent.

Excessive atmospheric concentrations of solvents other than those mentioned were found in five factories and, in each case by means of improved exhaust ventilation, the concentrations were reduced to a level below the recommended maximum atmospheric concentrations for occupational exposures.

The following list gives the total number of atmospheric determinations made for various solvent vapours during the year :—

Acetone	2	Perchloroethylene	6
Benzene	5	Solvent mixtures	8
Butylacetate	2	Toluene	6
Carbon tetrachloride	2	Trichloroethylene	9
Ethylacetate	3	Xylene	3
MEK	2		

* This is not to be confused with petrol.

X-ray Survey for Pneumoconiosis.

Sixty-eight chest X-rays were arranged by this Division using large 17in. x 14 in. films to search for pneumoconiosis with the following diagnoses resulting :—

X-ray within normal limits	38
Anthracosis	1
Asbestosis	5
Silicosis	13
Bronchitis and/or other pathology	11

Dust.

Thirty-one dust counts were carried out and 8 estimates were made of particle size. Analyses for free silica concentration were made in 3 cases.

Excessive dust concentrations were found in several factories and control measures are being instigated.

Pesticides.

1. *Organo-phosphorus Compounds.*—the estimation of blood cholinesterase levels in 47 people involved 77 analytical determinations. One case of " organic phosphate " poisoning of occupational origin was detected.

Another serious case, admitted to the Royal Melbourne Hospital, was investigated.

2. *Formaldehyde.*—Several complaints were received concerning throat and eye irritation due to formaldehyde present in the air. These were investigated and 5 chemical analyses of the atmospheres concerned were carried out.

Mercury.

Sixteen people were tested for the possibility of increased mercury absorption involving 20 determinations of mercury in urine.

Eight laboratories were tested for mercury vapour in the air using the Beckman Mercury Vapour Detector.

Arsenic.

Thirteen people were tested for suspected arsenical poisoning. This involved eighteen analytical determinations, 10 on urine, 5 on hair, 1 on serum, and 2 on gastric aspirate.

Three cases of poisoning were classed as not occupational in origin.

Two determinations of arsenic in wine were carried out in connexion with a case of lead poisoning due to consumption of home-made wine made from grapes probably contaminated with lead arsenate spray. A significant quantity of arsenic was detected.

Other Atmospheric Contaminants.

An investigation was carried out regarding decomposition products of Bromochlorodifluoromethane (B.C.F.), when applied as fire extinguishing agent. The rests revealed that the main decomposition products of B.C.F. are acids. An inquiry was made into the use of methyl bromide as a fire extinguisher in aircraft, and the possibility of using B.C.F. as a less toxic substitute was suggested.

The following list gives the total number of analyses of atmospheric samples for gases, dust and vapours other than solvent vapours :—

Carbon monoxide	10
Atmospheric dust concentrations	13
Free silica	12
Hydrogen cyanide	6
Nitrogen dioxide	9
Ozone	14
Toluene diisocyanate	4

Haematological Examinations.

In connexion with exposure to solvents and to radiation, 57 Full Blood Examinations were performed.

ENGINEERING DIVISION.

Sewerage.

The treatment plant and outfall sewer for the sewerage of Toora were completed during the year. The sewerage will receive primary sedimentation prior to being discharged to the waters of Corner Inlet. Sewerage is also proceeding for the township of Willaura ; treatment in this instance will be in the form of lagoons. Sewerage systems for Charlton and Seymour are almost complete and ready for house connexions ; works are also under construction at Chelsea, Coleraine, Cohuna, Cobram, Frankston, Orbost and Yallourn North. The installation of sewerage systems does away with pan closets and minimizes the problem of sullage disposal.

Sewerage Authorities were constituted during the year for Barwon Heads, Foster, Merbein and Ocean Grove and the first preliminary reports for sewerage were considered on behalf of a further six townships.

Inspections of operating provincial sewerage schemes were carried out during the year. Sixty-one inspections were made, samples of effluents from the treatment plants being collected for analysis. Generally speaking it was found that plants were being operated in an efficient manner.

The construction of the scheme for Leongatha which provides for disposal of waste liquids from the Korumburra and Leongatha milk factories into the ocean is proceeding.

Septic Tank Installations.

The number of septic tank plans examined in connexion with proposals by Municipal Councils or in connexion with Public buildings administered by the Commission totalled 186. Four new mass septic tank schemes for the townships of Barmah, Lake Bolac, Walwa and Yackandandah were also examined. The total number of inspections of septic tank installations amounted to 182.

Offensive Trades and Garbage Depots.

Proposals for the establishment of 38 new municipal garbage depots were considered by the Commission. Plans were examined for 5 new abattoir buildings as well as the proposals for extensions to 16 additional abattoirs. Forty-eight inspections were made in connexion with such establishments.

Stream Pollution.

Nine proposals for trade waste treatment and discharge to a stream were examined pursuant to the provisions of Section 68 of the Health Act. A total of 44 inspections associated with stream pollution were made.

Public Buildings.

Approvals of plans and specifications of public buildings numbered 939 comprising 443 new buildings and 496 in respect of additions to existing buildings. The following table indicates the individual classes of buildings.

Class of Building.	New.	Alterations or Addition.	Total.
Theatres	..	4	4
Picture Theatres	4	13	17
Dance Halls	5	7	12
Public Halls, Churches, and Sunday Schools	71	155	226
Day Schools	15	93	108
Pre-Schools and Infant Welfare Centres and Child Minding Centres	142	66	208
University Buildings	11	9	20
Mentally Retarded Institutions	4	8	12
Elderly Citizens' Clubs	17	14	31
Entertainment Parks, Travelling Shows	75	10	85
Other Public Buildings	94	79	173
Hotels as Public Buildings	5	38	43
Total Public Buildings	443	496	939

Day inspections of public buildings numbered 7,010 and during their public occupation 792. Certificates of Safety issued for amusement park structures totalled 218.

Swimming Pools.

Twenty-three inspections of swimming pools incorporating re-circulation and chlorination were made during the year, the greater number of pools being municipally owned. Regulations providing for the cleansing and purification of artificial swimming pools were adopted by the Commission during the year and were circulated to interested Authorities for comment.

Water Supply.

The number of samples collected for bacteriological analysis numbered 109 and there were 84 inspections of water treatment plants providing for chlorination of the supply.

AIR POLLUTION CONTROL.

The Clean Air Section continued air pollution measurements encompassing dustfall, smoke density, and sulphur dioxide concentration in the ambient atmosphere with only minor changes in the number and location of gauge sites. Background values for dustfall have changed little since 1959 when measurements were first made and can be considered low compared with overseas results. Excessive fallout rates near two cement works and continuing complaints led to further stack testing at these works which showed that the dust emission limits laid down in the Clean Air Regulations 1965 were being exceeded. The Commission has now required one works to install additional dust control equipment on the two sources of excessive emission and ordered the second works to discontinue the use of the offending plant works unless these could be operated without infringing the emission standards of the Clean Air Regulations 1965.

Further odour control units have been installed on meat rendering plants and all these units continue to give good service. Direct flame after-burners, another odour control method, especially useful on solvent odours, have continued to prove effective. The problem of fluoride emission from ceramic kilns burning heavy clayware which had led to vegetation damages appears to have been satisfactorily solved by the installation of chimneys of adequate height.

The year under review also saw the completion and coming into operation of two large automotive foundries which incorporate the most modern and extensive air pollution control equipment and in this regard are probably unique in the world.

The number of other plant and air pollution control equipment approved pursuant to the Clean Air Regulations 1965 numbered 129, almost the same number as during the previous two years (131,130). It included chemical works and plant (5), oil refinery and petro-chemical plant (5), metallurgical plant and furnaces (10), ceramic kilns, driers, and fuel conversions (5), boiler plant (57), industrial incinerators (3), spraybooths (25), various processes and control equipment (12), rendering odour control plant (2), after burners (2), and special furnaces (3).

Many inspections were carried out during the year in connexion with complaints investigations, of sites prior to installation of new plant, and of completed plant. They included stack sampling and testing, field work and attention to air pollution measuring instruments, as well as discussions with industrial management and operating personnel.

Liaison with officers of air pollution control Authorities in the other States and New Zealand was again maintained through mutual visits and attendance at the " Annual Technical Conference on Clean Air ", held early in June in Brisbane.

GENERAL ITEMS.

Werribee River.

Complaints were received and a petition forwarded to the Department regarding dead fish in the Werribee River about two miles from the mouth. This matter had been the subject of investigation by the Fisheries and Wildlife Department and the Shire of Werribee Health Inspector through a private analyst. It appears from the reports of the Fisheries and Wild Life Department and the information available that the death of the fish was due to Dinoflagellates which produce toxic substances.

Salt–lactose Hospital Survey.

Following on reports of fatalities in other States a survey was undertaken regarding the use in hospitals of salt for the cleansing of milk bottles and teats (used in infant feeding), and the existing precautions to avoid confusion with the lactose used in the bottle feeds. The possibility of this hazard existed in many hospitals throughout the State. The survey revealed a few instances only of inadequate labelling and/or inadequate trained staff supervision in the milk room.

Rodent Control.

Rodent control included assistance and advice to Harbour Trust personnel employed on waterfront areas. In addition, there were periodic inspections of leased premises on Harbour Trust land, factories, shops, garbage depots and various food establishments, and where remedial measures were necessary, appropriate directions were given to the occupier.

Special interest was shown in ships arriving from Vietnam because of reported outbreaks of plague in that area and increased vigilance in rodent control on these vessels was instituted.

During the year numerous inspections were made with Melbourne City Council health inspectors. The majority of infestations followed the demolition of old buildings to make way for new structures. Invariably, the old buildings harboured rats which had apparently been undetected or not reported. Immediately following the completion of demolition work, rats spread to adjacent properties and there was quite often a delay before their presence became known.

Fly Control.

In recent years there has been considerable publicity in the matter of fly control and the public in general is now more fly conscious.

Conditions in regard to house-fly control are fairly static in Victoria. It is considered that the number of house-flies in the Metropolitan Area is at a low level but there are still infestations in skin drying sheds and battery laying poultry farms.

Research into the bush fly problem continues at the C.S.I.R.O. (Canberra) but no results of any practical value have been made available for adoption in this State.

Central Cancer Registry.

The services of the Departmental medical officer have again been made available on a part-time basis at the Central Cancer Registry to assist in the collection of data relating to patients who attend the major public hospitals.

During the year this officer presented papers at a postgraduate symposium on Childhood Malignancy and Cancer of the Mouth and Tongue. In addition, he represented the Department at the Ninth International Cancer Congress in Tokyo and investigated methods of cancer control in Hong Kong and the Philippines.

Requests by medical practitioners and others for statistical material on cancer have increased during the year.

Cancer Education.

Medical officers of the General Health Branch have continued to assist the Anti-Cancer Council in its public education programme by giving lectures on cancer at public meetings.

A summary of these is as follows :—

On exfoliative cytology and breast cancer	24
On smoking and lung cancer	8
On general cancer topics	13
	45

Cigarette Advertising.

The Commission of Public Health continues to be concerned with the rising death rate from lung cancer in this State.

The voluntary code drawn up between tobacco manufacturers and the Federal Minister for Health to restrict cigarette advertising seems to have been ineffective in carrying out its purpose and in the absence of any legal restriction on such advertising, it is necessary to carry out public education about the relationship between cigarette smoking and the role it plays in the causation of a number of diseases, the most serious of these being lung cancer.

The Anti-Cancer Council of Victoria co-ordinates such talks, many of which have been given by medical officers of this Department. While the subject is mentioned to all age groups in the community, particular emphasis is placed on bringing this matter to the notice of adolescents in schools ; to do this, the utmost co-operation has been given by the Education Department of this State.

The information is well received and nothing presented which will in any way frighten the school children.

Exfoliative Cytology.

During 1967, in its public education programme, the Anti-Cancer Council of Victoria is placing special emphasis on exfoliative cytology as a valuable tool in the diagnosis of asymptomatic cancer of the cervix uteri.

Women throughout Victoria are being advised to consult their own doctors about this, and with this aim in view, many talks to women's groups throughout the State have been given.

The Anti-Cancer Council employs a full-time trained nurse to carry out most of these talks, but when required, medical officers of this Department also lecture on this subject.

The fact that over 2,000 specimens are examined weekly at the State Cytology (Gynaecological) Centre in Melbourne, is evidence of the fact that women are interested in this topic and that they are responding well to the educational matter being presented to them.

Civil Defence.

During the year, much effort has gone into the compilation of the Health Area folders. These will contain, in addition to maps, the names, addresses and telephone numbers of senior members of the municipal staffs, Victoria Police, Country Fire Authority and Forests Commission.

Quite apart from its value in re-assessing our own resourses, this folder will enable any medical officer of the General Health Branch to take up duty as district health officer in an emergency, with all the relevant facts at his disposal.

There were two emergencies during the year, one of which could have been very serious. On 29th June, a semi-trailer loaded with an organophosphate insecticide crashed near Sunday Creek and the Goulburn River. The Industrial Hygiene Section assisted officers of other Departments in the appraisal of the risk, which was fortunately minor. This occurrence was valuable for two reasons : firstly, it demonstrated clearly that public health disasters may easily occur and, secondly, provided a test of the Departmental Displan.

In the course of a fire in the Shire of Buninyong during late February, the Bannockburn Shire health inspector was instrumental in organizing the disposal of dead stock, using equipment pooled for this purpose.

Free Travel.

During the last financial year, there was a considerable increase in the number of applications for free travel. The overall total was 19,548 which was 2,280 more than the previous year.

Of these 19,548 applicants, 19,247 were issued with travel vouchers to attend a public hospital. The remaining 301 applicants were rejected as they failed to qualify as " persons of similar limited means to a pensioner " or were not attending approved institutions.

Expenditure on this service for the year was $83,996, a rise of $10,970.

LEGISLATION.

During the year the *Health* (*Amendment*) *Act* 1966 (No. 7490) was given Royal Assent. This Act includes :—

(*a*) Power to make regulations dealing with " Food for Domestic Animals ".

(*b*) An amendment to section 273 to enable action to be taken against the person responsible for bringing food into Victoria, either from overseas or interstate, but ensuring adequate protection to the innocent retailer.

(*c*) An amendment to section 281 dealing with procedures to be taken when samples of food, &c. are likely to deteriorate.

(*d*) An amendment to section 295 extending the time for the institution of legal proceedings in respect of food samples from 42 to 60 days.

(*e*) Amendments to section 304 in respect to proof of service of a copy of the analyst's certificate and providing that there shall be no defence that the second part of the sample (i.e., the part retained for future comparison) purchased for analysis has deteriorated, perished or changed.

(*f*) An amendment to section 390 to provide power to make regulations in relation to the labelling of certain appliances burning solid fuel and designed to operate indoors.

(*g*) An increase in the maximum penalty for obstruction in relation to the exercise of powers under Part XX. of the Act.

(*h*) A revision of Schedule 11 increasing the maximum fees in respect of the granting or annual renewal or transfer of registration of premises.

Regulations.

As well as the regulations referred to elsewhere in this report the following regulations were approved :—

Benzene Regulations 1966.

These regulations consolidate the requirements applicable to the use of benzene.

Meat Supervision (*Amendment*) *Regulations* 1966.

These regulations prescribe the branding procedure to be used in the case of imported meat in cartons and in the dressing of carcasses prior to removal from an abattoir and prohibit the removal from an abattoir in a meat area of an unflayed carcass of cattle.

Cleanliness (*Foods, Drugs and Substances*) *Amendment Regulations* 1966, (No. 2.)

These regulations prohibit the skinning of a vealer or bobby calf or having an unflayed vealer or bobby calf or the skin thereof on any butcher's shop in a meat area.

Camping (*Amendment*) *Regulations* 1966.

These regulations enable the Commission to declare a camping area under the control of a council or statutory body to be unsuitable for camping and to allow reasonable time to the proprietor to bring the camping area into compliance with the regulations. Similar provisions are also included for councils in dealing with privately operated camping areas.

Child Minding Centres (*Health Act*) *Staff Regulations* 1966.

These regulations provide a new and simplified schedule of staff requirements.

Lead Workers (*Medical Examination*) *Amendment Regulations* 1966.

These regulations include a determination of the urinary coproporphyrin concentration as necessary in the periodic medical examination of lead workers.

Camping (*Amendment*) *Regulations* 1966 (No. 2.)

These regulations extended to the 1st November, 1967, in the case of existing camping areas application of the requirement that no caravan, tent or vehicle shall be situated within 10 feet of any boundary of the camping area. Subsequently the Camping (Amendment) Regulations 1967 exempted camping areas in existence before the 1st December, 1965, from these requirements except where they had been modified in respect of the lay-out of camp sites or had been extended.

Public Buildings (*Fees*) *Regulations* 1966.

These regulations increased the maximum fees payable to the Commission for the examination of plans and specifications of a permanent public building.

Cleanliness (*Foods, Drugs and Substances*) *Amendment Regulations* 1966.

These regulations provide a number of additional requirements for the cleansing of second-hand or previously used jars or bottles.

Infectious Diseases (*Amendment*) *Regulations* 1967.

These regulations contain new tables for the exclusion from school of patients suffering from various infectious diseases and the contacts of such patients. In general these tables follow the recommendations of the National Health and Medical Research Council.

Household Insecticides (*Amendment*) *Regulations* 1966.

These regulations substitute new definitions for dusting powders, household insecticides and repellents and add to the main regulations a schedule of repellents.

Public Building (*Amendment*) *Regulations* 1967.

These regulations increase the minimum and maximum fees payable to the Commission for the examination of plans and specifications of public buildings (except amusement structures) to those allowed under the *Health* (*Amendment*) *Act* 1966.

Registration (Health Acts) Amendment Regulations 1967.

These regulations provide a new scale of fees payable to the Commission for the granting or annual renewal or transfer of registration of various premises.

Cinematograph Operators (Fees) Regulations 1967 and *Plumbers and Gasfitters (Fees) Regulations* 1967.

These regulations provide for increased fees payable by persons for examination and the issue of licences and renewals of licences as Cinematograph Operators, Plumbers and Gasfitters.

PROCLAMATIONS AND ORDERS IN COUNCIL.

Trades usually carried on in connexion with fish curing establishments and the wholesale processing of crayfish and shellfish and places established or conducted for the burial or cremation of dead animals on a commercial basis were proclaimed as offensive trades.

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 Shires of Ballarat and Grenville.

Orders in Council were issued for the opening of the Maryknoll Public Cemetery and the discontinuance of burials in the Yarrock Public Cemetery.

RETIREMENTS.

Dr. Kevin Brennan.

Dr. Kevin Brennan retired in August, 1966, after almost 40 years of public health service to the community. Since 1951 Dr. Brennan was Chairman of the Commission of Public Health and Chief Health Officer. During his term of office he saw many advancements in the field of public health, particularly the introduction of the Salk poliomyelitis vaccination. Dr. Brennan's experience and advice were most valuable to the Commission. The Commission records its appreciation of his services in the field of public health.

Dr. Walter Summons.

Dr. Walter Summons resigned as a member of the Commission on 30th, June, 1967 after having been a member since its constitution in 1919. He served as acting Chairman on several occasions.

The Commission places on record its appreciation of the outstanding service by Dr. Summons to medicine and public health during his long and distinguished career.

Respectfully submitted,

R. J. FARNBACH
H McLORINAN
S. W. WILLIAMS
A. K. LINES
T. R. FLOOD
A. S. THOMSON
A. C. PITTARD
} Members of the Commission.

A. T. GARDNER, Secretary,

Melbourne, 12th September, 1967.

By Authority: A. C. Brooks, Government Printer, Melbourne.