

Report of the Director-General of Public Health, New South Wales.

Contributors

New South Wales. Department of Public Health.

Publication/Creation

Sydney : Govt. Printer., [1932]

Persistent URL

<https://wellcomecollection.org/works/c4yxmxuk>

License and attribution

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

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



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

The Royal Sanitary Institute

Library.

1933-34.



—
LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

REPORT

OF THE

DIRECTOR-GENERAL OF PUBLIC HEALTH,

NEW SOUTH WALES,

FOR THE YEARS 1931 AND 1932.

PRESENTED BY THE SECRETARY FOR PUBLIC WORKS AND MINISTER FOR HEALTH
(THE HON. REGINALD WALTER DARCY WEAVER, M.L.A.).

Ordered by the Legislative Assembly to be printed, 14 December, 1933.



SYDNEY: ALFRED JAMES KENT, I.S.O., GOVERNMENT PRINTER.

—
1934.

1284



22501407260

1933-34.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

REPORT

OF THE

DIRECTOR-GENERAL OF PUBLIC HEALTH,

NEW SOUTH WALES,

FOR THE YEARS 1931 AND 1932.

PRESENTED BY THE SECRETARY FOR PUBLIC WORKS AND MINISTER FOR HEALTH
(THE HON. REGINALD WALTER DARCY WEAVER, M.L.A.).

Ordered by the Legislative Assembly to be printed, 14 December, 1933.



SYDNEY: ALFRED JAMES KENT, I.S.O., GOVERNMENT PRINTER.

1934.
[7s.]

93220 *90-a





REPORT

DEPARTMENT OF PUBLIC HEALTH

FOR THE YEARS 1931 AND 1932

WELLCOME INSTITUTE LIBRARY	
Col.	w/MC/mec
Call	+
No.	Ann Kip
	WA28
	KAB
	N53

1931-32

**Office of the Director-General of Public Health, 93 Macquarie-
street, Sydney.**

Members of the State Board of Health, 1931 and 1932.

Robert Dick, M.B., Ch.M., D.P.H. (President).						
Cecil Purser, M.B., Ch.M....	...	...	...	...	Member, Board of Health.	
William George Armstrong, M.B., D.P.H.	...	...	...	do	do	
The Hon. Frank Edgar Wall, M.D., M.L.C.	...	...	...	do	do	
L. P. Vial	...	...	...	do	do	
R. J. Hawkes, Chamber of Commerce	...	...	...	do	do	
J. Jackson, Lord Mayor (1931)	...	...	...	do	do	
Sir Samuel Walder, Lord Mayor (1932)	...	...	...	do	do	
Mrs. Euphemia Jean Maincke	...	...	...	do	do	
Mrs. Emma Linda Palmer Littlejohn	...	...	...	do	do	

Administrative Staff.

Director-General of Public Health and Commissioner for Venereal Diseases: Robert Dick, M.B., Ch.M., D.P.H.
 Senior Medical Officer of Health and Director of Maternal and Baby Welfare: E. Sydney Morris, M.D., Ch.M., D.P.H.
 Assistant Medical Officer of Health: F. M. Suckling, M.B., D.P.H. (Died 17th October, 1932.)
 Secretary: T. H. Neely.

Divisions and Branches.

The following Divisions are controlled by the Director-General of Public Health:—Maternal and Baby Welfare; Tuberculosis; Venereal Diseases; Industrial Hygiene; Government Medical Officers for Sydney; Medical Officers of Health, Metropolitan, Newcastle and Broken Hill Districts; Microbiological Laboratories, Sydney and Broken Hill; Chemical Laboratory; Pure Food; Cattle Slaughtering; Sanitation; Publicity, &c.

The Hospital Division comprises the Coast and David Berry Hospitals, Leper Lazaret, five State Hospitals and Homes, Waterfall Sanatorium, Greycliffe Babies Hospital, and two Convalescent Hospitals.

Legislative Enactments.

The Minister of Public Health is charged with the administration of the following Acts, execution of which is left to the Director-General of Public Health and the staff working under his control:—Cattle Slaughtering and Diseased Animals and Meat (Amendment) Act, 1902-1932; Diseased Animals and Meat (Amendment) Act, 1910; Food Preservation by Sulphur Dioxide Enabling Act, 1920; Noxious Trades Act, 1902; Private Hospitals Act, 1908; Public Health Acts, 1902-1932; Pure Food Act, 1908; Wine Adulteration Act, 1902; and Closed Cemeteries and Exhumation of Bodies for the purpose of re-interment, &c.

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

<https://archive.org/details/b31485236>

CONTENTS.

	PAGE.
Letter of Presentation	1
Vital Statistics, 1931 and 1932—Extract from Government Statistician's Report	9
SECTION I.	
A.—Public Health Administration.	
Chemical Laboratory: Report of the Government Analyst (Mr. S. G. Walton) for 1931 and 1932	12
(a) Partial Freezing of Milk as a Cause of Adulteration	19
(b) Freezing Point Method for the Detection of Added Water in Milk	20
(c) Treatment of Pineapple Stems with Preservative for the Purpose of Controlling "Soft Rot" or "Water Blister"	21
Pure Food Act, 1908: Report of the Chief Inspector (Mr. C. V. Francis) for 1931 and 1932	22
Report of the Chief Sanitary Inspector (Mr. T. A. Curry) for 1931 and 1932	25
Private Hospitals Act: Report by Dr. F. M. Suckling for 1931 and 1932	28
Medico-Legal Section and Hospital Admission Depot; Report of the Government Medical Officer for Sydney (Dr. Arthur Palmer) for 1931 and 1932	30
B.—Division of Maternal and Baby Welfare.	
Report of the Director (Dr. E. Sydney Morris) for 1931 and 1932	31
C.—Communicable Diseases.	
Return of Diseases notifiable under the Public Health Acts for years ended 31st December, 1931 and 1932 (with graphs). (F. S. Wearne)	40
Venereal Diseases Act, 1918: Report by the Commissioner (Dr. Robert Dick) for the years ended 31st December, 1931 and 1932	52
D.—Tuberculosis Division.	
Report of the Director (Dr. H. K. Denham) for 1931 and 1932	56
E.—Industrial Hygiene.	
Report of the Medical Officer for Industrial Hygiene (Dr. Charles Badham) for 1931 and 1932...	62
SECTION II.—MEDICAL OFFICERS OF HEALTH.	
Metropolitan Combined Sanitary District: Report of the Medical Officer of Health (Dr. J. S. Purdy) for 1931 and 1932	68
Hunter River Combined Sanitary District: Report of the Medical Officer of Health (Dr. H. G. Wallace) for 1931 and 1932	74
Broken Hill Sanitary District:	
(a) Report of the Medical Officer of Health (Dr. W. E. George) for 1931 and 1932	78
(b) Review of the Incidence of Pneumonia at Broken Hill, 1908—1931 (Dr. W. E. George)	79
SECTION III.—HOSPITALS AND INSTITUTIONS.	
Report upon the State Hospitals, &c., under the control of the Director-General of Public Health for the Years 1931 and 1932:—	
1. Coast Hospital, Little Bay, and Auxiliary, at Randwick; Report of the Medical Superintendent (Dr. R. J. Millard)	82
2. Leprosy in New South Wales (Dr. R. J. Millard)	105
3. David Berry Hospital, Berry	112
4. Lady Edeline Hospital for Babies, "Greycliffe," Vacluse	112
5. Strickland Convalescent Hospital for Women, "Carrara," Rose Bay	113
6. Denistone House, Convalescent Hospital for Men, Eastwood	114
7. State Sanatorium for Consumptives, Waterfall (Dr. H. W. Palmer)	114
8. Lidcombe State Hospital and Home for Men, Lidcombe (Dr. H. Baret)	118
9. State Hospital and Home for Men, Liverpool (Dr. Donald Wallace)	119
10. State Hospital and Home for Women, Newington (Mr. W. Megarvey)... ..	121
11. State Home for Aged and Infirm Men, George-street, Parramatta	123
12. State Home for the Blind, and Men suffering from Defective Sight and Senility, Macquarie-street, Parramatta	123
13. Statistical Tables for Institutions, Table 1, Nos. 4-6 for 1931 and 1932	124
2, Nos. 7-12	125
SECTION IV.—MICROBIOLOGICAL LABORATORY.	
Report of the Principal Microbiologist (Dr. E. L. Morgan) for 1931 and 1932	126
Part I. Routine Work	128
Part II. Investigational Work—A case of Malaria acquired in Sydney, N.S.W. (E. L. Morgan)	131

CONTENTS

1. Introduction 1

2. The History of the Institution 2

3. The Present Position 3

4. The Future of the Institution 4

5. The Role of the Institution 5

6. The Importance of the Institution 6

7. The Contribution of the Institution 7

8. The Impact of the Institution 8

9. The Significance of the Institution 9

10. The Value of the Institution 10

11. The Benefits of the Institution 11

12. The Advantages of the Institution 12

13. The Disadvantages of the Institution 13

14. The Challenges of the Institution 14

15. The Opportunities of the Institution 15

16. The Prospects of the Institution 16

17. The Outlook of the Institution 17

18. The Conclusion of the Institution 18

19. The Summary of the Institution 19

20. The Appendix of the Institution 20

21. The Bibliography of the Institution 21

22. The Index of the Institution 22

23. The Glossary of the Institution 23

24. The Acknowledgments of the Institution 24

25. The Dedication of the Institution 25

26. The Foreword of the Institution 26

27. The Preface of the Institution 27

28. The Introduction of the Institution 28

29. The Chapter of the Institution 29

30. The Section of the Institution 30

31. The Part of the Institution 31

32. The Volume of the Institution 32

33. The Issue of the Institution 33

34. The Edition of the Institution 34

35. The Printing of the Institution 35

36. The Binding of the Institution 36

37. The Distribution of the Institution 37

38. The Sale of the Institution 38

39. The Price of the Institution 39

40. The Cost of the Institution 40

41. The Revenue of the Institution 41

42. The Profit of the Institution 42

43. The Loss of the Institution 43

44. The Return of the Institution 44

45. The Yield of the Institution 45

46. The Income of the Institution 46

47. The Output of the Institution 47

48. The Production of the Institution 48

49. The Generation of the Institution 49

50. The Creation of the Institution 50

51. The Invention of the Institution 51

52. The Discovery of the Institution 52

53. The Development of the Institution 53

54. The Growth of the Institution 54

55. The Expansion of the Institution 55

56. The Progress of the Institution 56

57. The Advancement of the Institution 57

58. The Improvement of the Institution 58

59. The Enhancement of the Institution 59

60. The Enrichment of the Institution 60

61. The Augmentation of the Institution 61

62. The Amplification of the Institution 62

63. The Intensification of the Institution 63

64. The Consolidation of the Institution 64

65. The Integration of the Institution 65

66. The Interconnection of the Institution 66

67. The Interrelation of the Institution 67

68. The Interdependence of the Institution 68

69. The Interactivity of the Institution 69

70. The Interoperability of the Institution 70

71. The Interfamiliarity of the Institution 71

72. The Interfamiliarity of the Institution 72

73. The Interfamiliarity of the Institution 73

74. The Interfamiliarity of the Institution 74

75. The Interfamiliarity of the Institution 75

76. The Interfamiliarity of the Institution 76

77. The Interfamiliarity of the Institution 77

78. The Interfamiliarity of the Institution 78

79. The Interfamiliarity of the Institution 79

80. The Interfamiliarity of the Institution 80

81. The Interfamiliarity of the Institution 81

82. The Interfamiliarity of the Institution 82

83. The Interfamiliarity of the Institution 83

84. The Interfamiliarity of the Institution 84

85. The Interfamiliarity of the Institution 85

86. The Interfamiliarity of the Institution 86

87. The Interfamiliarity of the Institution 87

88. The Interfamiliarity of the Institution 88

89. The Interfamiliarity of the Institution 89

90. The Interfamiliarity of the Institution 90

91. The Interfamiliarity of the Institution 91

92. The Interfamiliarity of the Institution 92

93. The Interfamiliarity of the Institution 93

94. The Interfamiliarity of the Institution 94

95. The Interfamiliarity of the Institution 95

96. The Interfamiliarity of the Institution 96

97. The Interfamiliarity of the Institution 97

98. The Interfamiliarity of the Institution 98

99. The Interfamiliarity of the Institution 99

100. The Interfamiliarity of the Institution 100

REPORT of the Director-General of Public Health to the Honorable the Minister of Health.

Sir,

I have the honour to present herewith my report for the years 1931 and 1932.

A perusal of the summarised Vital Statistics (pp. 9-11) shows that these have been generally years of good health, and, with the exception of infantile paralysis, free from disquieting epidemics of infectious disease.

The population of the State on 31st December, 1932, was 2,542,034, being an increase of 17,261 in 1931, and 22,734 in 1932.

Births in 1931 numbered 47,724, and in 1932, 44,905, equivalent to rates respectively of 19.01 and 17.74 per 1,000 of population.

Deaths numbered 21,284 in 1931, and 21,357 in 1932, equivalent to rates of 8.48 in 1931 and 8.44 in 1932. The infantile mortality rate was 43.52 in 1931 and 41.06 in 1932. In the metropolis of Sydney, with a population of 1,259,660 at 31st December, 1932, the general death rate was 8.65 per 1,000 of population, and the infantile mortality rate 39.01 per 1,000 births. An infantile mortality rate of less than 40 per 1,000 births may be claimed as an enviable achievement in health administration for any city with a population of over a million and a quarter.

With the exception of whooping-cough in 1931, and infantile paralysis from December, 1931, to June, 1932, the State was free during the two years under review from disturbing epidemics of infectious disease. Deaths from the communicable diseases totalled 578 in 1932, compared with 846 in 1931, and a yearly average of over 1,000 for the preceding five years.

Included with the graphs following p. 10 is an array of observations showing the principal causes of death in this State in 1900 and 1932. This array indicates that the steadily increasing causes of death are invariably those connected with the individual as a separate entity—cancer, diabetes, diseases of the heart and arteries, Bright's disease, and similar constitutional illnesses—while the diseases showing a steady downward trend are invariably those associated with environmental conditions, such as typhoid fever, diarrhoea and enteritis, tuberculosis, and the infectious diseases generally.

These facts would indicate that more attention must be concentrated on the individual to determine what preventive measures are practicable for the avoidance of personal breakdowns in health, with accompanying financial loss and necessity for medical and hospital care and treatment. In Life Expectancy Tables, published in recent years, Australia is shown as having an average life expectation of 60 years compared with an average of 58 years in the United States and Great Britain; and in the recently issued International Year Book of the League of Nations Australia heads the list as the country with the lowest infantile mortality rate from tuberculosis (0.38) per 1,000.

The reports of the various Branches indicate the wide range of work which has received attention and the progress made during the two years under review; but the need for readjustments to meet the financial conditions of a declining revenue and essential curtailment in expenditure has limited investigational and research work.

Expansion and developments which had been in progress from 1923 onwards had to be halted in order to avoid crippling essential activities in preventive medicine, particularly those which concern maternal and infant welfare, the prevention of tuberculosis, and venereal diseases.

Nutrition became a subject of great importance during these years of financial embarrassment, when many thousands of ordinarily self-supporting wage-earners found themselves out of work and compelled to seek food relief for the subsistence of themselves and their families. The problem for the department was the drawing up of a reasonably complete and varied subsistence diet to suffice for the maintenance of health, and to meet the needs of growing children and expectant and nursing mothers, while at the same time keeping the cost at such a level as could be met by the community during the years of financial stress.

In cases of sickness, malnutrition, etc., an applicant was supplied with additional amounts or with special foods, or in case of disease, *e.g.*, diabetes, complete special diets were provided if a medical practitioner certified that such requirements were necessary.

Fortunately, during these years of anxiety, there have been reasonably good seasons over the greater portion of the State, and plentiful supplies of fresh fruit and vegetables.

Unemployed camps was another development which called for close supervision. In the metropolitan district, these camps have been mainly centred along unoccupied areas of the extensive inlets of the harbour. They are also located at various parts of the coast line, and in the neighbourhood of inland towns, and consist mainly of tents and temporary shacks. In many instances, water supplies and sanitary services have been temporarily extended by Local Authorities, and up to the present there has been remarkable freedom from outbreaks of disease.

At two of the unemployed camps, trials are being made with posthole (or bored-hole) latrines for the purpose of ascertaining their suitability for use in isolated unsewered localities. In the last two or three years, several favourable reports on this type of cesspit have appeared in the health reports and medical journals received from Fiji, Singapore, and the Philippine Islands.

INFANTILE PARALYSIS EPIDEMIC, 1931-1932.

In the latter part of 1931 and the first half of 1932, there occurred a more extensive outbreak of infantile paralysis than this State had hitherto experienced. Probably owing to its insidious nature, the lack of definite knowledge as to causation and mode of spread, its high mortality rate, and the life-long crippling that may be a sequence to even a mild attack, this disease appears to be more feared by parents

than any other of the infectious illnesses mainly affecting children and adolescents. As a result of the prevailing anxiety and disquietude, unusual demands for information and guidance were made upon the Department by the press and the public during the continuance of the epidemic.

Between 1st October, 1931, and 31st July, 1932, 463 cases and 63 deaths were notified to the Department. The monthly distribution of cases is shown on the accompanying graph, as is also the number of cases and periods of greatest incidence (summer-autumn) in previous epidemics. In the 1931-32 epidemic, the greatest incidence was in January-February, 1932, or a month to six weeks earlier than the peak period of previous outbreaks.

Of the 463 cases that comprised the epidemic, 202, or 43.63 per cent., occurred in the metropolitan district, and 261, or 56.37 per cent. in the remainder of State, which includes the urban district of Newcastle and the larger country towns.

Although as to numbers the epidemic was almost equally divided between the metropolis of Sydney (population 1,259,660) and the remainder of State (population 1,287,534), it reached its height in Sydney a month to six weeks earlier than in the country districts.

Age and Sex Incidence.—The figures below show a heavier incidence for males than females at all affected ages, except under one year, the number of males attacked being 281, females 182. There was, however, a higher percentage of fatal cases among females than among males, the rates in the 63 fatal cases being respectively 16 per cent. for females and 12 per cent. for males.

In thirteen families two cases occurred, but no family had more than two cases.

TABLE showing Age and Sex Distribution of the 463 Cases of Infantile Paralysis, with 63 Deaths, 1931-1932.

Age.	Sex.			Age Per cent. of Total Cases.	Deaths.		
	M.	F.	Total Cases.		M.	F.	Total.
Under 1 year	9	11	20	4.32	2	1	3
1-4 years	107	90	197	42.53	13	8	21
5-14 ..	128	61	189	40.82	13	16	29
15-24 ..	30	17	47	10.15	3	4	7
25 and over	7	3	10	2.16	3	...	3
	281	182	463		34	29	63

The areas of the State more particularly affected outside the metropolis were the south-east section as far as Moss Vale, and the main northern railway area from Newcastle to Glen Innes. Small outbreaks occurred in the last-named town and the surrounding (Severn) shire; in Tamworth municipality and the adjacent (Peel) shire, and at Armidale and the adjoining shires of Dumaresq and Gostwyck. Late in the epidemic a few cases were reported from Wagga, Wyalong, Narrandera and Broken Hill in the southern and western districts.

One outbreak of particular interest was at Bargo, a small township on the main southern railway, 64 miles south of Sydney. At the time of the epidemic there were approximately 800 persons at Bargo, mostly unemployed workmen and their families. The men had been engaged in constructing a water storage dam, but owing to financial stress work had been temporarily discontinued. The outbreak comprised 14 cases and 5 deaths; the first case was reported on 10th December, 1931, and the last, two months later, on 12th February, 1932. The outbreak was investigated by Dr. I. M. Mackerras, a medical officer attached to the Entomology Division of the Commonwealth Council for Scientific and Industrial Research, whose services were loaned to the Department. In his opinion the Bargo cases were transmitted by some infected person—patient or carrier—directly to susceptible individuals. He could find no evidence that insects played any part in transmitting the disease.

Throughout the epidemic very close touch was kept by the Department with the medical officer of the Infantile Paralysis Committee, a voluntary organisation formed under the leadership of the late Sir Charles Clubbe, and financed by public subscription. Particulars of this organisation and the work carried out by it during the epidemic is given in the second annual report of the Committee. Its objects are to always have on hand a stock of convalescent serum, to assist medical practitioners in making an early diagnosis, and the administration of serum, to encourage adequate after-treatment, etc. The Committee's medical officer, Dr. Karen Helms, was continuously available during the epidemic period. Over 400 patients were seen by her in the metropolitan area, and convalescent serum was administered where indicated. This serum was prepared for the Committee at the Royal Prince Alfred Hospital.

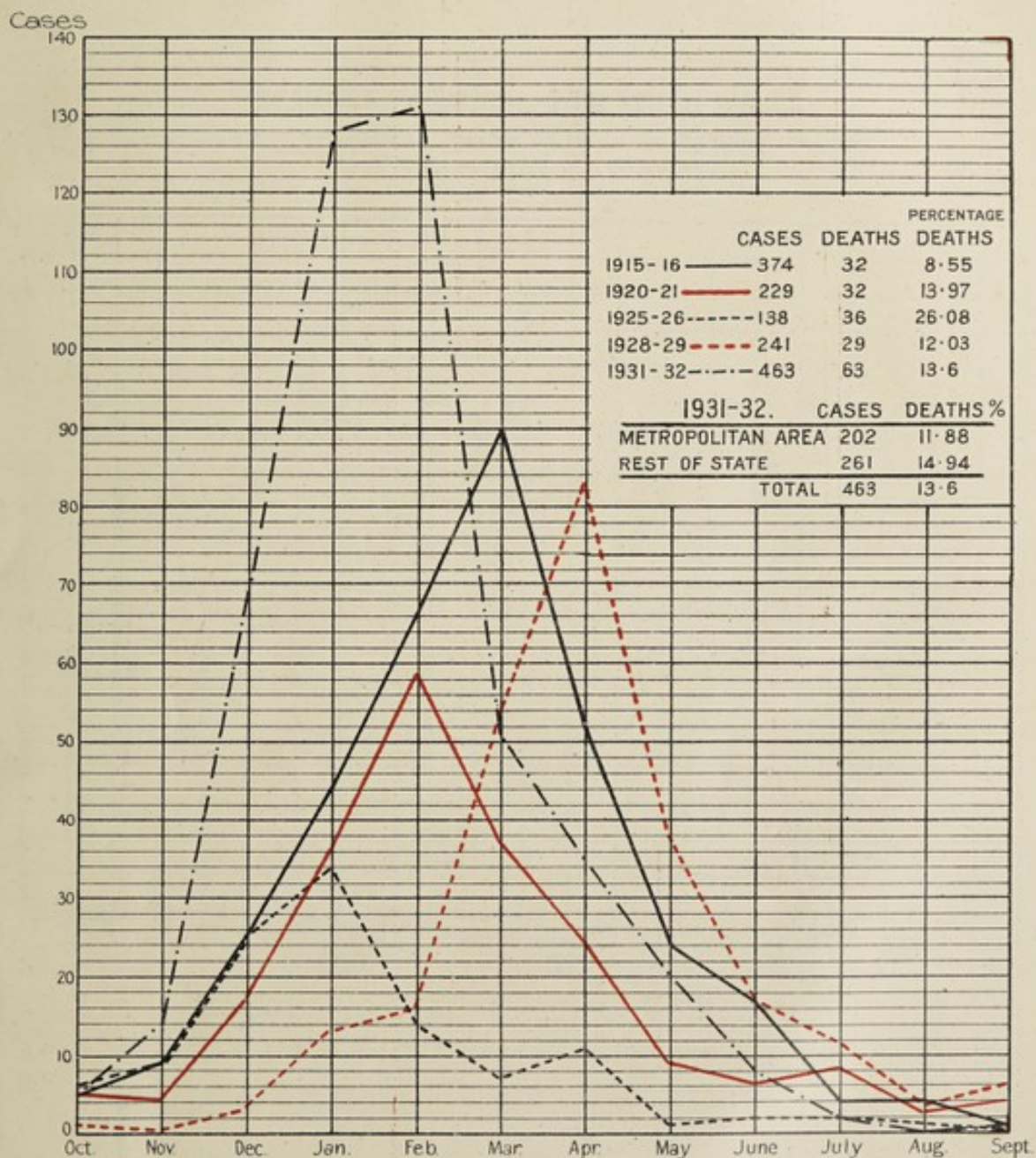
At the Royal Alexandra Hospital for Children the actual cost value of the convalescent serum used during the epidemic was £950. Serum was administered to 162 patients in the metropolitan district, 10,550 c.c. (approximately 18 pints) being used. Fourteen centrally situated country depots were established from which serum could be distributed to neighbouring districts if required. Stocks at these depots are tested for sterility every six months. During the epidemic 13,000 c.c. of serum (approximately 22 pints) were used in the country.

A very complete examination of the results of treatment with convalescent serum has been made by Drs. A. H. Tebbutt and Karen Helms in a report* on the epidemic. In a summarised discussion of the results obtained they state: "Owing to the lack of an unquestionable control series in Sydney, it is not possible to conclude that the undoubted good results in the serum-treated preparalytic cases were due to serum . . . A final statement cannot yet be made with regard to the role of convalescent serum therapy."

* Medical J. Aus. Vol. 1, 1933, p. 43.

INFANTILE PARALYSIS, NEW SOUTH WALES.

Graph illustrating Epidemics during the Years 1915-16, 1920-21, 1925-26, 1928-29, and 1931-32.

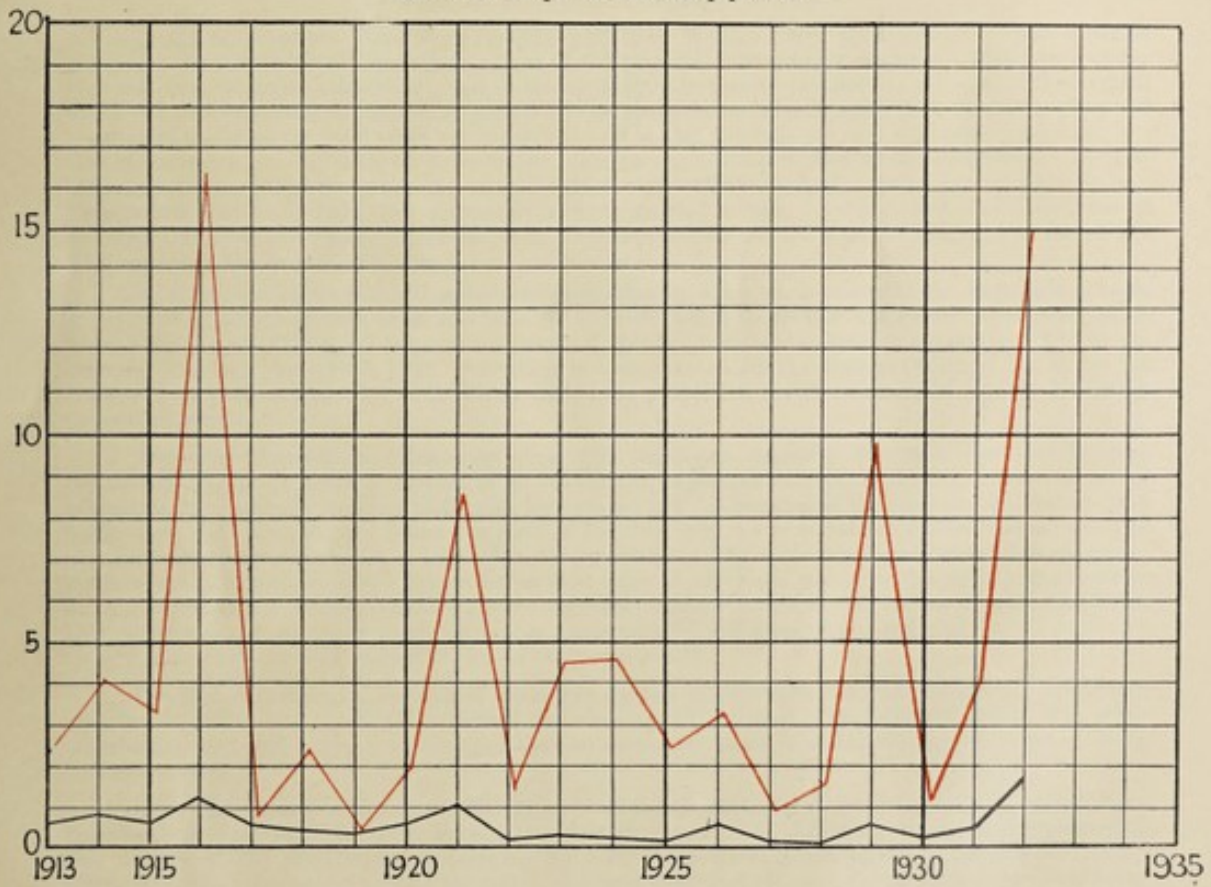


INFANTILE PARALYSIS, NEW SOUTH WALES.

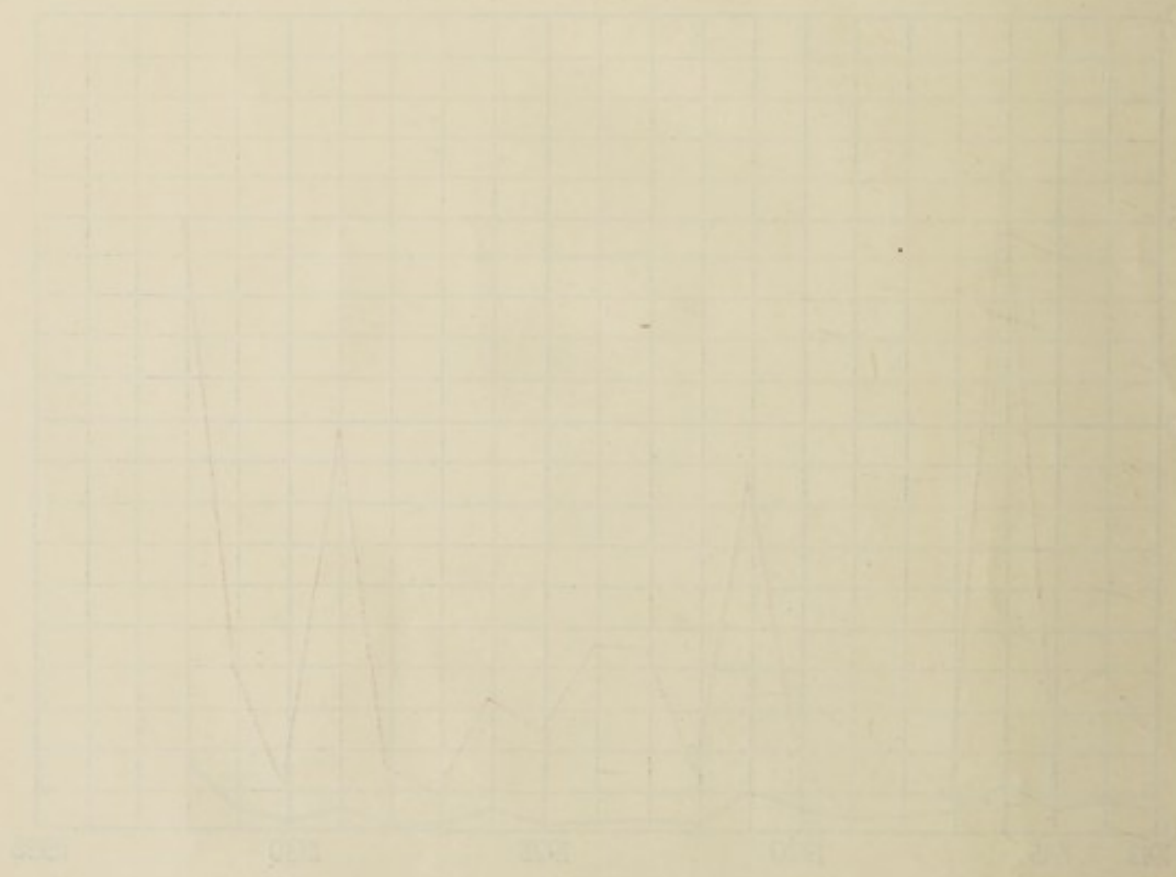
Annual Death Rate and Case Rate per 100,000 of the Population, 1913-1932.

Black.—Death rate per 100,000 of the population.

Red.—Case rate per 100,000 of the population.



THE WATER PARALLEL, NEW SOUTH WALES.
 A RECORD OF THE WATER PARALLEL IN THE DISTRICT OF
 THE PARALLEL, NEW SOUTH WALES.
 THE PARALLEL, NEW SOUTH WALES.



This statement is of interest in connection with the final conclusion arrived at by Dr. W. H. Park* at the meeting of the American Medical Association held at New Orleans in July, 1932, "that cases treated with convalescent serum, with human adult serum, and with the serum from immunised horses did no better than those not so treated."

Notwithstanding the entirely negative report of Dr. Park on the results of serum therapy in the New York epidemic, many practitioners in various parts of the world still believe that prompt administration of convalescent serum will lessen the severity of an attack and prevent complications, and it is hoped that the work of the New South Wales Committee will be continued in making available throughout the State supplies of convalescent serum for use in cases met with in the earliest stages of the disease.

A conference on poliomyelitis, called together by the Federal Director of Health, Dr. J. H. L. Cumpston, was held at the Federal Capital in April, 1931, and was attended by representatives from this and other States. The investigation form drawn up at the Conference was used throughout the epidemic, for collecting information concerning cases. In the metropolitan district staff nurses visited the patient's residence, and obtained particulars concerning the home surroundings, onset of the attack, etc.; this was later supplemented by the clinical history, serum treatment, and condition as to paralysis at three, six, and twelve months after the attack.

In outlying country districts the form was sent to the notifying doctor with a request for its completion. By this method fairly comprehensive case histories of about 90 per cent. of the patients from widely separated areas have been obtained, and the material is now awaiting classification and analysis. It is doubtful, however, if it will yield any new aspects on the mode of transmission of this puzzling and disquieting disease.

DIVISION OF MATERNAL AND BABY WELFARE.

In the report of the Director of Maternal and Baby Welfare (page 31) attention is again called to the increasing rate of illegal operations as one of the principal contributing causes in maintenance of the high maternal mortality rate (5.02); and to the apparently increasing practice—in all parts of the civilized world—of deliberate interference with pregnancy by the woman herself, more than by the professional abortionist so far as the fatal cases are concerned. It is also pointed out as a still more disturbing fact that the increase as a rule appears to be taking place among married women who are already the mothers of families, rather than among the unmarried single women. Of the 40 deaths that occurred in the Sydney metropolitan district in 1931, 25 (or two-thirds) were married women, 12 were single, and 3 widowed or divorced. In 1932 the number of deaths from illegal operations reached a record height of 50 out of 276 total maternal deaths (18.1 per cent.).

In the report of the Coast Hospital, the institution in which the majority of the metropolitan cases of septic abortion are treated, there is a table on page 83 which shows that the number of abortion cases treated has increased from 1.7 per cent. of the total female admissions in 1919 to an average of 13.88 per cent. for the four years 1929-1932. Attention is also directed by the Medical Officer of Health for the Hunter River District (page 75) to the increasingly large proportion of such cases admitted to the Newcastle General Hospital.

Ante-natal Supervision.—Enquiries show the increasing necessity for such work, and every opportunity for propaganda is availed of to inform the expectant mother of the importance to her of ante-natal care, and the facilities that exist for obtaining it. Nevertheless the majority of mothers, and particularly the young mother before the birth of her first baby, come to labour without having received any ante-natal supervision. It is somewhat disappointing to find that only one in about five expectant mothers avail themselves of the opportunities that exist at the large maternity hospitals and elsewhere for ante-natal care. Although nearly 7,000 expectant mothers attended the various Health Centres in 1931, their visits were mainly to obtain advice concerning baby clothes, extra nourishment, etc., and not for advice on the very vital matter of care of their own health.

The first departmental ante-natal clinic was opened at Newtown—one of the large metropolitan suburbs—in 1929; and its weekly sessions are always well attended. In February, 1932, nine other suburban centres were opened, so arranged that an ante-natal clinic is within reasonable access of every Sydney suburb.

Research.—Closely interwoven with the problem of high maternal mortality is that of the persistent high death rate amongst the newly born. As a first step towards a solution of the conditions underlying this wastage of life, the Division is carrying out a thorough investigation of every maternal and every neo-natal death. Investigation into the latter was completed in 1931, and the material collected is being classified and prepared for report. Maternal deaths as they occur are still being investigated, and as soon as sufficient data are available it is proposed to draw deductions from the facts ascertained.

Graphs are included in the report of the Division showing the annual death rate from childbirth and puerperal septicæmia, and from illegal operations; and the infantile mortality rate and deaths from diarrhoea and enteritis under and over two years of age. Table III (page 39) summarises the work of the Baby Health Centres during 1931 and 1932. The attendances at the Centres is now about 500,000 a year, and the work has been followed by a gratifying decrease in the infantile mortality rate which fell to 39.01 per thousand births in the metropolitan district in 1932.

SUPERVISION OVER THE MILK SUPPLY.

Chemical and Bacteriological Examinations.—In the report of the Government Analyst (page 12) particulars are given of the number of milk samples examined for the purposes of the Pure Food Act in 1931 and 1932 from the metropolitan and country districts, and the number found adulterated. In the two years under review a total of 37,923 samples were chemically examined, of which 562 from the metropolitan district and 181 from country districts were not in accordance with the standard.

Adoption of the Freezing Point Method for the Detection of added Water in Milk.—The revised code of regulations under the Pure Food Act issued in 1932 included the freezing point test. This test was first adopted as a Pure Food regulation in Queensland, and is now a recognised official test in various countries for the detection of added water in milk. Some notes concerning the test and a copy of the regulation are included on page 20.

The systematic bacteriological survey of the Sydney milk supply, in operation from 1927, was in abeyance for some months in 1931, during legislative changes in the constitution of the Milk Board. When the Amended Milk Act became law at the end of 1931, arrangements were made by the reconstituted Milk Board for continuance of the bacteriological work, and some 600 samples were tested in 1932. Among the samples tested for tubercle bacilli by guinea-pig inoculation in 1931, one infected specimen was found. This sample was collected from a vat of pasteurised mixed milk at one of the distributing depots.

The "Milk Act, 1931" cancelled the Metropolitan Milk Act of 1929, and created a Milk Board with extensive powers over every milk producing and milk distributing district established under the Act. The estimated yearly milk consumption in the metropolitan district of Sydney with a population of 1,259,660 is 25,000,000 gallons.

The Milk Board is charged with the regulation, control, supply and distribution of milk within the Metropolitan milk district, and such other milk distributing districts as may from time to time be established.

The Board is also given power to fix grades for milk, and can require milk of any prescribed grade to be sold in prescribed containers labelled as prescribed.

In the case of by-laws made under the Act, and which deal with grades, containers, labelling, methods of production, storage, distribution, and sale, maximum temperature at which milk is to be kept and other cognate sanitary requirements such by-laws must before publication be approved by the Board of Health.

SALE OF WRAPPED MEAT IN DEPARTMENT STORES.

In the report of the Chief Inspector under the Pure Food Act (page 22) attention is directed to the increasing sale of meat in the large department and other stores, particularly in the metropolitan district. The meat exposed for sale is generally already cut up and kept in refrigerated showcases; but the construction of the premises is not altogether in accordance with the requirements for ordinary butchers' shops, and as various commodities other than meat are usually sold from nearby counters, representations have been made by the licensees of butchers' shops to the effect that if the sale of meat is to be allowed in such department stores they should be compelled to comply with all the requirements of an ordinary butchers' shop. As the matter is of some importance, arrangements are on foot to bring about a conference of the interested parties, including departmental officers, with the object of finding a satisfactory solution of the difficulty.

RELABELLING IN AUSTRALIA OF LOW GRADE SALMON WITH FIRST GRADE LABELS.

Enquiries were made into this matter by the Pure Food Branch, which reported that apparently the practice of relabelling canned salmon is being carried on, in some cases the article being sold under a different name and grade to the one under which it was imported. The labels were printed in Sydney. This practice allowed the unfair trader to import cheap brands and sell them as choicest, thus obtaining a higher price for an inferior article.

There is apparently no provision under the existing New South Wales Pure Food Regulations under which action can be taken in matters of false description of this nature; but it is understood that the exporting country (Canada) has taken action for the code marking of cans in such a manner in the process of packing that in future they will show the grade of salmon, date of canning and name of packer. Such branding of the container should serve to identify the grade of salmon, and prevent the substitution of inferior grades.

LEGISLATION AFFECTING THE PUBLIC HEALTH.

The economic depression of the last two years has interfered with the introduction of legislation dealing with matters relating to public health, and the Bills drafted in 1930 and earlier years, which included an amending Public Health Bill, Pure Food Bill, Pharmacy and Poisons Act Amendment Bill, and Dangerous Drugs Act Amendment Bill, have not yet been dealt with by Parliament.

Death from Hydrocyanic Gas poisoning.—Amending legislation is needed for regulating the fumigation of occupied premises with hydrocyanic acid or other dangerous gas. Attention has been specially directed to a defect in existing enactments by two recent fatalities. The first was in October, 1931, when fumigation of one of a block of flats resulted in the death of an adult who occupied a ground floor flat immediately beneath the fumigated tenement. The second fatality occurred early in 1933. Two rooms in a city hotel were under fumigation, when a young woman was found dead in a room immediately above one of two rooms that had undergone fumigation. In each case the enquiring Coroner returned a verdict of accidental death. Regulations designed to effectively control fumigation operations were drafted, but it was then found that amendment of the law was necessary to secure power for their enforcement.

Swimming Baths and Pools.—A similar position exists in respect of an Ordinance under the Local Government Act to give Local Authorities adequate control over swimming baths and pools.

The department anticipates that these and similar difficulties will be met at an early date by the passing of the required legislation.

Slaughtering and Butchers' Premises, etc.—Some progress has been made in respect of supervision over slaughtering premises in country districts by an amendment to section 15 of the Cattle Slaughtering and Diseased Animals and Meat Act, 1902. This amendment empowers an increase in slaughtering inspection fees on a prescribed scale to recoup Councils for expenditure incurred in employing qualified meat inspectors; and in several districts Councils have availed themselves of its provisions and are employing qualified inspectors. This is particularly the case in the large mining centres in the Hunter River and South Coast districts. The scale of fees is fixed only after careful inquiry by the department into the particular circumstances of each district in order to ensure that only minimum charges will be levied.

The use is also prohibited (Ordinance 56, L.G. Act) of "cutting carts" for the transport, cutting up, and sale of meat cut up or stored elsewhere than on premises licensed as a butcher's shop or on licensed slaughtering premises on which is provided a room fitted in compliance with regulations for cutting up carcasses slaughtered for human food.

Other recent amendments of the Act prohibit the use of a killing house for any other purpose than the slaughtering and dressing of animals intended for the food of man; except in special circumstances and under the personal supervision of and inspection by responsible officers.

Amended Pure Food Regulations, 1932.—A revised code of regulations under the Pure Food Act was issued in 1932; some of the more important alterations are noted below:—

Preservative—

- Use of salicylic acid prohibited as from 1st July, 1932.
- Amount of benzoic acid permitted increased to 0.1 per cent.
- Preservative prohibited in minced meat.
- Preservative not permitted in butter.

Colouring Matters—

- No colouring permitted in butter.
- Revised and extended list of permitted colourings was authorized.
- Soft cured fish permitted to be coloured with annatto.

Milk—Freezing point figure and standards for grades of milk introduced.

Margarine—Kirschner value for fats contained in margarine introduced. (New Act to prohibit the use of butter fats in the manufacture of margarine.)

Fruit and Fruit Products—

- Limits for metallic contamination of fresh fruit fixed.
- New standards introduced for fruit squash and fruit squash drinks.
- Citral content of oil of lemon lowered.
- Citric acid content of lemon juice lowered and of lime juice raised.
- Glucose permitted in jams, and limits for fruit content and permitted additions of pectin and fruit acids fixed.

Tomato Sauce.—Standard for tomato solids content introduced and method of determination prescribed.

Vanilla Essence.—Alcohol content and lead number fixed.

Medicated Wine.—Additional standards for meat, malt, and mixed medicated wines and restrictions regarding sale introduced.

Carbolic Soap.—New standard introduced (minimum 3 per cent. phenol).

Lysol.—New standard introduced.

In revising the code, special attention was given to labelling provisions to prevent as far as possible the marketing of substitute materials for genuine products.

Bathing and Swimming Pools.—In 1928 a routine investigation was begun of the public bathing and swimming pools throughout the State, and comprehensive reports have now been made in respect of every public pool.

The survey disclosed that the majority of the pools have a capacity of about 100,000 gallons, are constructed of concrete, situated in the open, and owned and controlled by the town council. The water used is generally from the town supply.

During the 1932-33 swimming season, inspections and re-inspections were made of 52 metropolitan and 12 country swimming pools, and over 50 samples of water were submitted for bacteriological and five for chemical examination.

A number of new pools are in course of construction, particularly in country districts. The work of supervision is hampered by lack of an effective code of swimming bath regulations applicable to all Local Government areas. A comprehensive code has been prepared, after consultations between medical officers of the health department and representatives of other interested parties, but the code cannot be put into effective operation until an anticipated early amendment is made in the Local Government Act, giving Councils greater powers of supervision and control over swimming pools than they at present possess.

Health Inspectors in Municipal and Shire Districts.—In pursuance of the provisions of section 4 (1-c) of the Public Health (Amendment) Act, 1921, the Board of Health made the following regulations in regard to the qualifications to be held by health inspectors employed by or under the control of any municipality or shire:—

1. A person shall not be employed as health inspector by or under the control of the Council of a Municipality or Shire unless—

(a) he lawfully holds—

- (1) a sanitary inspector's certificate issued by the Royal Sanitary Institute of London; or
- (2) a full health inspector's certificate issued by the Sydney Technical College; or
- (3) a sanitary inspector's certificate issued by the Royal Sanitary Association of Scotland; or
- (4) a certificate issued by the Sanitary Inspectors' Examination Joint Board, London; or

(b) at the date of gazettal of this Regulation he is in the position of Health Inspector in the employ or under the control of the Council of a Municipality or Shire and is carrying out to the satisfaction of the Board of Health the whole of the sanitary duties of such position.

Provided that any such person shall not be eligible for appointment as Health Inspector to any other Shire or Municipality.

Regulation of Barbers' Shops and Need for Control of Itinerant Barbers.—By-law No. 37 under the Sydney Corporation Act, and Ordinance 62 under the Local Government Act were gazetted in 1932, and give power to regulate and control barbers' shops and premises used for the business of hairdressing and shaving. By-law 37 applies to all barbers and hairdressers' premises within the boundaries of the City of Sydney; and Ordinance 62 to similar premises in Local Government areas outside the city boundaries.

Itinerant barbers have for some time been a source of complaint to the Department on the ground that they carry on their calling without being licensed, and without supervision over the disinfection of implements, etc. During the recent lack of employment, out-of-work hairdressers canvass from house to house in search of business and it is alleged that in some suburbs there has been a considerable amount of such business, particularly among lady hairdressers. Departmental inspectors so far have not been in actual contact with any of these itinerant workers, and action is hampered by the need of amendment of the Local Government Act before a controlling ordinance can be drafted.

Mattresses and Upholstery.—During recent years a much greater variety of materials have been in use as a filling for mattresses and upholstery, and it has been considered necessary to seek amendment of the regulations controlling Rags, Flocks, etc., in order more adequately to deal with these materials so as to ensure their cleanliness and wholesomeness.

Under the Factories and Shops Act, 1931, which deals with trade descriptions of goods, the following regulations have been made in respect of bedding:—

- (a) The particulars required to be appended to any bedding shall be appended by being stamped in indelible ink on a label securely sewn in a conspicuous position to each separate article in prescribed type;
- (b) The character of the trade description to be conspicuously appended to bedding shall be a description of the filling material used in such bedding, and a statement indicating whether such filling material is second hand or otherwise.

Cremation.—The provisions of the law dealing with cremation have been amended and extended. It is now necessary for the site of a crematorium to be approved both by the Minister on the recommendation of the Board of Health and by the local authority within whose area it is to be built. The plans of the building must also be approved by the Minister and the local authority, whilst the equipment and apparatus to be used in connection with the crematory must be approved by the Minister upon the recommendation of the Board of Health. Buildings for the purpose of a crematory must not be erected within two hundred yards of any dwelling unless with the consent in writing of the owner, occupier and lessee, nor within fifty yards of any public road.

Regulations prescribe the fees to be charged for approval of the site, plans, etc., and the scale of fees for cremations and the disposal of the ashes. A report must be furnished to the Minister annually setting out the number of cremations carried out during the year, income received, and other general information.

The following figures indicate the progress of cremation in Sydney since the opening of the first Crematorium in May, 1925:—May, 1925-June, 1926, 122; 1926-27, 175; 1927-28, 336; 1928-29, 456; 1929-30, 647; 1930-31, 766; 1931-32, 966; 1932-33, 1,247.

SEWAGE TREATMENT BY CHLORINE.

Owing to serious defects having developed in the Long Bay main outfall sewer, the Metropolitan Water, Sewerage and Drainage Board found it necessary to divert the whole of the sewage amounting to 34,000,000 gallons per day into Botany Bay during the period required to make necessary repairs to the sewer.

In order to prevent the sewage from being a source of nuisance or danger, arrangements were made to screen the sewage and treat the effluent with liquid chlorine before its entry into the waters of Botany Bay. The chlorine was added in the proportion of 150 lb. of liquid chlorine per million gallons of sewage. This amount of chlorine sufficed to prevent nuisance, and enabled the sewage to be dealt with by the sea water in the Bay without subsequent ill effects. During the period of treatment 37 tons of chlorine, averaging 4,000 lb. a day, were used at a cost of £4,000.

During the fourteen days the sewage was being diverted inspections of the foreshores of Botany Bay, Shee's Creek and Cook's River were made daily by officers of this Department to ascertain to what extent, if any, pollution of the waters and foreshores of these waterways was taking place. 356 samples of water were also collected from various selected points in the Bay for chemical and bacteriological examination, in order to keep a check on the quality of water and the efficacy of the chlorine treatment.

Throughout the period of diversion there was close co-operation between this department and the Water and Sewerage Board, and the whole of the operations were successfully carried out without any cause for complaint.

PRIVATE HOSPITALS.

In the Report by the late Dr. F. M. Suckling on the Private Hospitals of the State, reference is made to the increase of community activities in connection with private hospitals; and also to the effect of the Public Hospitals Act, 1929, on the operation of the Private Hospitals Act. As a result of representations made to the Hospitals Commission by the authorities of two large denominational hospitals, the Commission reversed a previous decision it had given, and this year the hospitals in question again come within the scope of the Private Hospitals Act.

Under the Metropolitan Hospitals Contribution Fund, which is controlled by representatives of twenty-five metropolitan hospitals, a scheme of hospital insurance has been inaugurated, the rates of subscription being 6d. a week for contributors and certain dependents and 3d. a week for male minors and

all females for benefits to themselves only. This scheme provides inter alia that in the event of a contributor "being admitted to a duly licensed private hospital he shall have the right to benefit from the fund to the extent of 6s. per day (£2 2s. per week) for a period not exceeding eight weeks in any one year."

Rest Homes.—In the Metropolitan area during recent years the number of these premises have shown considerable increase. These rest homes receive aged and infirm persons of both sexes for care and attention at a charge. This class of business does not, however, render it necessary for the premises to be licensed under the Private Hospitals Act. Inspection of a number of these Homes by departmental officers has shown that it is desirable that some supervision should be exercised over them in the interests of the inmates. By amendment of the Private Hospitals Act these premises could be brought under control.

Registration of Nurses.—Amendments to the Regulations under the Nurses Registration Act were gazetted on 14th October, 1932, and took effect from 1st January, 1933. The effect of the amendments is to increase the period of midwifery training, and to afford trainees a longer period for study and greater practical experience in conducting confinements.

A pamphlet recently issued by the Nurses Registration Board sets out the agreements arrived at with other States and oversea registration authorities for reciprocal registration of nurses.

TUBERCULOSIS DIVISION (page 56).

The total notifications for the State were 1,588 cases in 1931 (a decrease of 329 compared with 1930); and 1,485 cases in 1932 (a decrease of 103 on the figures for 1931). Deaths for the two years were respectively 1,125 in 1931, and 1,071 in 1932.

The work of the Division was again specially directed towards popularising the work of the anti-tuberculosis dispensaries and clinics, where opportunities are available for early diagnosis, prompt treatment and admission to suitable sanatorium or hospital.

Two additional clinics, one in the Metropolitan area to serve the Liverpool and Parramatta districts, and one at Broken Hill, would no doubt prove helpful in the campaign against the disease.

The need for attracting the attention of the public to the facilities provided at the dispensary clinics for diagnosis is emphasised by the following extract from the Report of the Medical Superintendent of Waterfall Sanatorium (page 114):—

"Notwithstanding all the benefits that are available through the present system of co-ordination, few tuberculous persons are coming to Waterfall in that early and suitable period when there is such urgent need for all persons suffering from the first symptoms of tuberculosis to come under medical control and supervision. This calls for more publicity in directing attention to the early symptoms of tuberculosis; the danger of delaying treatment if recovery is to be obtained, and the facilities that are available at clinics and dispensaries for diagnosis and advice. During the year many of the patients admitted were advanced toxic cases for which little could be done; while a large percentage of the other admissions were chronic cases beyond the stage likely to benefit in a sanatorium, as their condition was too far advanced to react favourably to any special treatment."

During 1932 arrangements were made with Professor C. G. Lambie, of the Faculty of Medicine, University of Sydney, by the Board of Control of the Campaign against Tuberculosis, for the study of tuberculosis to be brought more prominently into the medical course of the University. In addition to the instruction given by means of lectures and demonstrations, arrangements have been made for each student to attend for a definite period at one of the anti-tuberculosis clinics for practical work; and for sixth year students to receive practical clinical experience at the Waterfall Sanatorium.

Veneral Diseases Act, 1918.—An analysis of notifications received for the years 1931 and 1932 is given in the report of the Commissioner (page 52).

There are now ten clinics in the Metropolitan area, an additional clinic having been established in connection with the Parramatta District Hospital in 1931.

Continuous Clinic.—Although the much needed continuous clinic for males could not be established in 1931 or 1932, the Minister for Health, the Hon. R. W. D. Weaver, soon after taking office, provided funds for alteration and addition to an existing building, which has been converted into an up to date continuous clinic for the treatment of venereal diseases in males. This clinic was opened in 1933, and a report on its activities will be included in the next Annual Report.

Industrial Hygiene.—In the report of this Division (page 62) attention is drawn to a recently published paper* on Coal Miner's Lung, in which a preliminary account is given of the chemical analysis and pathology of the lungs of New South Wales coal miners, and important conclusions concerning causation are drawn.

Reference is also made to an investigation in progress with "dusting chambers" to ascertain the effect of the action on the lungs of animals of dusts found in the coal mines of this State.

Work in connection with lead poisoning in the accumulator industry; spray painting dangers; and the effects of ethyl lead petrol are detailed.

Arsenic poisoning: A report of interest was concerned with an outbreak of poisoning among men engaged in manufacturing arsenic under interesting conditions.

An investigation was made into the illumination in various printing works, and suitable standards or illumination prescribed.

* Coal Miners' Lung (Badham, C. and Taylor, H. B.) Med. J. Aus., Vol. 1, 1933, p. 511.

HOOKWORM SURVEY.

The work concerned with hookworm eradication was partially halted during 1931 and 1932 owing to financial stringency.

It will be recalled that the Australian Hookworm Survey work was begun in 1919, when a comprehensive scheme was undertaken by the International Health Board of the Rockefeller Foundation, in co-operation with the Commonwealth Government and the States of New South Wales and Queensland. This arrangement was continued until October, 1924. It was then decided that the work should be carried on by the Commonwealth Government and the States of Queensland and New South Wales, the comprehensive survey made having disclosed the areas in which hookworm infection existed. It was found that in New South Wales hookworm was present in North Coast areas from the Queensland border to as far south as Taree, the infection being mainly confined to aborigines.

In 1928 a further arrangement was made between the Commonwealth Government and this State whereby collection of specimens and treatment of infected persons were carried out by this Department in conjunction with medical officers of the State Education Department, the examination of specimens being undertaken by the Commonwealth Government in its laboratory at Lismore.

In the early part of 1932 one of the departmental staff nurses was, by arrangement with the Commonwealth Health Department, attached to the Lismore Laboratory for instruction in laboratory methods, and later undertook field work for some weeks with the Commonwealth unit, which was then carrying out investigations in the North Coast district.

In May, 1932, the Commonwealth Government intimated that owing to the need for rigid economy the responsibility for the control of hookworm in its local aspects would in future rest with the State.

It is anticipated that in 1933 conditions will permit of the work being continued by this Department in collaboration with the State Education Department, when attention will again be given to those parts of the North Coast in which the heaviest infestation was found in previous surveys.

In the three years 1928-1930 inclusive, 20,961 specimens of faeces from Europeans were examined, of which 383, or 1.82 per cent., were found infected with hookworm; of 1,105 specimens examined from aborigines, 409, or 37 per cent., were found infected.

INVESTIGATIONAL WORK.

Owing to the demands made on the staff by the increasingly heavy volume of routine examinations, very little investigational work could be undertaken by the laboratory staffs during 1931-1932. In an appendix (page 19) to the Report of the Government Analyst there are three short papers dealing with—

- (a) Partial Freezing of Milk as a Cause of Adulteration.
- (b) Freezing Point Method for the Detection of Added Water in Milk.
- (c) Treatment of Pineapple Stems with Preservative.

The Principal Microbiologist includes at the end of his report a short note (page 131) "On a Case of Malaria acquired in Sydney."

The Medical Officer of Health, Broken Hill, has appended to his report (page 79) "A Review of the Incidence of Pneumonia, Broken Hill, from 1908-1931, inclusive."

Reference has been made above to the special investigation in progress by the Director of Maternal and Baby Welfare concerning the problem of high maternal mortality and the persistent high death rate amongst the newly born, the results of which will be published in subsequent reports. Certain of the problems encountered during the investigations are discussed in the report of the Director (page 31).

STAFF.

Resignations and Retirements.—Mr. Arthur Kench, who held the post of Chief Inspector under the Pure Food Act from November, 1909, retired from the position on 17th December, 1931.

The Chief Sanitary Inspector, Mr. E. A. Cresswick, who joined the staff in 1901, retired from the Public Service on 15th October, 1932, on attaining the age of 65 years.

DEATH OF BOARD MEMBER.

In closing this report, I have to record with great regret the death in July, 1931, of Mr. Augustus Frederick Robinson, a valued member of the Board of Health from his appointment to it in 1900, until the date of his death.

Among former officers of the Department who passed away during the year was William Mogford Hamlet, who held the post of Government Analyst from 1887 until his retirement from the service in 1915.

Mr. Robert Grant, a member of the staff of the Microbiological Laboratory from 1898 to 1929, died in September, 1931.

I also record with regret the death of Sir Charles Percy Barlee Clubbe, in November, 1932. Although not a member of the staff, he had been intimately associated with the Department on various occasions, notably in connection with the first outbreak of plague in Sydney in 1900, when he was appointed by the Government as a regular official visitor to the wards at the Quarantine Station, where plague patients were then under treatment. Up to the time of his death, Sir Charles Clubbe was in close contact with the Department in connection with the work of the Infantile Paralysis Committee.

THE LATE DR. F. M. SUCKLING.

The Department suffered a very great loss by the sudden and unexpected death of Dr. Frank Martin Suckling, on 17th October, 1932, while he was on recreation leave in South Australia.

Dr. Suckling was a valued and experienced officer of the Department, having joined the staff as Assistant Medical Officer in June, 1910. When he went on leave about two weeks before his death, he was apparently in excellent health, and his sudden death produced a sense of tragic loss among all his Departmental colleagues, to whom he had endeared himself by his personal charm and sympathetic assistance and helpfulness in all difficulties.

ROBERT DICK,
Director-General of Public Health.

**Extract from the Report of the Government Statistician, Mr. T. Waites, on the Vital Statistics of
New South Wales, for the years 1931 and 1932.**

Population, 1931.—The population on the 31st December, 1931, was 2,519,300, of whom 1,278,491 were males and 1,240,809 females. During the year the population increased by 17,261, or .69 per cent. The excess of births over deaths was 26,440; but the excess of departures over arrivals was 9,179. The mean population was 2,510,083.

1932.—The population at the end of 1932 was 2,542,034, of whom 1,289,290 were males and 1,252,744 females, the proportion both in 1931 and 1932 being 103 males to 100 females. In 1932 the population increased by 22,734, or .9 per cent. The excess of births over deaths was 23,548; but the excess of departures over arrivals was 814. The mean population was 2,531,330.

Marriages.—In 1931 the number of marriages was 15,377, corresponding to a rate of 6.13 per 1,000 of the population. The rate is 2.3 per cent. below the average of the previous five years. In the Metropolis the rate was 6.58, and in the remainder of the State 5.67 per 1,000 population.

In 1932 the number of marriages was 17,362, corresponding to a rate of 6.86 per 1,000 of the population. The rate is 8.98 per cent. below the average of the previous five years. In the metropolis the rate was 7.48, and in the remainder of the State 6.24 per 1,000 population.

Births.—In 1931 the total number of births was 47,724, equivalent to 19.01 per 1,000 of population, which is 13.9 per cent. below the average of the previous five years. Of this number 24,545 were males and 23,179 females.

In 1932 the total number of births was 44,905, equivalent to 17.74 per 1,000 of population, which is 16.70 per cent. below the average of the previous five years. Of this number 23,118 were males and 21,787 females. In both 1931 and 1932 the proportion was 106 males to 100 females.

Dividing the State into the Metropolis and remainder of the State, there were 19,080 births in the former and 28,644 in the latter in 1931, corresponding to rates of 15.21 and 22.81 respectively; and in 1932 there were 17,583 in the Metropolis and 27,322 in the remainder of the State, equivalent to rates of 13.96 and 21.49 respectively.

In 1931 the number of ex-nuptial births was 2,547, equal to 5.34 per cent. of total births, which is 6.10 per cent. above the quinquennial average. In 1932 there were 2,350 ex-nuptial births, equal to 5.23 per cent. of total births, or 3.51 per cent. above the quinquennial average. In the Metropolis the proportion was 5.55 and in the remainder of the State 5.19 per cent. of total births in 1931; and in 1932 the rates were respectively 5.66 and 4.96 per cent. of the total births.

Deaths.—In 1931 the deaths numbered 21,284, equivalent to a rate of 8.48 per 1,000 of population. This rate is 9.79 per cent. below the average of the previous five years.

The total includes 11,898 males and 9,386 females, equivalent to rates of 9.34 and 7.60 respectively per 1,000 of population. The rate in the Metropolis was 8.69 per 1,000, and in the remainder of the State 8.27.

Of the 21,284 people who died in 1931, 2,869 were under 5 years of age, 9,367 were aged from 5 to 64, and 9,041 were 65 and over. The rates per thousand living in the main groups, under and over 5 years, were 11.54 and 8.14 respectively.

In 1932 there were 21,357 deaths, equivalent to a rate of 8.44 per 1,000 of population. This rate is 8.10 per cent. below the average of the previous five years.

The total includes 12,110 males and 9,247 females, equivalent to rates of 9.43 and 7.41 respectively per 1,000 of population. The rate in the Metropolis was 8.65 per 1,000 and 8.23 in the remainder of the State.

Of the 21,357 people who died in 1932, 2,594 were under 5 years of age, 9,490 were aged from 5 to 64, and 9,264 were 65 and over. The rates per 1,000 living in the main groups, under and over five years, were 10.72 and 8.20 respectively.

Infantile Mortality.—In 1931 the number of children under 1 year of age who died was 2,077, equal to 43.52 per 1,000 births. To this total the Metropolis contributed 846, or 44.34 per 1,000 births, and the remainder of the State 1,231, or 42.98 per 1,000 births. The rate for 1931 is 20.55 per cent. below the average of the previous five years. Of the deaths under 1 year of age, 1,030, or 49.50 per cent., occurred under 1 week; 1,279, or 61.58 per cent., under 1 month; and 1,475, or 71.02 per cent., under 3 months.

In 1932 1,844 children under 1 year of age died, equal to 41.06 per 1,000 births. To this total the Metropolis contributed 686, or 39.01 per 1,000 births, and the remainder of the State 1,158, or 42.38 per 1,000 births. The rate for 1932 is 21.26 per cent. below the average of the previous five years. Of the deaths under 1 year of age, 1,030, or 55.85 per cent., occurred under one week; 1,242, or 67.35 per cent., under one month; and 1,403, or 76.08 per cent., under three months.

Causes of Death.—Of the deaths during 1931 and 1932, the most important causes were as shown in the following statement, which, for purposes of comparison, also gives the average number of deaths during the preceding five years, due allowance having been made for increase in population :—

1931.							
Causes of Death.	Number 1931.	Average Number 1926-30.	Increase (+) or Decrease (-) in 1926-30	Causes of Death.	Number 1931.	Average Number 1926-30.	Increase (+) or Decrease (-) in 1926-30.
			per cent.				per cent.
Typhoid Fever	35	63	- 44	*Diseases of the Arteries, Atheroma, etc.	983	744	+ 32
Measles	29	91	- 68	Other Diseases of the Circulatory System	25	92	- 73
Scarlet Fever	36	84	- 57	Bronchitis	366	416	- 18
Whooping Cough	186	171	+ 9	Pneumonia	1,398	1,817	- 23
Diphtheria and Croup	168	185	- 9	Other Diseases of the Respiratory System	260	306	- 15
Influenza	281	304	- 8	Diseases of the Stomach	124	155	- 20
Plague .....	...	...	...	Diarrhoea and Enteritis (under 2 years)...	283	648	- 56
Erysipelas	37	44	- 16	Diarrhoea and Enteritis (2 years and over)	137	208	- 34
Infantile Paralysis	10	9	+ 11	Appendicitis	197	209	- 6
Lethargic Encephalitis	16	28	- 43	Hernia, Intestinal Obstruction	179	209	- 14
Epidemic Cerebro-spinal Meningitis	9	13	- 31	Cirrhosis of the Liver	98	118	- 17
Other Epidemic Diseases	39	57	- 32	Other Diseases of the Digestive System...	349	394	- 11
Tuberculosis, Respiratory System	1,014	1,151	- 12	Bright's Disease (Acute and Chronic) ...	1,311	1,280	+ 2
Tuberculosis, Meninges and Nervous System	45	58	- 22	Other Genito-urinary Diseases	367	403	- 9
Other Tuberculosis Diseases	65	88	- 26	Puerperal Septicæmia	83	90	- 8
Cancer	2,439	2,340	+ 4	Other Puerperal Diseases	205	230	- 11
Diabetes	389	302	+ 29	Malformations	205	257	- 20
Other General Diseases	536	498	+ 8	Congenital Debility	113	234	- 52
Diseases of the Blood	284	222	+ 28	Premature Birth	682	892	- 24
Chronic Poisonings and Intoxications	27	55	- 51	Other Developmental Diseases	200	310	- 6
Meningitis	74	163	- 55	Senility	684	1,008	- 32
*Cerebral Haemorrhage and Apoplexy ...	742	928	- 21	Suicide	227	314	- 12
Insanity	104	94	+ 11	Accident	1,071	1,378	- 22
*Convulsions of Infants	13	43	- 70	All other Causes	308	336	- 8
Other Diseases of the Nervous System ...	523	683	- 23				
Diseases of the Heart	4,188	3,832	+ 9	Total	21,284	23,594	- 10

1932.							
Causes of Death.	Number 1932.	Average Number 1927-31.	Increase (+) or Decrease (-) in 1927-31.	Causes of Death.	Number 1932.	Average Number 1927-31.	Increase (+) or Decrease (-) in 1927-31.
			per cent.				per cent.
Typhoid Fever	31	53	- 42	*Diseases of the Arteries, Atheroma, etc....	932	854	+ 9
Measles	14	78	- 82	Other Diseases of the Circulatory System...	28	80	- 65
Scarlet Fever	57	80	- 29	Bronchitis	302	434	- 30
Whooping Cough	61	181	- 66	Pneumonia	1,239	1,761	- 30
Diphtheria and Croup	160	188	- 15	Other Diseases of the Respiratory System	227	304	- 25
Influenza	136	295	- 54	Disease of the Stomach	129	143	- 10
Plague .....	...	...	...	Diarrhoea and Enteritis (under 2 years)...	184	537	- 66
Erysipelas	14	44	- 68	Diarrhoea and Enteritis (2 years and over)	137	181	- 32
Infantile Paralysis	44	8	+450	Appendicitis	214	209	+ 2
Lethargic Encephalitis	18	24	- 25	Hernia, Intestinal Obstruction	208	202	+ 3
Epidemic Cerebro-spinal Meningitis	7	10	- 30	Cirrhosis of the Liver	93	113	- 18
Other Epidemic Diseases	36	47	- 23	Other Diseases of the Digestive System ...	382	390	- 2
Tuberculosis, Respiratory System	969	1,116	- 13	Bright's Disease (Acute and Chronic)	1,371	1,313	+ 4
Tuberculosis, Meninges and Nervous System	45	53	- 15	Other Genito-urinary Diseases	409	404	+ 1
Other Tuberculosis Diseases	57	85	- 33	Puerperal Septicæmia	59	92	- 36
Cancer	2,534	2,382	+ 6	Other Puerperal Diseases	217	227	- 4
Diabetes	378	326	+ 16	Malformations	237	250	- 5
Other General Diseases	572	511	+ 12	Congenital Debility	86	205	- 58
Diseases of the Blood	201	226	- 11	Premature Birth	629	841	- 25
Chronic Poisonings and Intoxications	27	50	- 46	Other Developmental Diseases	320	308	+ 4
Meningitis	96	140	- 31	Senility	673	921	- 27
*Cerebral Haemorrhage and Apoplexy	872	873	...	Suicide	279	309	- 10
Insanity	83	95	- 13	Accident	1,100†	1,329	- 17
*Convulsions of Infants	16	32	- 50	All other Causes	332	308	+ 8
Other Diseases of the Nervous System	555	638	- 13				
Diseases of the Heart	4,587	3,993	+ 15	Total	21,357	23,243	- 8

* See paragraph "Cerebral Haemorrhage."

† Includes 304 motor accidents.

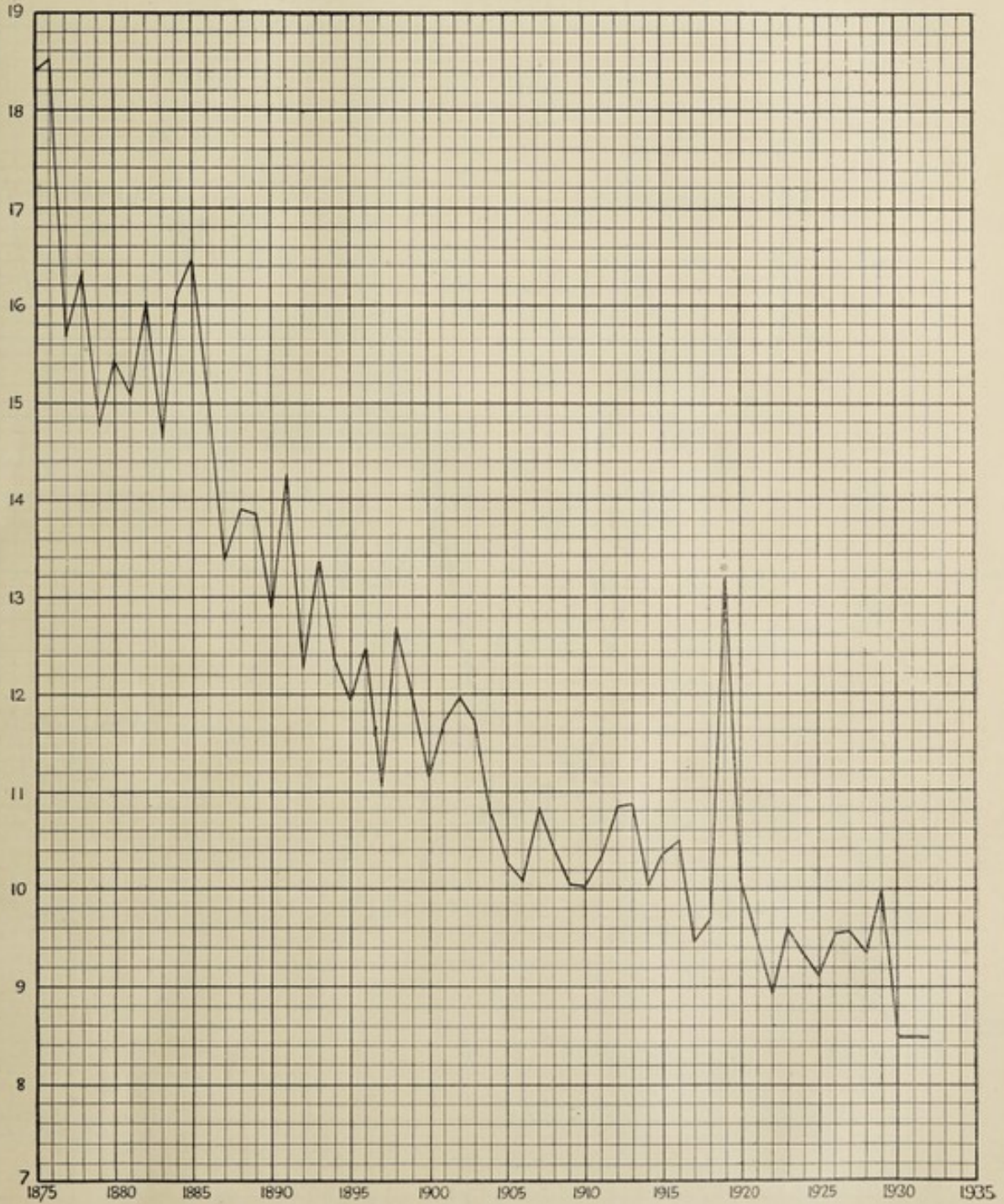
Epidemic Diseases.—In 1931 the deaths from epidemic diseases numbered 846, as compared with an average of 1,019 during the previous five years, a decrease of 19 per cent. The deaths from scarlet fever numbered 36 in 1931, and 57 in 1932, or 57 and 29 per cent. less respectively than the average of the previous five years.

In 1932 the deaths from epidemic diseases numbered 578 as compared with an average of 1,008 during the previous five years, a decrease of 43 per cent.

Tuberculosis of the Respiratory System was the cause of 1,014 deaths in 1931 and 969 deaths in 1932, being respectively 12 and 13 per cent. below the average of the previous five years. Speaking generally, the death-rate from tuberculosis has been declining for some years past. In 1931 the deaths of males numbered 608 and of females 406, and the rates per million living were 477 and 329

ANNUAL DEATH RATE PER 1,000 OF THE POPULATION IN NEW SOUTH WALES, 1875-1932.

RATE PER
1,000 OF
POPULATION.



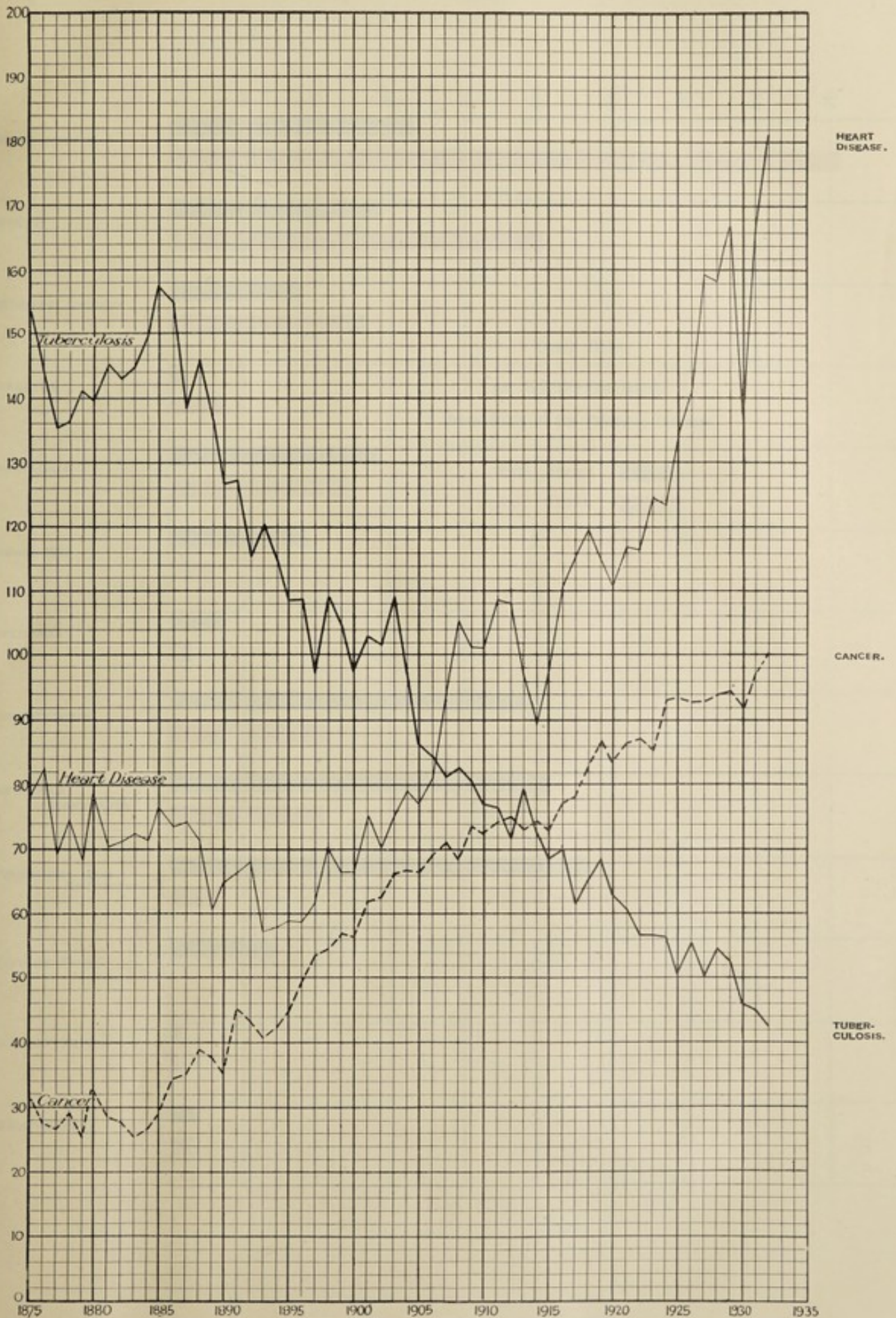
* There was an epidemic of influenza in the year 1919.

ANNUAL DEATH RATE PER 1,000 OF THE POPULATION
IN NEW SOUTH WALES 1871-1922

The image shows a large, empty rectangular area with faint horizontal lines, likely a placeholder for a table or graph. The lines are evenly spaced and run horizontally across the page. The overall appearance is that of a blank sheet of paper with a header and a large empty space below it.

CANCER, TUBERCULOSIS, AND HEART DISEASE.

Annual Death Rate per 100,000 of the Population in New South Wales, 1875-1932.

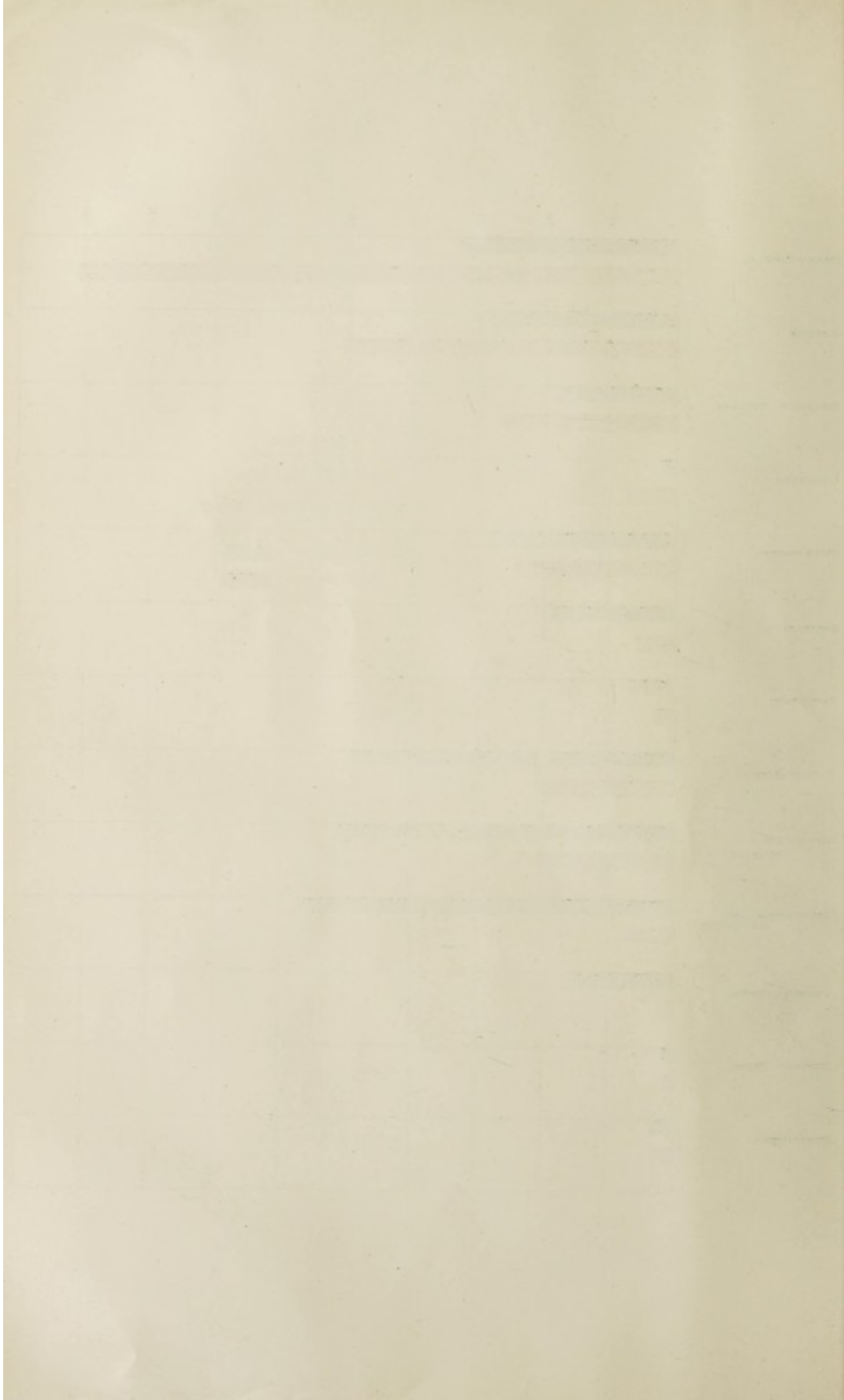


Heart Disease includes pericarditis, endocarditis and other valvular diseases, myocarditis, other organic diseases of the heart, angina pectoris, and in 1931 and 1932 by a change in the classification, diseases of the coronary arteries.

1915

1922





respectively; and in 1932 the deaths of males numbered 582 and of females 387, and the rates per million living were 453 and 310. The mortality from other tuberculous diseases was 25 per cent. below the average in 1931 and 23 below in 1932.

Cancer.—In 1931 the deaths from cancer numbered 2,439, equal to a rate of 972 per million living, and 4 per cent. above the average of the preceding quinquennial period. The deaths of males numbered 1,256 and of females 1,173, the rates for each sex being 993 and 949 per million respectively.

In 1932 the deaths from cancer numbered 2,534, equal to a rate of 1,001 per million living, and 6 per cent. above the average of the preceding quinquennial period. The deaths of males numbered 1,405 and of females 1,129, the rates for each sex being 1,094 and 905 per million respectively. The death-rate from this disease has been increasing steadily for a number of years.

Diseases of the Heart were the cause of 4,188 deaths in 1931, the rate being 1,668 per million. In 1932 there were 4,587 deaths, the rate being 1,812 per million. The apparent increase in these deaths during the last twenty-five years is probably the result of more careful death certifications. Furthermore, in combination with other diseases, where precise information is lacking, diseases of the heart are given precedence over many other diseases. Deaths from heart diseases in 1931 were 9 per cent. and in 1932 15 per cent. above the average of the preceding five years. Of the total deaths in 1931, 2,359 were of males and 1,829 of females, the corresponding rates per million living of each sex being 1,851 and 1,480; in 1932 of the total deaths 2,630 were of males and 1,957 females, the corresponding rates of each sex being 2,048 and 1,569 per million respectively.

Bronchitis and Pneumonia.—In 1931 bronchitis with 366 deaths (equal to a rate of 146 per million living) showed a decrease of 18 per cent.; and pneumonia with 1,398 deaths, or 557 per million, a decrease of 23 per cent. as compared with the experience of the previous five years.

In 1932 there were 302 deaths from bronchitis, equal to a rate of 119 per million living, or a decrease of 30 per cent.; and pneumonia with 1,239 deaths, or 489 per million, a decrease of 30 per cent. as compared with the experience of the previous five years.

Of the deaths from bronchitis in 1931, 176 were of males and 190 of females, or 138 and 154 per 1,000,000 living respectively; and in 1932, 173 were of males and 129 of females, or 135 and 103 per million living respectively. Of the persons who died from pneumonia in 1931, 818 were males and 580 were females, and the rates were 642 and 469 per million living of each sex. In 1932, 720 males and 519 females died from pneumonia, the rates being 561 and 416 per million living of each sex.

Bright's Disease.—During 1931 there were 1,678 deaths due to diseases of the genito-urinary system, of which 1,311 were caused by acute nephritis and Bright's disease. The rate for nephritis (acute and chronic) was 522 per million; for males 575 and for females 468 per million.

In 1932 there were 1,780 deaths due to diseases of the genito-urinary system, of which 1,371 were caused by acute nephritis and Bright's disease. The rate for nephritis (acute and chronic) was 542 per million; males 610, and females 471 per million.

Diseases of Infants.—In both 1931 and 1932 the principal causes were prematurity, 682 and 629 respectively; other developmental diseases, 586 and 608; diarrhoea and enteritis, 212 and 126; pneumonia, 198 and 172; whooping cough, 114 and 44; bronchitis, 31 and 22; measles, 7 and 2; and convulsions, 10 and 13.

The following statement shows the causes of deaths of children under 1 year of age per 1,000 births during 1931 and 1932, in comparison with the preceding five years:—

Causes of Death.	1931.					
	Males.		Females.		Total.	
	1931.	1926-30.	1931.	1926-30.	1931.	1926-30.
Epidemic Diseases	3.42	3.58	3.88	3.65	3.65	3.62
Tuberculous Diseases .....	.20	.28	.30	.35	.25	.32
Syphilis .....	.33	.29	.22	.29	.27	.29
Meningitis .....	.16	.68	.17	.51	.17	.60
Convulsions .....	.16	.74	.26	.52	.21	.63
Bronchitis .....	.61	.97	.69	.83	.65	.90
Pneumonia	4.77	6.04	3.49	5.19	4.15	5.62
Diarrhoea and Enteritis	5.21	9.91	3.62	8.05	4.44	9.61
Premature Birth	15.85	17.82	12.64	14.25	14.29	16.09
Other Developmental Diseases	14.42	15.96	10.01	12.05	12.28	14.95
Other Causes	3.59	4.12	2.72	3.16	3.16	3.65
All Causes	48.73	60.41	38.01	48.83	43.52	54.78

Causes of Death.	1932.					
	Males.		Females.		Total.	
	1932.	1927-31.	1932.	1927-31.	1932.	1927-31.
Epidemic Diseases	2.08	3.58	1.70	3.65	1.89	3.71
Tuberculous Diseases .....	.22	.28	.23	.35	.22	.30
Syphilis .....	.22	.32	.32	.29	.27	.29
Meningitis .....	.56	.68	.52	.51	.55	.51
Convulsions .....	.17	.74	.41	.52	.29	.47
Bronchitis .....	.60	.97	.37	.83	.59	.86
Pneumonia	4.50	6.04	3.12	5.19	3.83	5.57
Diarrhoea and Enteritis	2.85	9.91	2.75	8.05	2.80	7.61
Premature Birth	15.70	17.82	12.21	14.25	14.61	15.90
Other Developmental Diseases	15.10	15.96	11.89	12.05	13.54	13.73
Other Causes	3.55	4.12	2.98	3.16	3.27	3.50
All Causes	45.55	60.41	36.20	48.83	41.03	52.15

SECTION I.

A.—PUBLIC HEALTH ADMINISTRATION.

CHEMICAL LABORATORY.

REPORT OF THE GOVERNMENT ANALYST FOR THE YEARS ENDED
31ST DECEMBER, 1931 AND 1932.*Staff.*

<i>Government Analyst</i>	Sidney G. Walton, F.A.C.I.
<i>Second Government Analyst</i>	Harold B. Taylor, M.C., D.Sc., F.I.C., F.A.C.I.
<i>Senior Assistant Government Analyst</i>	Arthur D. Dibley, A.S.T.C., A.A.C.I.
<i>Assistant Government Analyst</i>	Robert G. O'Brien, A.S.T.C., A.A.C.I.
<i>Analysts</i>	Ernest S. Ogg, B.Sc., A.A.C.I. W. F. Fisher, A.S.T.C., A.A.C.I.

Five laboratory assistants; 1 laboratory attendant; 1 clerk (Grace McGlynn), 1 shorthand-writer and typist.

The total number of samples examined during 1931 amounted to 25,494, comprising 22,955 samples submitted under the Pure Food Act, and 2,539 samples examined for various public services of the State. There was an increase of 3,300 samples over the number examined during any previous year.

The number examined in 1932 amounted to 24,691 of which 22,317 were received for analysis in connection with the Pure Food Act, and 2,374 for the public services of the State.

PURE FOOD ACT.

Milk.—The majority of the samples examined for the purposes of the Pure Food Act in 1931 consisted of milk, 19,575 samples of which were collected throughout the State. From the metropolitan area 16,779 samples were submitted, 279 (1·6 per cent.) of which contravened the prescribed standard. A total of 2,776 samples were collected in country districts, 119 (4·2 per cent.) of which were below standard. These proportions of adulterations were lower than any previously recorded.

The number of milks examined in 1932 (18,348) is less than the number received in 1931. Inspectors in the metropolitan area were responsible for the collection of 15,990 samples, 283 (1·7 per cent.) of which were adulterated, while, of the 2,358 samples collected in country districts, 62 (2·6 per cent.) were not in accordance with the standard. The following table shows the nature of adulterations:—

	1931.		1932.	
	City.	Country.	City.	Country.
Samples deficient in fat	134	51	54	26
" " solids-not-fat	88	48	176	27
" " both solids-not-fat and fat	57	20	53	9
	279	119	283	62

Details of work carried out during 1931 in regard to—

- (a) the freezing point determination as a means of detecting added water in milk; and (b) variations in solids content of milk occasioned by partial freezing;

will be found in an appendix to this report.

The samples other than milk examined in 1931 amounted to 3,380, 21·2 per cent. of which did not comply with the provisions of the Act, and in 1932 to 3,969, 22·7 per cent. of which were adulterated.

A.P.C. Tablets and Powders.—Thirty-eight samples were examined in 1932, and it was found that a considerable variation existed in the proportions of the ingredients present. With a view to safeguarding the public it is considered that the provisions of Regulation 69 requiring the declaration of the presence of acetylsalicylic acid and phenacetin should be strictly enforced. It might be thought advisable, also, to formulate a standard specifying the minimum quantities of phenacetin and caffeine permitted to be present, and prescribing minimum and maximum weights for each article. Foreign substances such as starch, milk sugar, etc., should be prohibited in powders and only a limited amount should be allowed in tablets.

Beer.—Sixteen samples were examined for the presence of arsenic and in no instance did the amount found exceed the maximum permitted by Regulation 5 (1/100th grain per gallon).

Margarine.—An additional clause has been added to Regulation 23 providing that "the fat contained in margarine shall have a maximum Kirschner value of 4.5." Before this proviso was added to the standard the proof of the presence of more than 10 per cent. of butter fat in a margarine prepared with coconut fat was difficult, especially as in defence the argument has been raised that the presence of added butyric ester (tributylin) or other esters invalidates the figures on which the analyst depends for the estimation of the percentage of butter fat. The figure adopted (4.5) is based on a maximum Kirschner value for butter fat of 26 and for coconut fat of 2. The Kirschner value of the fat obtained from a margarine containing 90 per cent. of coconut fat and 10 per cent. of butter fat would be 4.4, i.e., 2.6 from the butter fat and 1.8 from the coconut fat. The maximum amount of butter fat permitted in margarine remains 10 per cent., and in those cases where coconut or palm oils are not constituents the maximum Kirschner value permitted would be 3.

"Coated Raisins."—This article consists of raisins coated with biscuit crumbs, the object of the coating being to prevent the raisins becoming a sticky mass when tightly packed. Upon examination 5 per cent. of starch was found to be present. Assuming the coating material to contain 66 per cent. of starch, the amount of biscuit crumbs added was 7½ per cent. No damage or inferiority was concealed by the coating of the sample examined, and the addition of biscuit crumb in this manner achieved its desired object.

"Australian Rice Powder."—A sample submitted was found to be of the following composition:—

Mineral matter (Talc)	70 per cent.
Zinc Oxide	25 "
Starch (not rice starch)	3 "
Water, boric acid, perfume, colouring, etc.	2 "

As rice was not used in the preparation of this powder the name was misleading.

Yeast Foods.—Two samples examined contained small quantities of persulphate, which has been definitely prohibited.

Particulars of Adulterations.—In 1931 a total of 720 samples (other than milk) did not comply with the requirements of the Act. The following, briefly, are details of adulterations:—

Particulars of Adulteration, 1931.

Nature of Sample.	No.	Particulars of Adulteration.
Beer	1	Deteriorated and unfit for human consumption.
Brine	7	Contained foreign matter and impurity.
Butter	6	Rancid and in a dirty condition.
"	3	Contained large proportions of foreign fat.
Camphorated Chalk ...	2	Deficient in camphor.
Cider	1	Diluted with a considerable proportion of water.
Cordials	5	Contained metals (nickel and iron) derived from Monel metal containers.
Cream	2	Deficient in milk-fat.
Eucalyptus Oil	1	Gave positive reaction for phellandrene and solubility not in accordance with Pharmacopoeial requirements.
Flour, Self-raising	1	Deficient in carbon dioxide.
Hydrogen Peroxide	4	Deficient in oxygen and contaminated with barium salts.
Ice Cream	6	Deficient in milk-fat.
Iodine, Tincture of	1	Prepared with methylated spirit;
"	1	" " and deficient in iodine.
"	1	Deficient in iodine and potassium iodide.
"	1	" potassium iodide.
Lysol	2	Deficient in phenols and did not form clear solutions on dilution.
Margarine	1	Contained excess butter fat and did not contain a prescribed indicator.
Meat—Fresh	281	50 per cent. of total examined illegally preserved.
Tripe	26	10.8 " " " "
Minced	15	53.5 " " " "
Sausages (Raw)	299	14.0 per cent of total examined contained excess permitted preservative.
Sausages (Cooked)	24	19.5 per cent. of total examined contained prohibited colouring matter and excess starch.
Milk, Condensed	1	Deficient in milk-fat.
Mustard	1	Coloured with turmeric.
Paraffin, Liquid	5	Contained sulphur compounds.
Pears	1	Contained 5/100ths grain of arsenic per lb.
Rice Complexion Powder	1	Rice not used in preparation.
Gin (Proof)	1	Deficient in proof spirit.
Sugar	1	Contaminated with urine.
Tobacco	1	Coated with carbonaceous matter
Tomato Sauce	1	Artificially coloured.
" Chutney	2	Artificially coloured with an aniline colour.
Vinegar	4	Deficient in acetic acid.
Wine	5	Diluted with 33 per cent. water.
Yeast Foods	2	Contained persulphates.

Particulars of Adulterations, 1932.

Nature of Sample.	No.	Particulars of Adulteration.
Apples	3	Arsenic in excess of permitted maximum, derived from spray.
Wholemeal Bread	17	Deficient in whole-wheat flour.
Brine	10	Foreign matter and impurity.
Butter.....	7	2 rancid; 2 excess water; 3 foreign colour and foreign fat.
Cabbage	4	Excess arsenic derived from spray.
Camphorated Oil	1	Deficient in Camphor.
Cheese.....	1	Metallic contamination.
Cod Liver Oil Emulsion	1	Deficient in cod liver oil.
Coffee and Chicory Essence.	5	Deficient in caffeine.
Cordials	6	2 illegally preservative; 1 excess preservative; 3 artificially coloured and flavoured.
Cream	4	3 deficient in fat; 1 artificially prepared.
Disinfectants	7	1 disinfectant powder—phenol content not in accordance with statement on label. 6 lysols prepared with oleic acid instead of vegetable oil.
Dripping.....	1	Artificially coloured.
Edible Fats	3	Contained an admixture of water.
Fish (Soft Cured)	4	Artificially coloured with an aniline colour.
Fish Pastes	26	7 coloured with a prohibited colour. 18 declaration of presence of colour not given on label. 1 deteriorated.
Self-raising Flour	19	13 deficient in carbon dioxide; 6 not prepared with ingredients stated on label;
Flavoured Ices	3	Contaminated with nickel.
Ice Cream	3	Deficient in fat.
Iodine Paint	1	Deficient in iodine.
Jam.....	1	Deteriorated.
Magnesium Stearate ...	1	Contaminated with salt water.
Margarine	7	5 artificially coloured; 2 artificially coloured and contained excess water.
Meat—Fresh	259	Illegally preservative (45.5 per cent. of total examined).
„ Tripe	23	„ „ (9.0 „ „ „).
„ Minced	247	„ „ (59.9 „ „ „).
„ Sausages (Raw)	211	„ „ (10.59 „ „ „).
„ „ (Cooked)	13	6 excess starch; 5 aniline colour; 2 prohibited colour (16.0 per cent. of total examined).
Meat Pastes	4	2 aniline colour; 2 prohibited colour.
Medicines, Patent	2	False therapeutic claims.
Mustard	1	Coloured with turmeric.
Rouge	1	Contaminated with lead.
Salt	1	Offensive and unfit for consumption.
Rum, O.P.	1	11°3 U.P.
Shakers (for Cordials) ...	3	Would prove source of lead contamination to liquids coming in contact with them.
Tomato Sauce	8	4 artificially coloured with aniline dye; 2 contained prohibited preservative; 2 contained considerable mould contamination.
Vinegar	3	2 deficient in acetic acid; 1 imitation vinegar.
Wine	2	Contaminated with copper (from measure used in serving).

An investigation was carried out during 1931 into the treatment of pineapple stems with a preservative substance for the purpose of the control of the disease known as "soft rot" or "water blister." Details of this work will be found in appendix, (page 21).

A total of 2,539 samples were received for examination in connection with the public services of the State in 1931, and 2,374 in 1932.

From Subsidised Institutions and Hospitals.—469 samples in 1931 and 380 in 1932 comprising various foods under contract; milk produced by local dairy herds; human milk and infants' foods in connection with the work of Baby Clinics; drugs for examination as to purity and strength; and stomach lavage and other exhibits in connection with the diagnosis of illness.

From the Government Stores Department.—761 samples in 1931 and 807 in 1932 for the purpose of fixing suitable standards and controlling the quality of articles supplied under contract to Government departments. The samples included foods, disinfectants, inks, soaps, fuel, oils, paints, bed ticking, etc.

From Pharmacy Board.—15 samples in 1931 and 19 in 1932 for examination in connection with administration of the Poisons Act.

Criminal Investigations.—Examination was made of 272 exhibits in 1931 and 382 in 1932 for the Police Department in connection with criminal investigations, as shown in the following table:—

Charge.	Number of Exhibits.	
	1931.	1932.
Administration of abortifacients	4	27
Counterfeit coining	15	18
Uncertified deaths (exclusive of viscera)	150	146
Animal poisoning (exclusive of viscera)	2	16
False pretences	4	32
Breaking and entering, robbery, etc.	20	15
Incendiarism	10	3
Explosives (used for destruction and threat)	14	...
Illicit liquor manufacture and sale	2	...
Alleged poisoning	24	40
Attempted murder	7	34
Murder	20	6
Suicide ... ..	...	8
Contraceptives ... ..	...	2
Indecent assault ... ..	...	5
Sly grog selling ... ..	...	4
Malicious damage to property ... ..	...	6
Horse doping ... ..	...	4
Breaches of Poisons Act ... ..	...	8
Miscellaneous ... ..	...	8
	272	382

Animal Viscera.—Comprised 7 exhibits submitted by the Police in 1931 and 5 in 1932. Strychnine was present in 2 instances, and arsenic in 6 others. In 2 cases (viscera of Angora rabbits) no poison was found, but in both instances death was probably due to ingestion of rabbit hair, with which the stomachs were almost completely filled.

Prohibited Drugs.—The police submitted 37 exhibits, viz., 10 of cocaine, 10 of veronal, 16 of opium and 1 of morphine, for examination in connection with the Police Offences Amendment (Drugs) Act in 1931; and 57, viz., 47 of opium, 7 of cocaine, 2 of veronal, and 1 of morphine and atropine in 1932.

Human Viscera.—Coroners forwarded exhibits of human viscera and blood for examination in connection with 73 cases of uncertified deaths in 1931, and 68 in 1932. The chemical examination for poisons yielded negative results in 34 cases in 1931, and in 30 cases in 1932.

The following table shows the poisons found in the remainder of the cases:—

	1931.	1932.
Aconitine ... ..	...	1
Arsenic	3	6
Carbon monoxide	3	...
Drowning	2	2
Chloretone ... ..	...	1
Cyanide	9	2
Hydrocyanic acid	1	...
Lead (derived from pills)	1	...
Lysol ... ..	...	2
Mercury ... ..	...	1
Nicotine ... ..	...	2
Paraldehyde and strychnine	1	...
Strychnine	18	19
Veronal	1	1
Zinc... ..	...	1
	39	38

Water and Sewage.—Municipal and departmental authorities submitted 456 samples of water in 1931 and 290 in 1932, in connection with the provision of country water supplies, supervision of swimming pools, etc., and 87 samples of effluent, drainage, etc., in 1931 and 65 in 1932, for the purpose of control of sewerage installations and the discharge of drainage and wastes into public places.

A considerable amount of work was undertaken during 1931 in connection with the discharge of sewage into Botany Bay, a detailed report of which will be published later.

Industrial Hygiene.—In connection with this branch of work, 268 specimens were analysed, in 1931 and 205 in 1932, consisting of arsenic ore, coal, dust, human hair and nails, urine, etc.

Miscellaneous.—Samples analysed totalled 94 in 1931 and 96 in 1932. These included supposed ambergris, boiler scale re-corrosive action of waters, cocaine, foods, patent medicines, fruit juices, in relation to metallic contamination derived from containers, pineapples, various articles re alleged cases of attempted poisoning, silt, re mortality of fish, wall plaster, etc.

Full particulars of all samples examined are shown in attached Tables.

Appended hereto, also, are particulars of investigations carried out during the year in connection with—

The partial freezing of milk as a cause of adulteration;

The freezing point method for the detection of added water in milk;

The treatment of pineapple stem with preservative for the purpose of controlling "soft rot" or "water blister."

S. G. WALTON,
Government Analyst.

APPENDIX.

TABLE I.—Samples examined during the year 1931, under the Pure Food Act, 1908.

Nature of Sample.	Submitted by—	Samples.	
		Number Examined.	Number Adulterated or Falsely Described.
Beer	Food Inspectors	30	1
Bread	"	7	0
Brine	"	9	7
Brine Cure	"	1	0
Butter	"	9	9
Camphorated Chalk.....	"	2	2
Camphorated Oil	"	1	0
Cider	"	1	1
Coffee	"	1	1
Coffee and Chicory	"	12	0
Cordials and Beverages	"	11	5
Cream	"	30	2
Disinfectants (Lysol)	"	2	2
Eucalyptus Oil	"	2	1
Edible Fat	"	1	0
Fish (Tinned)	"	2	0
Flour, Self-raising	"	1	1
Hydrogen Peroxide	"	10	4
Ice Blocks (Flavoured)	"	16	0
Ice Cream	"	65	6
Iodine, Tincture of	"	6	4
Jelly Preserve	"	1	0
Margarine	"	2	1
Meat	"	507	281
.. Tripe	"	240	26
.. Sausages	"	2,163	299
.. Minced Meat	"	28	15
.. Cooked Sausages, etc.	"	123	24
Medicines (Patent, etc.)	"	4	0
Milk—Fresh	Food Inspectors, Metropolitan District	11,586	205
.. ..	Municipal and Shire Inspectors, Met. District	5,213	74
.. ..	Food Inspectors, Country Districts	834	42
.. ..	Municipal and Shire Inspectors, Country Districts	1,922	77
.. Condensed	Food Inspectors	2	1
.. Shake	"	2	0
Mustard	"	2	1
Nutmeg	"	1	0
Ointment	"	3	0
Onions, Pickled	"	1	0
Paraffin, Liquid	"	14	5
Pears	"	2	1
Peas	"	3	0
Pepper	"	4	0
Powder (Complexion)	"	1	1
Preservative	"	2	0
Raisins	"	2	0
Salt, Table	"	7	0
Spirits	"	4	1
Sugar	"	1	1
Tobacco	"	1	1
Tomato Sauce	"	2	1
Tomato Chutney	"	2	2
Vinegar	"	18	4
Wine	"	14	5
Yeast Foods	"	5	4
Totals		22,955	1,118

TABLE I.—Samples examined during the year 1932 under the Pure Food Act, 1908—*continued*.

Nature of Sample.	Authority Submitting.	Samples.	
		Number Examined.	Number Adulterated or Falsely Described.
Acetylsalicylic Acid Tablets and Powders.	Food Inspectors	4	0
A.P.C. Tablets and Powders	"	38	0
Apples (re-spray)	"	11	3
Bread	"	57	17
Brine	"	12	40
Butter	"	7	7
Cabbage (re-spray)	"	4	4
Camphorated Oil	"	3	1
Cheese	"	4	1
Citrus Paste	"	1	0
Cod Liver Oil Emulsion	"	1	1
Coffee and Chicory Essence	"	3	3
Colouring Matters for Food	"	3	0
Cordials	"	27	6
Cream	"	24	4
Depilatory	"	6	0
Diabetic Foods	"	4	0
Disinfectants	"	9	7
Dripping	"	1	1
Face Cream	"	11	0
Face Powders	"	8	0
Fats (Edible)	"	6	3
Fish, Fresh, Smoked, etc.	"	23	4
Fish Pastes	"	56	26
Flour, Self-raising	"	33	19
Ice Cream and Flavoured Ices.	"	175	6
Iodine Paint	"	1	1
Jam	"	11	1
Lipstick	"	5	0
Luminal Tablets	"	1	0
Macaroni	"	6	0
Magnesium Stearate	"	1	1
Margarine	"	21	7
Meat—Fresh	"	574	250
.. Tripe	"	253	23
.. Minced Meat	"	414	247
.. Raw Sausages	"	1,991	211
.. Cooked Sausages	"	81	13
.. Seasoning for	"	2	0
.. Paste	"	7	4
Medicines, Patent	"	5	2
Milk—Fresh	Food Inspectors, Metropolitan District	12,302	219
.. ..	Municipal and Shire Inspectors, Met. District ...	3,688	62
.. ..	Food Inspectors, Country Districts	609	29
.. ..	Municipal and Shire Inspectors, Country Districts	1,749	33
.. Condensed	Food Inspectors	5	0
.. Measure	"	1	1
Mustard	"	1	1
Peasemeal	"	3	0
Rouge	"	10	1
Salt	"	1	1
Soap	"	2	0
Spirits	"	9	1
Shakers (for Cordials)	"	3	3
Tomato Sauce and Chutney	"	35	8
Vinegar	"	13	3
Wine	"	7	2
	Totals	22,317	1,247

TABLE II.—Samples examined during the years 1931 and 1932, for the Public Services of the State.

Authority Submitting.	Nature of Sample.	Number of Samples.	
		1931.	1932.
Subsidiary Institutions	Barley	2	...
"	Beer	2	...
"	Baking Powder	4	5
"	Broad	14	24
"	Chloride of Lime	1	...
"	Corn Flour	2	...
"	Ether	...	2
"	Eye Lotion	1	...
"	Groats	1	...
"	Clinic Baby Food	1	...
"	Clinic Emulsion	...	3
"	Meat	115	56
"	Malt Combings	...	1
"	Manure	...	1
"	Milk, Cow's	230	196
"	" (for infant feeding)	4	4
"	" Human	74	75
"	Morphine Hydrochloride	...	1
"	Novarsenobillon	1	...
"	Oatmeal	6	7
"	Rice	...	3
"	Sago	2	...
"	Stomach Lavage and Vomit	9	...
"	Tomato Juice	...	2
Government Stores Department	Antiphlogistine substitutes	...	2
"	Blue (Laundry)	1	...
"	Chicory	78	80
"	Curry Powder	1	...
"	Disinfectants	135	148
"	Flour	2	...
"	Fuel Oil	1	2
"	Ink and Ink Powders	78	65
"	Junket Tablets	1	...
"	Linseed Meal	...	2
"	Lubricants	195	248
"	Margarine	...	2
"	Mother's Tonic	...	2
"	Concentrated Milk	...	3
"	Pain	3	...
"	Pan Oil	...	1
"	Peas (Canned)	3	...
"	Paraffin, Liquid	...	1
"	Office Paste	...	4
"	Metal Polish	3	2
"	Bituminous Roofing	...	1
"	Sauce	1	...
"	Semolina	...	1
"	Soap	211	179
"	Solder	...	1
"	Stockholm Tar	...	2
"	Tar (Distilled)	...	2
"	Ticking for Mattresses	2	...
"	Gum Tragacanth	...	1
"	Turpentine	1	2
"	Typewriter Oil	1	...
"	Waterproof Cloth and Sheetting	42	55
"	Xylol	2	1
Pharmacy Board	Bath Stain Remover	...	3
"	Camphorated Oil	1	...
"	Chlorodyne	1	...
"	Cough Mixture	1	...
"	Disinfectants	7	10
"	Cannabis Indica, Tinc.	1	...
"	Fellows Syrup	...	1
"	Insecticide	1	1
"	Iodine Paint	1	...
"	Liniment	1	...
"	Nicotine	...	1
"	Opium Tincture	1	...
"	Pills	...	3
Police Department	Criminal Investigations	309	439
"	Human Viscera	73	68
"	Animal Viscera	7	5
Municipal and Departmental Authorities	Drainage and Effluents	87	65
"	Water	456	290
Industrial Hygiene Authorities	Air	5	1
"	Arsenic Ore	1	...
"	Coal	2	...
"	Dust	92	33
"	Ferro-Manganese	1	...
"	Gas Mask	...	1
"	Human Foot	1	...
"	" Hair	18	28
"	" Nails	4	1
"	Urine	129	98

TABLE II.—Samples examined during the years 1931 and 1932, for the Public Services of the State—*continued*.

Authority Submitting.	Nature of Sample.	Number of Samples.	
		1931.	1932.
Industrial Hygiene Authorities	Post-mortem Specimens.....	12	43
" " "	Animal Viscera	2	...
" " "	Yeast Food	1	...
Miscellaneous Authorities	Alum	2	1
" " "	Supposed Ambergris	1	...
" " "	Arsenic Pentoxide	2	...
" " "	Arsenic Rubble	1	...
" " "	Boiler Scale	2	4
" " "	Bone (Human).....	...	1
" " "	Butter Flavourings .....	...	2
" " "	Celery	1	...
" " "	Cement .....	...	1
" " "	Cleaning Liquid	1	...
" " "	Cocaine	1	...
" " "	Cocoa	2	...
" " "	Diabetic Bread .....	...	1
" " "	Diabetic Remedy	1	...
" " "	Fæces	2	...
" " "	Flock .....	...	31
" " "	Fruit (Tinned)	11	...
" " "	Foot (Portion of Human) .....	...	1
" " "	Hair (for mattress making) .....	...	1
" " "	Hat (re dye).....	1	...
" " "	Insecticides	2	...
" " "	Kapok .....	...	2
" " "	Lime	2	...
" " "	Lime Juice Cordial	1	...
" " "	Lubricant	1	...
" " "	Meat Extract .....	...	2
" " "	Medicines (Patent), Ointments, etc.	15	4
" " "	Motor Spirit	1	...
" " "	Peat Moss .....	...	1
" " "	Poisons, Exhibits re	6	29
" " "	Prickly Pear.....	...	1
" " "	Prickly Pear Poison	1	...
" " "	Pineapples	18	...
" " "	Prunes in Wine	1	...
" " "	Rubber Sealing Compound	3	...
" " "	Rubber Solution .....	...	4
" " "	Silt, Slime, etc.	9	...
" " "	Soda Ash .....	...	1
" " "	Sulphate of Alumina .....	...	1
" " "	Tea .....	...	1
" " "	Tomato Sauce	2	...
" " "	Tree—Exhibit re destruction	1	...
" " "	Animal Viscera .....	...	6
" " "	Vegetables re Spray .....	...	1
" " "	Walls, Deposit on	2	...
" " "	Wool Clippings	1	...
	Total	2,539	2,374

THE PARTIAL FREEZING OF MILK AS A CAUSE OF ADULTERATION.

With the advent of household refrigerators, many small milk vendors, chiefly shopkeepers, find it convenient to keep their supplies in the chilled state. In some cases, however, the milk becomes partially frozen, and when in this condition it is almost impossible to serve representative samples without thawing and mixing the whole supply. The ice crystals which separate out on freezing are much lower in solids than the main bulk, and in consequence the liquid, or unfrozen, portion tends to become a concentrated milk. If milk in this partially frozen condition is run through a tap at the bottom of the can, the first customers, by reason of the fact that the ice crystals rise to the top, receive a concentrated milk, whilst those served towards the end of the supply will receive adulterated milk, *i.e.*, milk which does not conform to the standard prescribed by regulation under the Pure Food Act. Moreover, the last-mentioned portion of the supply, if submitted to analysis by the freezing point method, will show the addition of water, *i.e.*, its freezing point will lie between -0.55° C. and zero. This result is only to be expected, as water is actually subtracted from one portion of the milk (the unfrozen) and added to the other portion (the frozen) by the process of freezing. If, on the other hand, instead of running the milk through a tap at the bottom of the can the vendor dips the milk from the upper portion of a pail containing the partially frozen milk, the earlier customers will in all probability receive the poorer milk.

The following table shows the results of analysis obtained from milk which has undergone different degrees of partial freezing. The original milk was of the following composition:— Total solids, 12.28 per cent.; Fat, 3.4 per cent.; Solids-not-fat, 8.88 per cent. It was divided in five equal portions of 200 c.c. each, and frozen to contain different percentages of ice. The liquid portion was then drained away from the ice crystals by means of a strainer, and the frozen and unfrozen portions were analyzed separately for total solids, fat, and solids-not-fat, with the results given below:—

Analyses made by R. G. O'Brien, A.A.C.I.

Ice separated per cent.	Analysis of Liquid Portion.			Analysis of Frozen Portion.		
	Total Solids per cent.	Fat per cent.	Solids-not-fat per cent.	Total Solids per cent.	Fat per cent.	Solids-not fat per cent.
15	12.75	3.6	9.15	9.03	2.55	6.48
20	13.0	3.6	9.4	9.11	2.5	6.61
24	13.25	3.75	9.5	9.26	2.6	6.66
41	14.45	4.0	10.45	9.38	2.7	6.68
49	15.5	4.2	11.3	8.75	2.6	6.15

Although this question is hardly a new one, its revival is timely on account of the large number of small refrigerators lately put into use, leading in some cases to the sale of partially frozen milk. Most vendors are unaware of the separation of solids which takes place, and of the fact that they may render themselves liable to prosecution for the sale of milk which does not conform to the standard under the Pure Food Act.

FREEZING POINT METHOD FOR THE DETECTION OF ADDED WATER IN MILK.

First adopted as a Pure Food Regulation in Queensland, this method is now recognised as an official test in various parts of the world for the detection of added water in milk. Whilst not doubting the value of the test, New South Wales only recently included it in its food standards.

Hortvet's method and apparatus were adopted, the details of the test followed being those given in the "A.O.A.C. Methods of Analysis," 2nd edition, p. 265. Owing to the large number of tests that would have to be made when the test was completely in operation, an electrical blower and a mechanical stirrer were incorporated with the apparatus. Of the tests made, particular interest attaches to the milk of a herd of cows which were individually giving low solids-not-fat figures. The following are representative analyses:—

Analyses made by R. G. O'Brien, A.A.C.I.

	Breed of Cow.	Date of Birth.	Date of Calving.	Date of Test.	Acidity as Lactic Acid.	Freezing Point.	Total Solids.	Fat.	Solids-not-fat.
1	Friesian	18-9-16	2-2-31	27-5-31	Morn. 0.14% Even. 0.14%	Morn. -0.56°C Even. -0.56°C	Morn. 10.7% Even. 12.2%	Morn. 2.8% Even. 3.7%	Morn. 7.9% Even. 8.5%
2	"	5-8-27	12-2-31	8-6-31	Morn. 0.12% Even. 0.12%	Morn. -0.55°C Even. -0.54°C	Morn. 11.4% Even. 12.5%	Morn. 3.2% Even. 3.9%	Morn. 8.2% Even. 8.6%
3	" .....	.....	5-3-31	11-6-31	Morn. 0.15% Even. 0.15%	Morn. -0.54°C Even. -0.54°C	Morn. 10.2% Even. 12.3%	Morn. 2.7% Even. 4.0%	Morn. 7.5% Even. 8.3%
4	"	10-11-28	2-4-31	17-6-31	Morn. 0.14% Even. 0.14%	Morn. -0.54°C Even. -0.55°C	Morn. 11.7% Even. 12.5%	Morn. 3.2% Even. 3.8%	Morn. 8.5% Even. 8.7%
5	" .....	.....	.....	22-6-31	Morn. 0.13% Even. 0.14%	Morn. -0.54°C Even. -0.55°C	Morn. 11.4% Even. 12.3%	Morn. 3.4% Even. 4.0%	Morn. 8.0% Even. 8.3%
6	"	4-10-28	7-4-31	28-6-31	Morn. 0.13% Even. 0.14%	Morn. -0.54°C Even. -0.54°C	Morn. 11.3% Even. 12.2%	Morn. 3.1% Even. 3.6%	Morn. 8.2% Even. 8.6%
7	"	12-12-28	23-3-31	29-6-31	Morn. 0.12% Even. 0.13%	Morn. -0.55°C Even. -0.55°C	Morn. 10.8% Even. 11.5%	Morn. 2.9% Even. 3.4%	Morn. 7.9% Even. 8.1%
8	"	3-6-21	18-4-31	1-7-31	Morn. 0.12% Even. 0.12%	Morn. -0.54°C Even. -0.54°C	Morn. 11.2% Even. 13.2%	Morn. 2.9% Even. 5.0%	Morn. 8.3% Even. 8.2%
9	"	26-4-21	11-4-31	12-7-31	Morn. 0.13% Even. 0.13%	Morn. -0.54°C Even. -0.54°C	Morn. 11.5% Even. 11.8%	Morn. 3.5% Even. 3.6%	Morn. 8.6% Even. 8.2%
10	"	21-4-27	25-3-31	13-7-31	Morn. 0.14% Even. 0.14%	Morn. -0.54°C Even. -0.55°C	Morn. 11.0% Even. 13.7%	Morn. 2.5% Even. 4.8%	Morn. 8.5% Even. 8.9%

The figures given are representative of some hundreds of tests performed during the investigation. It was found that no unpasteurised milk of general origin gave, on either a morning or an evening milking, a freezing point closer to zero than - 0.54°C.

Tests were also made as to the influence of acidity on the freezing point, and from the results obtained it was decided that for each increase of 0.01 per cent. in acidity calculated as lactic acid, an increased depression of 0.0033°C. resulted. This agrees generally with the conclusions of other observers, notably Monier-Williams and Parker and Spackman. It was further decided that the permissible limit for acidity should be 0.36 per cent., calculated as lactic acid. Whilst agreeing that no correction for acidity is as satisfactory as the freezing point obtained on fresh milk, circumstances sometimes make this impossible, especially in regard to the joint analysis of the third portion of the sample which may have been held in cold storage for months. It was therefore considered that any standard under the Pure Food Act adopted should include some provision for the acidity factor.

The following provision is made for the freezing point test for milk in Regulation 24 (1) of the Pure Food Act, 1908:—

Its freezing point shall not lie between zero Centigrade and -0.55 degree Centigrade, as determined in the Hortvet Cryoscope. When 10 cubic centimetres of the milk require more than 1.6 cubic centimetres of decinormal sodium hydrate solution for its neutralisation, using phenolphthalein as indicator, 0.003°C . shall be added to the observed figure for each 0.1 cubic centimetre of decinormal sodium hydrate required in excess of 1.6 cubic centimetres, thus bringing the corrected freezing point closer to zero. The freezing point of milk shall not be determined when 10 cubic centimetres of the milk require more than 4 cubic centimetres of decinormal sodium hydrate for its neutralisation.

As the figure of -0.55°C . had already been adopted in Queensland, West Australia, Tasmania, and New Zealand, it was thought best to use this figure for the present, although in the future some slight modification may be considered advisable.

TREATMENT OF PINEAPPLE STEMS WITH PRESERVATIVE.

As a result of experiments undertaken jointly between the Department of Agriculture, Queensland, and the Division of Plant Industry of the Commonwealth Council for Scientific and Industrial Research, with a view to the control of the disease known as "soft rot" or "water blister," the treatment of the cut stems of the pineapples with various preservative substances was decided upon. An investigation was carried out in this Laboratory to determine the quantity of preservative substances present in the fruit as consumed. The preservatives used were tannic acid, salicylic acid, and benzoic acid, and these were applied only to the cut surface of the stem, 1 to $1\frac{1}{2}$ inches from the edible portion of the fruit.

The edible portion of the pineapple is usually taken as the fruit flesh freed from the harsh outer skin and also from the fibrous core. The removal of the latter, however, is not always complete, and, consequently, the presence of any preservative in the core must be regarded as of some importance.

Tannic Acid Treatment.—In the pineapples submitted which had been treated with tannic acid, it was possible by means of staining with dilute ferric chloride solution to follow the entry of the preservative into the fibres of the core, although no evidence of penetration was visible in the fruit flesh. The following are the details of the tests undertaken in this connection:—

The pineapples were freed from skin, but were not cored. Sections were cut at intervals from the base of the fruit, and were stained with dilute ferric chloride solution, with the results shown:—

Sample No.	Distance of Section from base of fruit.	Result of Test.
1	$\frac{1}{4}$ inch	Tannic acid present in core, but absent in flesh.
	$1\frac{1}{4}$ inch	"
	2 inches	Very faint indication of tannic acid in core; absent in fruit flesh.
	Near top of pineapple...	Tannic acid still visible in two fibres.
2	.....	Similar results to those obtained with No. 1.
3	.....	Practically no penetration of tannic acid in core; none in fruit flesh.
4	.....	Medium penetration of tannic acid in core less than in Nos. 1 and 2, but none in fruit flesh.
5	.....	Practically no penetration of tannic acid in core; none in fruit flesh.
6	.....	Similar to No. 5.

From the foregoing results it is seen that the preservative penetrates the core in small quantities to varying depths, depending in all probability on the nature of the pineapple (degree of ripeness, etc.).

Salicylic Acid Treatment.—Salicylic acid was found to penetrate in a manner similar to that of tannic acid. As, however, the natural acidity of the fruit interferes with the delicacy of the direct test, its course could not be followed with the degree of accuracy possible in the fruit treated with tannic acid.

Three pineapples, the total weight of which was 5.8 lbs., deprived of their skins and the ends removed, but uncored, were found to contain salicylic acid in the proportion of 1/100th grain per lb. This was all present in the core, mostly towards the base of the fruit. No evidence of the penetration of the preservative into the fruit flesh was obtained.

Benzoic Acid Treatment.—This preservative was found to behave similarly to salicylic acid, penetrating the core in minute amounts.

PURE FOOD ACT, 1908.

REPORT OF THE CHIEF INSPECTOR ON THE GENERAL ADMINISTRATION OF THE PURE FOOD ACT, 1908, FOR THE YEARS ENDED 31ST DECEMBER, 1931 AND 1932.

Staff.

Chief Inspector, CHARLES V. FRANCIS. Senior Inspector, G. A. GRIFFIN. 9 Metropolitan Inspectors, 2 Country Inspectors and 1 Assistant.

Mr. Arthur Kench, who occupied the position of Chief Inspector under the Pure Food Act from 1910, resigned from the staff on 17th December, 1931.

I have to report as follows concerning the work carried out by officers of this Branch during the two years under review.

Such work includes the supervision of all places where food or drugs are prepared, stored or exposed for sale, together with the incidental duties required to be carried out in order to secure the wholesomeness, cleanliness and freedom from contamination of food, and compliance with the legal provisions as set out in the Act and Regulations thereunder.

Milk.—As usual, much attention was given to this very important article of food. A total of 23,000 samples were taken for analysis by officers authorised by the Board during 1931 and 1932, and 454 were found to be below standard. 171 warnings were issued and legal proceedings instituted in 283 cases. The fines and costs imposed totalled £802 15s., the amount collected in 1932 being a slight increase on the figures for the previous year.

The freezing-point test was, for the first time, utilised by the Government Analyst as a means of estimating the presence of added water in samples of milk purchased from suppliers to the public. Several prosecutions have been successfully undertaken against vendors of milk which, although containing more than the minimum solids-not-fat content, viz., 8.5 per centum, had a freezing-point between zero and -0.55 degrees Centigrade, contrary to the requirement of the standard laid down in the Pure Food Regulations. In one of the first cases, it was admitted by the defending solicitor that a son of the defendant had added water to the milk, although such milk, according to the analyst's certificate, contained more than 8.5 per centum of solids-not-fat. Incidentally, it was found necessary, in order to retard the development of acidity in the portions of samples retained for future comparison, to store them as soon as possible after purchase in a chamber in which the temperature did not rise above 20 degrees Fahrenheit. A number of samples were also submitted for bacteriological examination. Thirty samples of cream were collected in 1931.

Meat.—Butchers continue to use, for powdering the surface of meat, the prohibited preservative sulphurous acid. They are evidently prepared to pay the penalty rather than forego its use. Many samples of sausages were found to contain this substance in excess of the permitted amount. In the two years 6,487 samples of meat were taken for analysis, of which 1,159 or 17.86 per cent. were not in accordance with the standard; 485 warnings were issued; and prosecutions were instituted successfully in 674 instances, the fines and costs imposed totalling £1,686 7s.

In the City of Sydney sales of meat by department stores, which are not licensed butchers' shops, are rapidly increasing. It is the practice of such stores—which, by the way sell all sorts of commodities—to utilise a part of premises for the sale of many foods for human consumption. In this section butchers' meat, already cut up, is exposed for sale in refrigerated show cases. This meat has been cut to the required size on proper premises before being exposed for sale in the stores mentioned. It is taken direct from the showcase and wrapped in the customer's presence. The use for wrapping purposes of a transparent material called cellophane was common, but its price has, except in isolated cases, rendered its use almost prohibitive.

Brine.—Of 12 samples of brine taken from butchers' pickling vats, five contained foreign impurities, and successful prosecutions resulted. The prohibition of the use of once-used brine for injection into meat for sale has effected a great improvement in the quality of the liquid.

Bread.—Several samples of so-called "wholemeal" bread were found to contain more than the permitted amount of ordinary flour.

Butter Substitutes.—26 samples of edible fats (exclusive of butter) were submitted for analysis; 3 prosecutions resulted in the imposing of fines and costs totalling £9 4s. Preparation of margarine from vegetable oils, unlike its manufacture from animal fats, requires little more than simple mechanical mixing with the other permitted ingredients to ensure an article of uniform body and texture. During 1932 the manufacture of margarine from vegetable oils was carried out on an extensive scale by three firms in the metropolitan area, and its sale became so widespread and large throughout the State that the Government amended the Dairy Industry Act to prohibit the addition of butter fat to margarine. It made it an offence also to have any butter-fat on premises used for the manufacture of margarine. By proclamation, this was to come into force on the 1st March, 1933. As a result of persistent efforts by officers of this branch the position at time of writing is that margarine complies with the requirements of the Pure Food Regulations, except in the case of one firm which was prosecuted and convicted for selling margarine containing artificial colouring matter.

So far as can be ascertained, margarine manufacturers do not appear to be perturbed at the prohibition placed on the use of butter-fat in their product.

Beer.—A number of samples taken for analysis in 1931 were found to be free from prohibited preservatives and to be otherwise in accordance with the regulations.

Flavoured Ice Blocks.—These are made in various shapes and sizes from such ingredients as water, milk, temperance drinks, fruit and synthetic essences, fruit juices, sliced fruit, citric and tartaric acids, sugar, flavouring and colouring substances, etc., and are widely sold. A number of samples analysed in 1931 and 1932 were found to contain no traces of metallic impurities, or other harmful ingredients. Efforts continue to be made by interested parties to influence the public against consumption of these blocks, but without any apparent success as they are cheap. They appear to have affected the sale of the more costly and nutritious ice-cream.

Tomato Sauce and Chutney.—During the latter part of 1932 these articles received special attention, and the labelling provisions of the new regulations were enforced. Tomato chutney containers, on the labels of which were designs and descriptive matter indicative of tomatoes or tomato sauce, appear to have been driven off the local market. Many warnings were issued for breaches of the regulation governing tomato chutney, and more drastic action will be taken in the case of future offences.

Food Samples in General.—Of a total of 7,428 samples of food and drugs submitted for analysis in 1931 and 1932, 1,244 (16.74 per cent.) were below standard. 543 warnings were given and 704 prosecutions resulted in the imposition of £1,775 in fines and costs.

Amendment of Pure Food Regulations.—During 1932 a revised code of the regulations under the Pure Food Act, 1908, was gazetted. Many very necessary alterations, particularly in regard to labelling, were made. This should tend to make more difficult the substitution of imitation products for the genuine article. The enforcement of these legal requirements should be for the betterment of the public food supply.

Seizure and Condemnation of Unsound Food.—The practice of visiting auction rooms and other premises, including wholesale and retail stores, was regularly carried out, and large quantities of food stuffs were inspected following fires that had occurred in various premises. In the two years under review over 112 tons of bulk foods and 78,351 tins and packages of food were found to be in a deteriorated condition and unfit for human consumption, and such foods were destroyed under departmental supervision. In connection with these seizures seven prosecutions were instituted and £26 6s. in fines collected.

Premises, Plant, Utensils, etc.—The inspection and supervision of premises used in connection with the preparation, storage and sale of food, as well as the plant, equipment, etc., incidental to such premises, was again given considerable attention. 24,304 premises, in all parts of the State, were inspected by members of the staff in 1931 and 1932. 840 notices were issued in connection therewith, and prosecutions for unclean premises resulted in collection of £303 8s. in fines and costs.

For general breaches of the Act and Regulations 28 prosecutions were instituted, fines and costs amounting to £53 19s. being imposed.

Venerable Diseases Act.—At the request of the Commissioner, special investigations were made concerning breaches of the Act. In this connection some attention was given to the question of certain forms of advertising.

Medical Treatment by other than Qualified Persons.—Certain inquiries were made into allegations concerning herbalists, chiropodists and persons carrying on kindred occupations, that they had obtained money by means of questionable representations, as well as results being more or less valueless so far as the person treated by them was concerned. The law needs strengthening before much work of definite value to the community can be carried out to make this form of deception less profitable.

Tables are attached herewith showing the number and nature of foods seized and destroyed. Particulars are also given of the samples taken, inspections made, etc., during the two years under review.

C. V. FRANCIS,
Chief Food Inspector.

TABLE I.—Summary of Work performed by Pure Food Officers for the years ended 31st December, 1931 and 1932.

Analysis of Samples of Milk.	1931.			1932.		
	Samples taken by—			Samples taken by—		
	Departmental Officers.	Municipal and Shire Council Inspectors.	Total.	Departmental Officers.	Municipal and Shire Council Inspectors.	Total.
Number of samples taken from all parts of the State	12,439	7,124	19,563	10,987	5,422	16,429
Number of samples below standard ...	234	143	377	220	99	319
Number of warnings	109	53	62	62	32	94
Number of prosecutions	125	90	215	158	67	225
Amount of fines and costs.....	£ s. d. 398 11 0	£ s. d. 226 4 0	£ s. d. 624 15 0	£ s. d. 404 4 0	£ s. d. 216 19 6	£ s. d. 621 3 6

Foods and Drugs, other than Milk.* (See Table I, pp. 16 and 17.)

	1931.	1932.
Number of samples taken from all parts of the State	3,466	3,962
Number of samples below standard	491	753
Number of warnings	118	425
Number of prosecutions	376	328
Amount of fines and costs	£1,036 11s.	£738 9s.

* Local authorities (municipal and shire councils) do not, as a matter of routine, collect samples of foods and drugs other than milk.

Food unfit for Consumption, Seized and Destroyed.

The seizures comprised over 112 tons of foodstuffs, and 78,351 packages of assorted foods.

	1931.	1932.
Number of prosecutions	6	1
Amount of fines and costs	£23 8s.	£2 8s.

Inspection of Premises used for Preparation, Sale, or Storage of Food.

	1931.	1932.
Number of premises inspected in all parts of the State	12,751	11,553
Number of notices issued	394	446
Number of prosecutions	51	19
Amount of fines and costs	£214 16s.	£86 12s.

TABLE 2—Summary of Legal Proceedings for Breaches of the Pure Food Act and Regulations, 1931 and 1932.

	1931.		1932.	
	Prosecutions.	Fines and Costs.	Prosecutions.	Fines and Costs.
		£ s. d.		£ s. d.
Adulterated milk	266	1,064 14 0	225	404 4 0
Adulterated foods and drugs	376	1,036 11 0	328	738 9 0
Food unfit for human consumption seized and destroyed	6	23 8 0	1	2 8 0
Unclean premises	51	214 16 0	19	86 12 0
General breaches of Act and Regulations	43	81 4 0	28	53 19 0
Breaches of Venereal Diseases Act and Regulations	2	30 8 0	...	.....
Grand Total	744	£2,451 1 0	601	£1,285 12 0

TABLE 3.—Summary of work carried out under the Pure Food Act, 1908, from the date of its operation (October, 1910) to 31st December, 1932.

	Total No.	Total below standard.	Prosecutions undertaken.	Amount of Fines and Costs.
				£ s.
No. of milk samples	155,230	7,660	3,873	19,469 15
No. of food and drug samples	28,073	5,241	3,061	10,070 0
Premises inspected	179,086	.....	2,295	11,708 8
General breaches of Act	1,907	.....	1,536	5,221 3
Total samples collected	364,296	12,901	10,765	46,469 6

REPORT OF THE CHIEF SANITARY INSPECTOR FOR THE YEARS ENDED 31ST DECEMBER, 1931 AND 1932.

Staff.—Chief Sanitary Inspector, E. A. Cresswick, M.R.S.Inst. (retired 25/10/1932); and succeeded by T. A. W. Curry (appointed 15th October, 1932); 9 certificated inspectors and 1 certificated inspector and licensed surveyor.

ROUTINE AND GENERAL.

Inspection of Country Towns.—Primary inspection has been made of 98 country towns and villages in 1931 and 50 in 1932; and reports prepared and forwarded to local authorities indicating necessary improvements; re-inspections were made of 49 towns and villages in 1931 and 50 in 1932, with the object of ascertaining what progressive action had been taken by local authorities to give effect to previous recommendations forwarded by the Department.

Fifteen outbreaks of infectious diseases in 1931 and 9 in 1932 were investigated, and recommendations made as to the action necessary to prevent spread or recurrence of the disease. In 1931 the services of two officers were made available for the purpose of inspecting the whole of the slaughterhouse premises in the territory extending from the municipality of North Illawarra to Nowra, and to give evidence before the Royal Commission appointed to inquire into the slaughtering and inspection of meat on the South Coast.

Sanitary and Garbage Depot Sites.—A total of 287 sanitary and garbage depots were inspected during 1931 and 1932, and 71 proposed new sites were investigated and reported upon. As a result of such reports several of the proposed sites were not approved.

Insanitary Buildings.—Inspections were made of 56 insanitary buildings in 1931 and 36 in 1932. In 56 cases, where the structures were found to be unfit for human habitation or occupation, closing orders were issued, and, where necessary, local authorities recommended to take action to close the buildings. In many other cases necessary improvements were recommended to place the buildings in a habitable condition.

<i>General Inspections and Investigations.</i> —	1931.	1932.
Septic tank sites and proposed sites	184	101
Plans of proposed installations	85	116
Drainage and nuisances	48	85
Unemployed, aborigines', and other camps	61	37
Noxious trades premises	654	485
Noxious trades, new sites for	16	20
Food premises (including butchers' shops)	72	18
Public hospitals	16	24
Private hospitals (new and existing)	9	16
Public and private schools	65	82
Bedding factories—in respect of re-making and sale of used bedding	106	210
Cemeteries	3	5
Swimming baths	8	13
Wharves, etc.	6	10
Garbage punts	6	5
Showgrounds and racecourses	10	5
Hotels	210	147
Chemical closets tested	1*	2†

Inspections and inquiries were made into the probability of pollution of four sources of water supply, and of water supply wells at 47 private premises in 1931, and 8 water supplies in 1932; 45 samples of water were collected and submitted for chemical or microbiological examination in 1931 and 112 in 1932. Nineteen samples of sewage, 20 samples of hair, kapok, and flock were collected and submitted for analysis in 1931, and 40 samples of flock in 1932.

In 1932 special attention was given to the possibility of the pollution of Georges River at Liverpool from woolscour premises. Frequent inspections were made and samples of wastes and water were collected for examination.

Supervision of Abattoir and Meat Works Wastes.—Forty-two inspections in 1931, and 31 in 1932 were made of the State Abattoirs and the Sydney Meat Preserving Company's Works. Haslam's Creek has also been kept under observation for possible nuisance. Very few complaints were received as to nuisance from these sources during the period.

Theatres and Public Halls.—182 inspections in 1931 and 167 in 1932 have been made of theatres and public halls, and reports and recommendations forwarded to the Chief Secretary's Department. Air tests were carried out at 36 premises in 1931, and two air tests were made at theatres in 1932.

Land Notified as Unfit for Building Purposes.—Gazette notices under section 55 of the Public Health Act were published relative to 10 areas in 1931 and 7 in 1932. Eleven Gazette notices were revoked in 1931, retention of restrictions having become unnecessary as the land had been satisfactorily improved. One area at Manning-road, Woollahra, was revoked and renotified to cover a modified area, the part excised having been satisfactorily improved. Many routine inspections have been made and numerous notified lots were brought to a condition which rendered them suitable for building purposes. Surveys were made of extensive areas of low-lying lands, which had been subdivided for building purposes. These surveys covered large areas at Tacoma in the Erina Shire, 10 in the Woy Woy Shire; and 2 areas at Albion Park, in the Shellharbour Municipality. Surveys have been made of a large area bordering Greendale Creek and Curl Curl Lagoon, in the Warringah Shire, and elsewhere.

* Unsatisfactory, and not recommended for approval.

† Recommended for approval.

The abovementioned surveys have been plotted and plans prepared. Large areas adjoining Cook's River above Tempe Dam were investigated and a report submitted.

A scheme for improvement of a large area of mud flats at Iron Cove, Municipalities of Ashfield and Drummoyne, was submitted by the Reclamation Trust to this Department for consideration; and conditions have been formulated which the Department considers would render the land suitable for building purposes, if carried out.

In 1931 replies were furnished to 531, and in 1932 to 625 inquiries by legal representatives as to whether or not specified areas had been proclaimed under Section 55 of the Public Health Act. These replies at 2s. 6d. each, returned to revenue £144 10s.

Repairs to the Main Carrier, Western Suburbs Outfall Sewer.—In 1931, during the period that sewage was discharged into Botany Bay while repairs to the Main Carrier of the Western Suburbs Outfall Sewer were being carried out by the Water Board, 20 inspections of the foreshores of Botany Bay, Shea's Creek and Cook's River were made by a departmental officer to ascertain to what extent, if any, sewage was being washed on to or deposited on the shores; and reports were submitted showing the result of such inspections. During the same period and since the completion of the repairs to the carrier, 356 samples of water were collected from Botany Bay and submitted for chemical and microbiological examination for the purpose of keeping a check on possible pollution, and the efficiency of the methods adopted for the purification of the sewage before being discharged into the Bay.

Ordinances, Regulations and Bylaws submitted for Approval.—These included, in 1931, 2 proposed new ordinances (Cessnock abattoirs, and swimming pools); amendments to 5 existing Local Government Act ordinances (No. 44 sanitary conveniences; 46 sewers; 51 garbage; 52 public baths; 56 butchers and smallgoods shops); and six new by-laws under the City of Sydney Corporation Act respecting public conveniences; rooms in flats; common lodging houses; and public health. A number of necessary amendments were suggested, and in most cases accepted as satisfactory, before the proposed enactments were submitted for approval by the Board of Health.

In 1932, section 15 of the Cattle Slaughtering, Diseased Animals and Meat Act, 1902, was amended by the Cattle Slaughtering, Diseased Animals and Meat (Amendment) Act, 1932, by which scales of fees payable in relation to cattle slaughtered may be fixed. Any proclamation under this section shall be subject to the approval of the Board of Health.

Regulation 9 (j) of the Cattle Slaughtering, Diseased Animals and Meat Act, 1902, has been slightly re-worded for the purpose of clarifying its general intention.

Regulation 9 (k) of the same Act has been modified by the addition of a clause relating to the inspection of animals, suspected of being diseased, by qualified inspectors.

Ordinance 56, Local Government Act, 1919, was amended to make additional provision for the licensing of butchers' cutting carts in all Local Government areas. Conditions on which cutting carts may be licensed are specified.

Consideration was given to proposed amendments to the Cattle Slaughtering, Diseased Animals and Meat Act, 1902, for the purpose of revising and re-arranging its provisions to modern requirements. The principal aim of this revision was to provide means whereby slaughtering could be more strictly regulated, particularly in regard to inspection of meat intended for human consumption.

A proposed regulation under the Public Health (Amendment) Act, 1921, dealing with qualifications to be held by Health Inspectors appointed by Councils was formulated. This regulation has since been approved and gazetted.

Slaughtering Premises.—In 1931, 290, and in 1932, 287 premises registered under the Cattle Slaughtering and Diseased Animals and Meat Act were inspected, and action taken to have necessary improvements effected.

Investigations and reports were made regarding complaints alleging that animals for human consumption were being slaughtered at 5 unregistered premises; and suitable action was taken where warranted. Plans of 12 proposed new slaughterhouse premises were examined, and reported upon.

Health Week Exhibition.—At the Health Week Exhibition held at the Town Hall, Sydney, in October, this branch contributed to a display of exhibits relating to personal and public hygiene. Much interest was taken in the display by large numbers of the visiting public, who appeared to be desirous of obtaining information respecting these matters.

Routine Destruction of Rats.—Systematic destruction of rats by means of traps and poison has been carried out by departmental rat catchers along the harbour front from Woolloomooloo Bay to Blackwattle Bay.

A total of 4,531 rats in 1931 and 3,812 in 1932 were caught by the rat catchers employed by the Department, Sydney Harbour Trust, and City Council. These rats were all examined in the Microbiological Laboratory and found free from plague.

Fatalities through Fumigation by Hydrocyanic Acid Gas.—On 8th October, 1931, one of a block of flats in Sydney was fumigated with hydrocyanic acid gas by a firm of fumigators, and resulted in the death of a woman who occupied a ground floor flat situated under the fumigated tenement.

At the request of the police an inspection of the premises was made with the object of ascertaining how the gas reached the lower flat and caused the fatality. The investigating officer attended the Coroner's inquiry for the purpose of giving evidence; a verdict of accidental death was returned.

In May, 1933, there was a similar fatality in a hotel in Sydney while two rooms were under fumigation. In this case the victim, a young woman, occupied a room immediately above one of the rooms undergoing fumigation.

Subsequent inquiries disclosed that at present there is no statutory power under which the use of cyanide for fumigation of buildings can be effectively controlled, and action is being taken to secure necessary legislation.

Prosecutions.—Prosecutions instituted by officers of this branch for breaches of the various Health Acts, Regulations and Ordinances, in 1931 and 1932 resulted in the collection of £390 11s. 7d. in fines and costs.

Evidence was given in five cases in both 1931 and 1932 before various Licensing Courts for failure to carry out improvements ordered at hotel premises. Evidence was also given in 1931 on behalf of the Sydney Harbour Trust against a contractor for creating a nuisance on a garbage punt moored in Gore Bay, and for failing to remove the garbage to sea at proper intervals. The defendant was convicted and fined £5 with 8s. court costs. An officer also attended the Land Valuation Court in a claim for compensation for resumption, by the Railway Commissioners, of a property which was part of a registered noxious trade premises.

Appointment of Health Inspectors.—Health inspectors were appointed in the Municipality of North Illawarra and Shire of Blaxland at the instance of the Department.

PRIVATE HOSPITALS ACT, 1908.

Report on the operation of the Act for the years ended 31st December, 1931 and 1932, by F. M. SUCKLING, M.B., M.S., D.P.H. (Sydney), D.T.M. & H. (Cambridge), Assistant Medical Officer of Health.

At the end of 1931 there were 661 licensed hospitals in New South Wales, showing an increase of 7, compared with the total for the year ended 1930.

Of these 661 hospitals, 273 were included in Sydney and District (a decrease of 4 for the year), the remainder, 388 (increase for the year of 11) being situated in the country districts.

At the end of 1932 there were 706 licensed hospitals, showing an increase of 45 for the year; of these 291 were included in Sydney and District (an increase of 18), and 415 in country districts (an increase of 27 for the year).

Inspection of Private Hospitals.—The Departmental Supervisory Nurses have systematically carried on the work of inspection of hospitals, both in the metropolitan area and the country districts. The results are manifest in that the management of hospitals in general appears to be now more efficient than it was when these nurses first took up their duties, and the regulations under the Act are better observed by keepers of hospitals. Moreover, there would appear to be a growing sense of appreciation of the visits of the nurses by resident managers, especially among those who are keen upon improving the standard of their hospitals. The inspecting nurse is able to give advice and personally discuss with the manager problems presenting some difficulty to her which may arise from time to time.

Community activities in connection with Private Hospitals.—Several agencies are concerned with the development of such hospitals. The Kuring-gai Community Service Hospital at Chatswood has now been established for several years. Similarly the Red Cross Society has been responsible for a hospital at Hay. A new departure was made during 1931 by the opening of a Masonic Hospital at Ashfield, a fine modern, well-equipped building, licensed to receive 48 medical and surgical cases.

In addition, the Bush Nursing Association and the Country Women's Association of New South Wales still continue to carry on the excellent work of maintaining hospitals for the benefit of residents in the more remote parts of the State. Hospitals under the auspices of the Bush Nursing Association are licensed at Bonalbo, Dalgety, Ebor, Erigolia, Finley, Ivanhoe, Jindabyne, Kentucky, Nimmitabel, Pilliga, Reids Flat, Tabulam, Tumbarumba and Urbenville. An exempted hospital at Rye Park is also under the control of this Association.

The Country Women's Association is responsible for the establishment of hospitals at Barellan, Carinda, Eugowra, Gulargambone, Hillston, Quandialla, Tallimba, Tottenham, Ungarie and Yenda.

Exemptions.—Only one hospital held an exemption for the years 1931-32, viz., that at Rye Park.

Effect of the Public Hospitals Act, 1929, on the operation of the Private Hospitals Act.—As indicated in my report for the year 1930 the status of certain hospitals hitherto licensed under the Private Hospitals Act was altered by placing them in the Third Schedule of the Public Hospitals Act.

In this schedule were placed the Lewisham and St. Vincent's Hospitals, and as it was then considered that the private hospitals attached to these institutions comprised a section of such hospitals, licenses under the Private Hospitals Act were no longer deemed necessary. However, the authorities of these two hospitals subsequently made further representations to the Hospitals Commission, with the result that the Chairman of the Commission submitted the following report:—

“Inquiries made in regard to the relationship between St. Vincent's Hospital, Darlinghurst, and St. Vincent's Private Hospital, have shown that the buildings are situated within the same curtilage, but are quite separate, the General Hospital having been built in 1857 on land granted by the Government for that purpose, on the condition that it is not to be alienated for any other purpose or encumbered in any way; the Private Hospital was built on freehold land purchased later by the Order.

The latter hospital is quite self-contained, maintaining its own services. Its accounts (building and finance) are quite independent of those of the General Hospital.

As both are staffed, for the greater part, by members of the Sisters of Mercy, they are all under the religious guidance of the Mother Rectress, who is in charge of the General Hospital; their duties, however, are otherwise distinct and confined to their respective hospitals.

On the basis that these institutions are together rendering a service on community hospital lines the Commission is prepared to take that fact into consideration in determining the status of the institution.

Representations from the Lewisham Private Hospital show it to be in a similar position as regards its relationship to the Lewisham Hospital conducted by the Little Company of Mary.

The Commission, therefore, is now of the opinion that the reference in the Third Schedule of the Public Hospitals Act, 1929, to St. Vincent's Hospital (Darlinghurst) and Lewisham Hospital conducted by the Little Company of Mary includes only the public hospital known by that name and not the private institutions adjoining which, as is shown above, are established and maintained as entirely separate hospitals.

The Commission further withdraws its previous ruling that the provisions of the Public Hospitals Act, 1929, apply to St. Vincent's Private Hospital at Darlinghurst and Lewisham Private Hospital at Lewisham and has therefore no objection to the continuance of the licensing of them under the Private Hospitals Act, 1908.”

Accordingly, the issue of licenses under the Private Hospitals Act was again recommended to St. Vincent's Private Hospital and the Lewisham Private Hospital.

Rest Homes.—Although the keepers of such homes are not called upon to become licensed under the Act, still it has been deemed wise that the approval of the Board of Health should be sought for permission to conduct such homes.

The premises are also inspected from time to time and a departmental form for such purpose has been drafted and is now in use.

Question of the accommodation of persons suffering from Tuberculosis of the lungs other than in Public Sanatoria.—This matter is raised from time to time by some keepers of private sanatoria licensed under the Private Hospitals Act. It is a grievance to them that many persons suffering from tuberculosis reside in boarding houses, hotels, etc., whilst their own respective establishments are consequently maintained in a comparatively empty state. They would like to see all phthisical persons forced to enter either public sanatoria or duly licensed private hospitals approved to receive cases of this nature.

The problem is by no means easy of solution since whilst it is recognised that it is preferable that tubercular patients should be received into sanatoria, the wishes and rights of the individual must also be borne in mind.

Many persons demur at entrance into a private sanatoria for reasons, such as the following:—

- (a) The question of financial cost.
- (b) The fact that being inmates of a known sanatoria would more or less render public the nature of their complaint and this would be a source of distress not only to themselves but to others. In this connection it is to be noted that legal notification of such cases is to be regarded as confidential.
- (c) Probably irksome disciplinary restrictions placed upon them should they be inmates of such institutions.

So far as my own observations are concerned, I think that there is now a tendency for consumptives if they do not enter sanatoria to either occupy their own premises, e.g., in the Blue Mountains, or to go to a boarding house managed by some person who has had experience of dealing with sufferers from tuberculosis (either members of her own family or others), and is prepared to receive such guests. This is a step in the right direction as compared with promiscuous residence in hotels and general boarding houses.

Sepsis connected with Pregnancy in Private Hospitals.—Sixty-two cases were notified during 1931 and 66 cases in 1932, as compared with 66 cases notified during 1930. For the most part the notifications were of single cases from individual hospitals.

The observance of the notification of "puerperal pyrexia" and of "puerperal infection" would now appear to be fairly well carried out by resident managers of private hospitals, so that the above figures may be taken as a reasonably accurate estimate of the extent to which sepsis in pregnancy has existed in private hospitals during the year.

Comments on Tables I and II.

Table I.—As indicated in this table hospitals licensed for lying-in cases still constitute the greatest proportion of those licensed, being 51.4 per cent. of the total in 1931 and 50.1 per cent. in 1932, although the proportion is somewhat less than that of the previous year, 1930 (54.8 per cent.).

In the great majority of private hospitals the licensees and approved resident managers are the same persons, the exceptions being 71 (Sydney district 17, country 54), and 70 (Sydney district 20, country 50) for the years 1931–1932 respectively.

In 1931 twelve medical practitioners held the position of approved resident managers of hospitals (Sydney district 3, country 9); in 1932, 8 (Sydney district 2, country 6).

Table II.—The number of hospitals containing 4–10 beds still comprise the largest proportion of those licensed, being 48.4 of the total in 1931, and 48.0 per cent. in 1932, a figure slightly in excess of that of the previous year, 1930 (47 per cent.).

TABLE I.—Showing the Classification of Private Hospitals licensed at 31st December, 1931 and 1932, according to Nature of Cases received and the total number of beds provided by each class of hospital.

	Medical, Surgical, and Lying-in.				Medical and Surgical only.				Lying-in.				Total.			
	Number of Hospitals.		Number of Beds.		Number of Hospitals.		Number of Beds.		Number of Hospitals.		Number of Beds.		Number of Hospitals.		Number of Beds.	
	1931.	1932.	1931.	1932.	1931.	1932.	1931.	1932.	1931.	1932.	1931.	1932.	1931.	1932.	1931.	1932.
Sydney and District	95	108	1,869	2,008	24	29	446	548	154	154	632	619	273	291	2,947	3,265
Country Districts	192	203	1,681	1,764	9	12	139	162	187	200	794	832	388	415	2,614	2,758
Total.....	287	311	3,550	3,862	33	41	585	710	341	354	1,426	1,451	661	706	5,561	6,023

TABLE II.—Showing Classification of Private Hospitals licensed at 31st December, 1931 and 1932, with respect to size as signified by the Number of Beds available.

	1.		2.		3.		4-5.		6-10.		11-20.		Over 20.		Total Number of Hospitals.	
	1931.	1932.	1931.	1932.	1931.	1932.	1931.	1932.	1931.	1932.	1931.	1932.	1931.	1932.	1931.	1932.
	Sydney and District	20	26	30	26	27	28	51	51	56	66	55	56	34	38	273	291
Country Districts	24	23	33	42	52	61	87	84	126	138	58	58	8	9	388	415
Total.....	44	49	63	68	79	89	138	135	182	204	113	114	42	47	661	706

HOSPITAL ADMISSION DEPOT; MEDICO-LEGAL SECTION, &c.
REPORT OF THE GOVERNMENT MEDICAL OFFICER FOR SYDNEY FOR THE YEARS
ENDED 31ST DECEMBER, 1931 and 1932.

Medical Staff.

DR. ARTHUR PALMER, Government Medical Officer for Sydney; Dr. C. E. Percy, Medical Officer.
Depot Assistants, 2; Night Officer, 1.

MEDICAL WORK.

Arrangement of Admissions to Hospitals and Homes and Outdoor Treatment.—The Depot is open for this purpose from 9 a.m. to 4.30 p.m., Monday to Friday, and from 9 a.m. to 12 noon on Saturday. At all other times the night officer is available.

During the year ending 31st December, 1931, 17,023 and during 1932, 22,582 persons were admitted through the Depot to the various Metropolitan hospitals. In 1931, 8,422 were admitted and in 1932, 6,203 persons to the State Hospitals and Homes at Lidcombe, Liverpool, Newington, George-street and Macquarie street, Parramatta; 1,193 in 1931 and 924 in 1932 to the Convalescent Homes at Eastwood, Camden and Vacluse; and 1,970 persons in 1931 and 1,287 in 1932 were referred to the Metropolitan hospitals for outdoor treatment.

Another activity of the Hospital Admission Depot is the determination of the need of applicants for glasses, artificial eyes and other surgical appliances.

Medical Examinations for State Government Departments.—These examinations were made as follows:—

- (a) of persons claiming or receiving aid from the Child Welfare Department;
- (b) for retirement from the Public Service on account of invalidity;
- (c) pensioners under the Superannuation Act;
- (d) of Pilots;
- (e) to ascertain the fitness of officers to continue duty after reaching 60 years of age;
- (f) examination of applicants for the Widows' Pension and for renewals of pensions;
- (g) examination of boys for fitness to undergo courses of farm training.

Some of the above persons were visited in their own homes by the Medical Officers.

Medical Examination of Police Recruits.—196 intending recruits were examined during 1931 and 151 in 1932. Of these, 71 were classed as fit in 1931 and 42 in 1932. Some of those rejected were subsequently re-examined and accepted when their defects were remedied, or when they reached the required physical standards.

On completion of twelve months' service all probationary constables are again examined at the Police Headquarters. 125 such examinations were performed in 1931 and 8 in 1932.

Medical Supervision of Sick Police.—This is carried out daily by the Government Medical Officer at the Police Headquarters. The sick or injured members of the Force attend for treatment or for the purpose of reporting the progress of their illness. The average daily number of police on sick report for 1931 was 68.15 and 63.80 for 1932.

Any other matters dealing with the health of the Police Force are also attended to.

MEDICO-LEGAL WORK.

Examination of Alleged Rape and Criminal Assault Cases and Examination of Criminals.—These cases are examined at all hours, as it is usually desirable that they be examined as soon as possible after the offence. Examinations are made to determine any injury or to ascertain the mental condition of these persons. Forty-nine such examinations were made in 1931 and 69 in 1932.

In addition, exhibits connected with these cases or with poisoning cases, etc., are seen before being sent to the Microbiological or Chemical Laboratory.

This work entails the attendance of the medical officers at the law courts in the city and suburbs and at the Central Criminal Court and the Quarter Sessions, for the purpose of giving evidence.

Work for the Coroner's Court entails the daily attendance of the Government Medical Officer at the City Morgue for the purpose of examining dead bodies in connection with suicides, murders, violent and uncertified deaths, and the giving of evidence at the Coroner's Court.

During 1931, 120 external examinations and 218 internal examinations of dead bodies were performed; the figures for 1932 being respectively 113 and 195.

Lunacy Work.—The Reception House at Darlinghurst is visited daily by a medical officer for the purpose of examining persons detained there. 1,030 persons were certified as insane in 1931 and 1,022 in 1932.

In addition, arrangements were made for the transfer of suitable cases to State Hospitals and Homes.

Vaccinations.—Members of the Police Force are vaccinated at the Police Depot during their course of instruction, and members of the general public at the Hospital Admission Depot. 136 vaccinations were performed in 1931 and 401 in 1932.

The medical officers attached to this Branch are on duty at all hours and are liable to be called upon at any time by the Police Department for any urgent work of a medico-legal nature.

It will be noted that there is a very large increase in the work of this Branch, chiefly in regard to admission of patients to hospitals and institutions.

Ambulance Removals.—The Hospital Admission Depot arranges for the transport of patients to the various metropolitan hospitals and to the State Hospitals and Homes. During the day time this work is carried out by departmental ambulances; and after 5 p.m. by the Central District Ambulance by means of its own ambulances or those of adjacent districts.

Ambulance Removals during 1931 and 1932:—

	1931.	1932.
Departmental ambulances	2,100	2,000
Central District ambulances	10,225	8,112
Total removals	12,325	10,112

SECTION I.—B.

DIVISION OF MATERNAL AND BABY WELFARE.

ANNUAL REPORT FOR YEAR ENDED 31ST DECEMBER, 1931 AND 1932.

Director: Dr. E. Sydney Morris; Assistant to the Director, Dr. Elma Sandford-Morgan.

PART I.—MATERNAL WELFARE.

Extreme accuracy is observed in finalising the vital statistics in New South Wales, particularly with regard to the figures dealing with maternal mortality. This is possible because every death of a woman in the child-bearing period, where there is any likelihood whatever of the cause being a puerperal one, is the subject of a special investigation by an officer of this Division, and the Government Statistician's figures are based on these findings. There is thus no possibility of any death which has a puerperal relationship being overlooked; in fact, it is more likely that the maternal mortality rate for this State is placed at a disadvantage in comparison with that of other countries where the basis of computation is not so thorough as in our own.

The maternal death-rate all over the world is very much higher than it should be, especially in view of the fact that the death-rate generally continues to decline steadily. There is no doubt that much of this maternal mortality is preventable, and though it, too, is declining in New South Wales, the fact cannot be ignored that the decline is much slower than it should be and that it is marked by occasional rises.

The year 1931, it is to be regretted, shows one of these periodic rises—in fact this has been the case for the last three years, so that (as will be seen by Table I) taking the quinquennial period 1907–11, inclusive, as 100, the percentage ratio for each succeeding five years has decreased, until this last period 1927–31 shows a rise again to 87 per cent.

The births in New South Wales during 1931 showed a very marked decrease—the number (47,724) of births being the lowest for several years, while the number of maternal deaths (excluding illegal operations was 243). The maternal mortality rate per 1,000 live births was thus 5.09.

In 1932 there was a still further drop in the birth-rate (44,905), while the maternal mortality rate was 5.02 per 1,000 live births (226 deaths, excluding illegal operations).

TABLE I.

Year.	Total Births.	Total Puerperal Deaths.	Deaths from Illegal Operations.	Percentage of Total Deaths caused by Illegal Operations.	Maternal Mortality Rate, excluding Illegal Operations.	Ratio.*
1907	42,195	263	7	2.6	6.0	100
1908	42,525	304	15	4.9	6.7	
1909	43,769	252	8	3.1	5.5	
1910	45,533	261	8	3.0	5.5	
1911	47,677	279	12	4.3	5.6	
1912	51,993	305	16	5.2	5.5	92
1913	52,134	329	10	3.0	6.1	
1914	53,615	296	9	3.0	5.3	
1915	52,885	272	8	3.0	4.9	
1916	52,575	297	16	5.3	5.3	
1917	52,467	327	22	6.7	5.8	88
1918	50,700	267	15	5.6	4.9	
1919	48,528	263	17	6.4	5.0	
1920	53,974	331	27	8.1	5.6	
1921	54,634	281	33	11.7	4.5	
1922	55,214	279	32	11.4	4.4	80
1923	54,112	283	33	11.6	4.6	
1924	53,670	291	32	11.0	4.8	
1925	54,615	325	40	12.3	5.2	
1926	53,126	276	40	14.5	4.4	
1927	53,858	352	46	13.0	5.6	87
1928	54,800	327	32	9.7	5.4	
1929	52,676	278	33	11.8	4.6	
1930	52,136	304	44	14.4	4.9	
1931	47,724	288	45	15.6	5.1	
1932	44,905	276	50	18.1	5.02

* Per cent. ratio of quinquennial averages to average of 1907–11 which is taken as 100.

In Table II these deaths from the various causes incidental to childbirth are shown as follows:—

NEW SOUTH WALES.—Deaths Incidental to Childbirth, 1929–1932.

Causes.	1929.		1930.		1931.		1932.	
	Number.	Rate per 1,000 Births.	Number.	Rate per 1,000 Births.	Number.	Rate per 1,000 Births.	Number.	Rate per 1,000 Births.
Accidents of Pregnancy	29	.55	33	.63	24	.53	24	.53
Puerperal Hemorrhage	34	.65	36	.69	33	.69	39	.87
Puerperal Septicæmia.....	49	.93	42	.81	41	.85	26	.58
" " following Abortion, Mis-	30	.57	38	.73	41	.85	33	.73
" " carriage.....								
Albuminuria and Eclampsia	48	.91	41	.79	53	1.11	61	1.36
Phlegmasia Alba Dolens, Puerperal Embolism, Sudden Death	26	.49	24	.46	23	.48	16	.35
Other Casualties of Childbirth	29	.55	46	.88	23	.58	27	.59
Total	245	4.65	260	4.99	243	5.09	226	5.02
Illegal Operations.....	33	.63	44	.84	45	.94	50	1.12
Grand Total	278	5.28	304	5.83	288	6.03	276	6.14

Table II shows in detail the death rate from the various causes incidental to child birth in New South Wales for 1931 and 1932. A word of explanation is necessary regarding the classification, which has been altered in accordance with the 1929 revision of the International List of Causes of Death. It would appear as though there had been a considerable increase in the number of deaths from Albuminuria and Eclampsia (0.79 per 1,000 in 1930, and, apparently, 1.11 in 1931). This, however, is not the case, the actual number of deaths from these causes in 1931 was 42 (0.88 per 1,000), the remainder of cases being due to other toxæmias of pregnancy which were formerly allocated to "Accidents of Pregnancy."

The deaths from Albuminuria and Eclampsia in 1932 numbered 53 (1.18 per 1,000), and from other toxæmias of pregnancy, 8 (totalling 1.36 per 1,000).

Accidents of Pregnancy.—Under this heading are grouped abortions (not returned as septic), hæmorrhage, ectopic gestation, and other accidents of pregnancy. In 1931, 11 of the 24 deaths occurred from abortion, the majority of them being country cases, and the other 13 from ectopic gestation, again the majority occurring in country districts.

Apart from deaths known to have been caused by illegal operations, there is no doubt that many cases classified under the heading of "Accidents of Pregnancy," as well as many grouped under "Puerperal Septicæmia following Abortion," are no doubt self-induced, thus further penalising the already high maternal mortality rate.

In 1932 "Accidents of Pregnancy" were 24—being mainly ectopic gestations (15).

Illegal Operations.—This rate continues to soar higher every year, as eloquently illustrated in Graph II. In 1931 it reached 15.6 per cent. of the total maternal deaths (i.e., 45 out of 288).

It would appear that the amount of deliberate interference with pregnancy—and mainly by the women themselves, more than by professional abortionists (at any rate as far as the fatal cases are concerned)—is increasing all over the civilised world. Moreover, the increase is all the more disquieting in that it appears—as a rule—to be taking place among married women who are already the mothers of families, and not, as one might expect, among desperate single women. Actually in the year 1931, of the 40 cases which occurred in the metropolitan area, almost two-thirds (25) were married women, while 12 were single, and 3 widowed or divorced.

As usual, the cases occurred almost entirely in the city—40 out of the 45. This is, no doubt, partly due to the fact that the means of obtaining the desired termination of pregnancy are more readily obtainable in the city, and, in previous years, it has been found that many of the victims are country women, who have come to the city for that purpose; but in 1931 only 3 of the metropolitan cases were country visitors.

The increases in the amount of deliberate interference with pregnancy is well shown by the figures in the records of the Coast Hospital, Sydney—the institution where the majority of the cases of septic abortion are treated. In the year 1919, for instance, of a total of 3,210 female patients treated only 54 (i.e., 1.7 per cent.) were cases of abortion, whereas in 1931, while the total number of female patients (6,176) had not yet doubled, the number of cases of abortion treated (904 or 14.6 per cent.) had increased almost seventeen-fold.

The number of deaths from illegal operations during 1932 was still higher than in the preceding year, reaching the record height of 50 out of 276 total maternal deaths (18.1 per cent.). As usual the majority of these (35) were city cases.

Puerperal Hæmorrhage.—One feels that, with our increased technique, deaths under this heading should be capable of considerable reduction, but the rate, as a matter of fact, remains about the same, the number of cases being 33 during 1931.

One would expect that, under the difficult conditions existing in many country districts, these fatal cases of hæmorrhage would mainly occur there, and not in the metropolis, but of the 33 cases, country cases were only in a small majority (18 as against 15).

Some of the deaths were attributed to shock following manual removal of adherent placenta, often in public hospitals, where such sequelæ might be least expected; at least two occurred through absence of any attendant (one being in the metropolis). In one case the umbilical cord was only 5 inches long; while in about half of the total cases the, as yet, unexplainable condition of placenta prævia was responsible for the fatality.

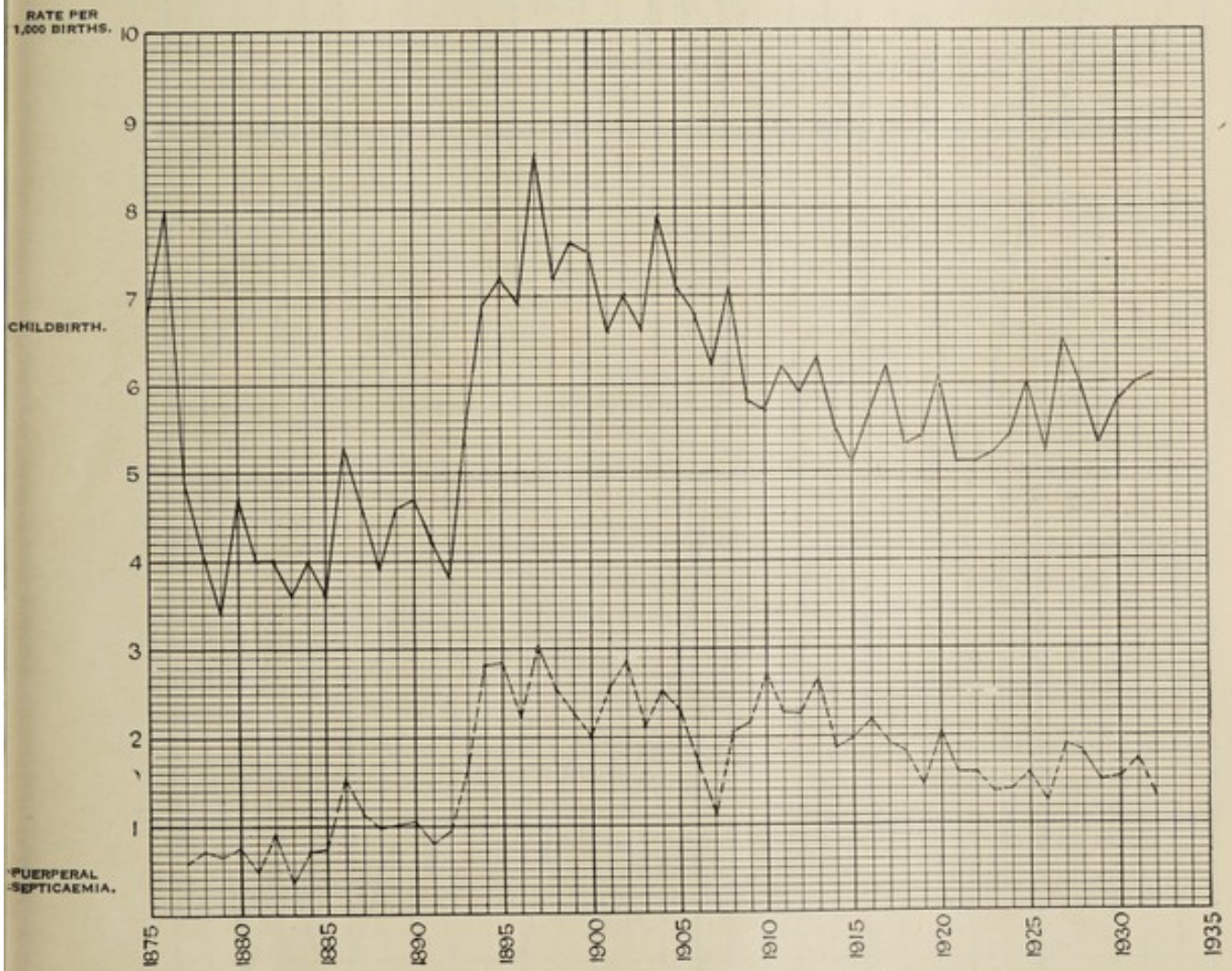
Deaths from this cause in 1932 show an increase to 0.87 per 1,000 (39 cases), and again the greater number (25) were metropolitan. Of the 39 cases, 10 were due to placenta prævia, one died of secondary anaemia three months after child birth at which there had been severe post partum hæmorrhage, and one was already suffering from pernicious anaemia and succumbed to quite a slight hæmorrhage at delivery. In two other cases sudden, profuse and fatal hæmorrhages occurred late in the puerperium (on thirteenth and seventeenth days respectively).

Puerperal Septicæmia.—This condition, as seen in graph 1, continues to account for about one-third of the total maternal deaths—a serious reflection upon our standard of midwifery. It is true that one-half of the 82 cases in this class occurred after abortion, and not after full-time delivery. In such cases medical help is seldom sought until the infection is already well-established, partly because, no doubt, many of these cases of abortion are the result of deliberate drug-taking to bring about such an end, and partly because women continue to look upon early miscarriage as being a simple affair which does not call for medical treatment.

The 41 cases in this category do not call for any particular comment, beyond the interesting fact that (as with illegal operations) the greater number—30—occurred in Sydney and Newcastle.

An analysis of those cases following full-time labour, however, discloses some important facts. Very few of them occurred in public maternity hospitals; only two of the whole 41, as a matter of fact, were confined in public institutions, and in both those cases there was, no doubt, infection before admission (one had been sent down from the country with eclampsia, and the other, too, had received previous outside treatment).

GRAPH No. I.
CHILDBIRTH AND PUERPERAL SEPTICÆMIA.
 Annual Death Rate of Women per 1,000 Births in New South Wales, 1875-1932.



NOTE.— Since 1906 deaths from "illegal operations" are included in total deaths in childbirth.

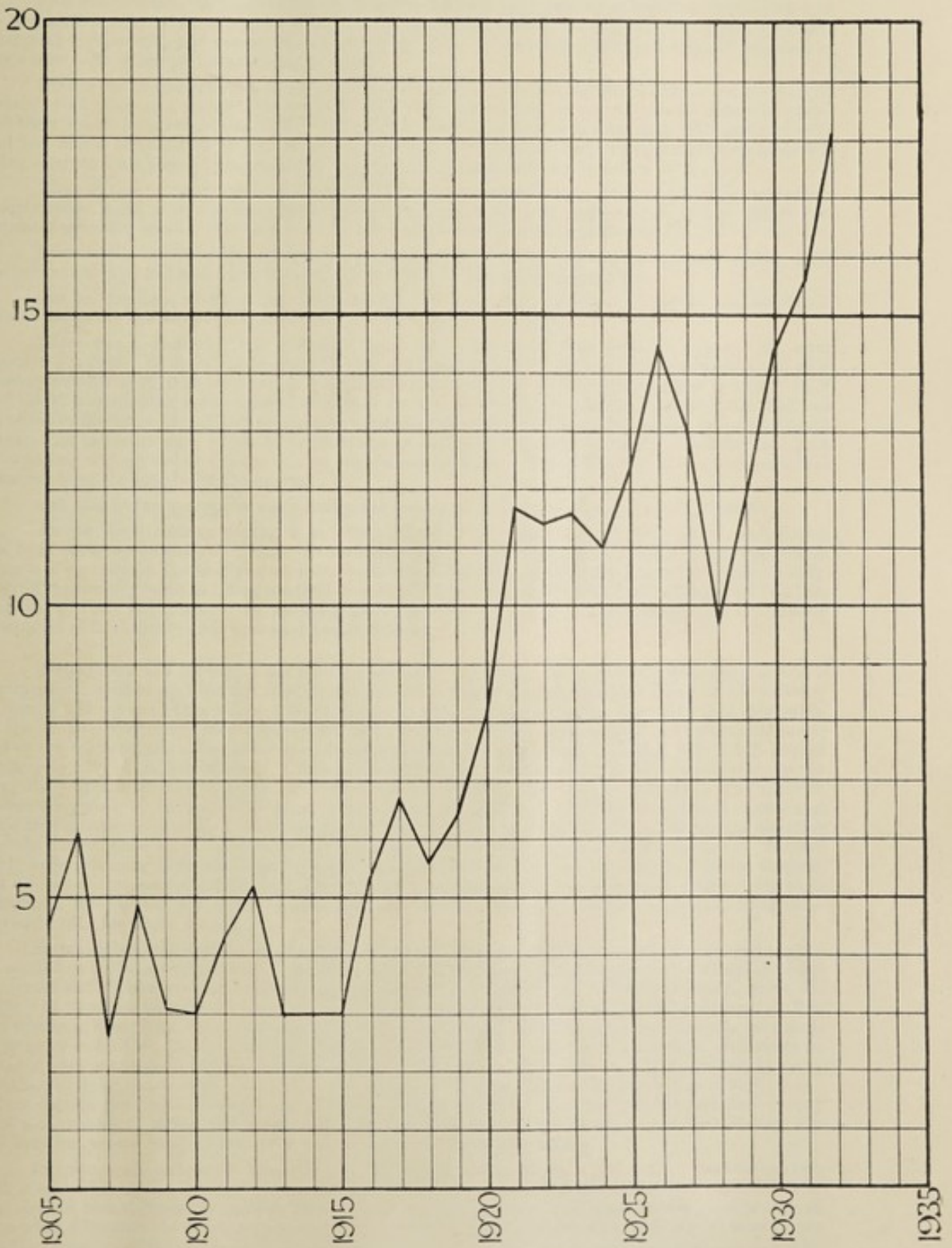


GRAPH No. 2.

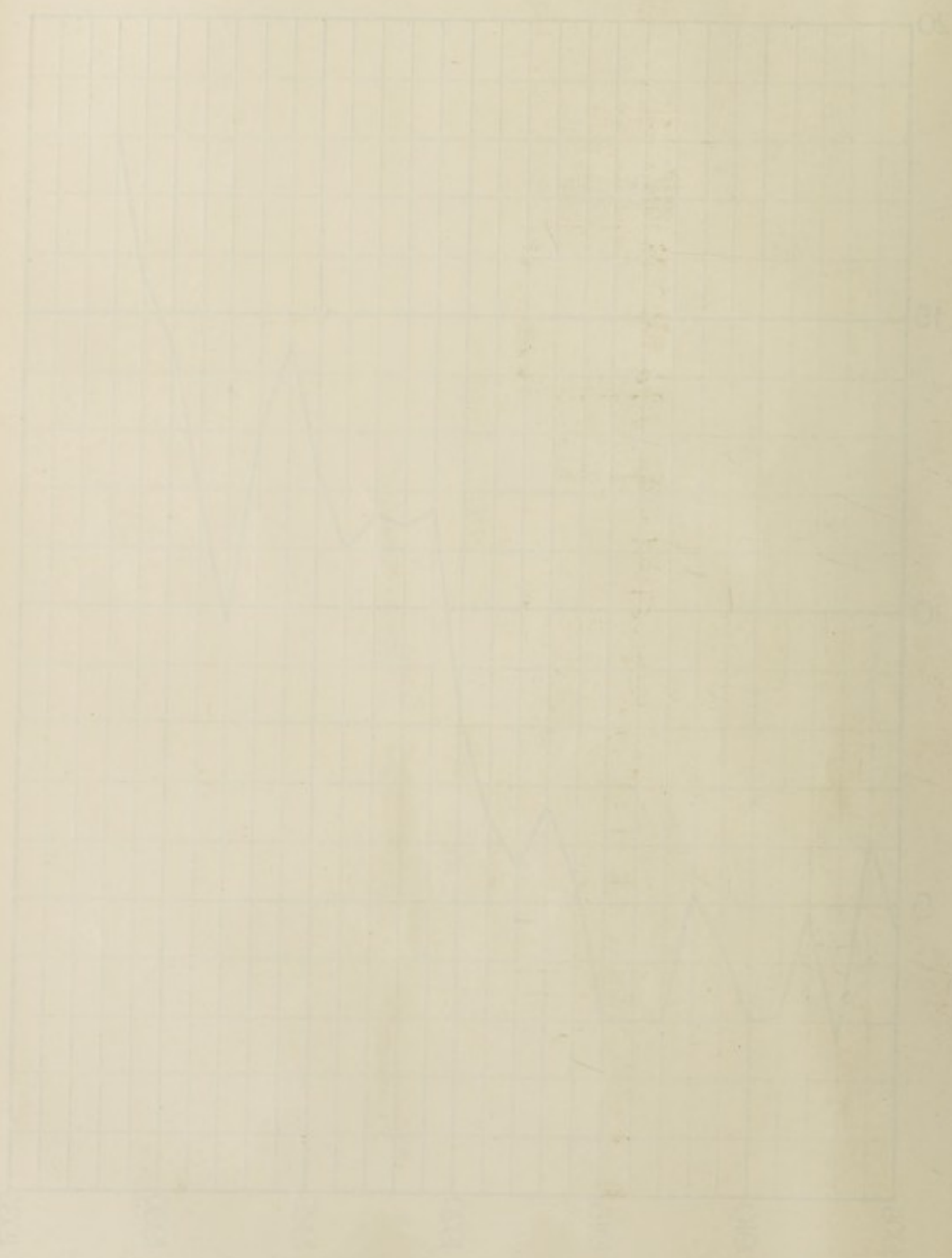
ILLEGAL OPERATIONS.

Percentage Total Maternal Deaths, New South Wales, 1905-1932.

PERCENTAGE
OF TOTAL
MATERNAL
DEATHS.



GRAPH NO. 3
ILLEGAL OPERATIONS
Presented Total National Defense New South Wales 1967-1972



1967
1968
1969
1970
1971
1972

This has been our usual experience in New South Wales, as a matter of fact, in spite of the popular impression that public institutions are a common source of puerperal infection.

Another patient had required interference on account of hydramnios and a 15½ lb. baby; in fact, in all but 2 of the remaining metropolitan cases dystocia had been the determining cause. The majority of patients had been delivered by medical practitioners, half of them in their own homes and half of them in private hospitals.

One case demonstrated the close connection between scarlet fever and puerperal infections by haemolytic streptococci. A nurse in the hospital had been off duty with what has since been decided as having been a mild attack of scarlet fever, and on her return nursed the patient. The latter developed puerperal septicaemia, and nurses who attended her alone subsequently developed tonsillar infection in their turn. No other patients became infected.

Among the 19 country cases there was one in which the source of infection is quite unaccounted for; delivery took place in a private hospital with a doctor in attendance, no vaginal examination was made, and there was no interference whatever. In another spontaneous case the patient had felt vaguely unwell, and had had a temperature of 100° F. before delivery. One patient acknowledged having persistently taken abortifacients throughout pregnancy, and had had a vaginal discharge before confinement.

Many of these country cases, too, were due to much manipulation on account of dystocia and other complications (such as in one case the necessity for plugging for post-partum haemorrhage, where the patient's condition was already hazardous on account of acute pre-eclamptic symptoms.)

Occasionally infection appears to take place more than ten days after delivery—not, in fact, until the patient has returned home, if in hospital. One such case was among this number.

One baffling case, where no source of infection was discovered, was that of a patient who developed tetanic fits on the 7th day of the puerperium, and died twelve hours later.

There was a gratifying fall in deaths from septicaemia—both after full-time delivery and after abortion—in 1932. Of the 33 latter cases, 19 were metropolitan and 14 country. The deaths after full-time delivery numbered 26, 0.58 per 1,000, a considerable reduction from 0.85 in 1931 and 0.81 in 1930. Only 2 of the 17 metropolitan cases occurred after delivery in public hospitals, and one of these victims had had an offensive discharge throughout pregnancy, while the other was a virulent, fulminating case where death occurred on the tenth day, within 48 hours of the appearance of the first symptoms. Delivery had been spontaneous and normal and there was no vaginal examination. Pure culture of *B. coli communis* was obtained from the interior of the uterus.

One case in the metropolis was a malignant endocarditis supervening upon a mild sapraemia.

Among the 9 country deaths, 2 had been delivered in district hospitals and much manipulation had been necessary on account of ante-partum haemorrhage. One woman died in a private hospital, where in spite of regulations, she had been admitted to the same bed occupied by a septic case 21 days previously. Four of the country cases had been confined at home with no medical attention (one an aboriginal in a hut, and one a single girl attended by an unregistered woman). Another country patient did not develop symptoms of fatal illness until nine weeks after delivery.

Albuminuria and Eclampsia and other Toxaemias of Pregnancy.—In investigating these cases, one is continually impressed with the fact that, in spite of all the educational propaganda carried on, the majority of women will not avail themselves of prenatal care and supervision, no matter how easily it is obtainable. Of the 42 deaths occurring from albuminuria and eclampsia, 14 were metropolitan and 28 country cases; and of the metropolitan cases, every one of whom could have easily obtained advice, only 5 had availed themselves fully of the help offered. One case, in particular, is worth recording. The patient came to the local Baby Health Centre to apply for some extra nourishment. She was a multipara. The sister in charge was struck by her marked oedema of face, hands, and feet, and urged her to attend the ante-natal clinic that afternoon, or to see a doctor privately. She was at term. She refused medical advice, asserting that she did not agree with "modern ideas," and refused even to allow the Sister to test her urine. Immediately upon returning home she began to have eclamptic fits, was removed hurriedly to a public hospital, but died at the moment of admission. Post-mortem Caesarian section was performed, and a living child delivered. The patient was found to have had pre-eclamptic symptoms, violent headaches, disturbance of vision, etc., for about a week.

Several other women who died of eclampsia had refused to seek advice or to follow treatment in spite of marked pre-eclamptic symptoms. In only one case did fatal eclampsia supervene where thorough treatment and rigorous dieting were carried out. These investigations, more than any others, prove the efficacy of thorough treatment in almost every case of albuminuria, and it is difficult to understand how any woman in these days, when warnings are issued on every hand, can allow acute pre-eclamptic symptoms to progress unheeded. In one case the patient had herself been a nurse before marriage, and owing to distance from her medical adviser, arranged to test her own urine. When last seen by her doctor, at seven months, the urine was normal. A month later she developed gross oedema and loss of vision, and yet she did not communicate with the doctor, merely giving instructions to her people as to how to act if she should have a convulsion! It was two weeks before the doctor saw her—close on term—and by that time she had been completely blind for two days, and the urine was solid upon boiling.

In spite of accouchement force, the case terminated fatally within a few hours. Another patient with a somewhat similar history was receiving daily care from her medical adviser, and confessed later that she had been deliberately ignoring his instructions regarding diet. One realises from histories such as these what difficulties the country practitioner, in particular, has to contend with, and how far short of our aim the education of the public in these matters is falling. Only 9 of the 28 cases had kept in touch with medical advice, though it was available to most of them.

Among the 11 toxaemias of pregnancy were numbered several cases of hyperemesis gravidarum. All received intensive treatment, in some cases the pregnancy being terminated without avail.

Two of the deaths were from chorea gravidarum. Neither gave any history of chorea or rheumatism previously, but one—a primigravida, eight months pregnant—had been treated for three months for syphilis, developed chorea and became rapidly worse, and ultimately demented, dying eight days after the onset of symptoms; and the other, who had had one previous normal pregnancy and labour, also developed sudden choreic symptoms. She was seven months pregnant, and was shopping in town when the symptoms developed. She, too, grew rapidly worse, in spite of treatment; labour was induced, but she died a few days later. It was learned afterwards by her medical attendant that the patient's mother had become mentally deranged at the time of the patient's birth, and had died some few years later of cerebral syphilis.

From a study of the history of the deaths from albuminuria and eclampsia (53) during 1932, it would appear that at last pregnant women are beginning to avail themselves, though still to only a small extent of the ante-natal supervision which is, in most cases, available to them. Twenty-four of these deaths were metropolitan and 14 of the patients had received regular ante-natal care, six of them irregular supervision, and four of them no care at all. Unsatisfactory as these figures are, they do show a slight improvement on those of previous years. In spite of careful supervision, three of the fourteen developed eclampsia without showing any premonitory symptoms whatever.

Among the 29 country cases, 8 received proper supervision during pregnancy and 9 some supervision (distance and difficulty of transport partly accounting for this). One woman was only six weeks pregnant and another only four months. One patient refused all ante-natal care, though she had previously undergone Caesarian section and two difficult instrumental labours on account of a contracted pelvis.

Among the country cases, too, there were 4 in which there had been adequate supervision and no pre-eclamptic symptoms whatever during pregnancy; while another had developed œdema of the legs, only two days before delivery, and yet another had been treated in hospital for five weeks, early in pregnancy on account of hyperemesis.

Of the 8 cases of other toxæmias of pregnancy 6 occurred in the country. All died while the fœtus was yet non-viable or were delivered of still-born infants. One of these women died at three months' gestation, in spite of treatment, and in 2 other cases pregnancy was terminated without avail.

In 1 of the 2 metropolitan cases, prolonged anæsthesia was necessary for a difficult delivery and it was thought by the specialist who performed the operation that the patient's death was possibly partly due to delayed chloroform poisoning.

Phlegmasia Alba Dolens, Puerperal Embolism, and Sudden Death.—Of the 23 deaths from these causes, 5 followed previous varicose conditions of the veins, and the remaining 18 were sudden deaths attributed, in nearly every case, to pulmonary embolism—one after quite an early miscarriage. Deaths in this class occur, as often as not, after normal labours, and are quite unaccountable. At the present stage of our knowledge they would appear to be inevitable.

In 1932 there were 16 deaths from these causes, two caused by emboli from varicose veins and the remaining 14 (8 metropolitan and 6 country) occurring suddenly. Contrary to the cases in previous years, these—with the exception of 4—all took place after abnormal labours or pre-existing albuminuria.

Other Casualties of Childbirth.—The remaining 28 deaths embrace many causes, including puerperal mania (2), ileus after Caesarian section (4), ruptured uterus (4), ruptured bladder (1), shock after difficult labour, and many other causes. As found in previous years, rupture of the uterus appears to occur early in labour—during the first stage—the reason for the rupture being obscure, though one case was known to follow an attempted abortion earlier in pregnancy. In one case of death following dystocia, "failed forceps" on 5 occasions before the patient was admitted to hospital had not been mentioned. The death from rupture of the bladder occurred after a moderately difficult persistent occipito posterior case where forceps had been applied after emptying the bladder by catheterisation. One patient died at Caesarian section, which was being performed for antepartum hæmorrhage, the hæmorrhage having occurred whilst she was seated on the floor rolling a ball to her older children. At operation, the placenta was found lying entirely free in the uterine cavity, and the hæmorrhage had penetrated the muscular coat of the uterus and spread to the broad ligaments.

One other case in this class calls for comment, occurring on the 12th day of the puerperium from acute encephalitis, resulting from a breast abscess.

Of the 27 deaths in this class in 1932, 9 occurred after Caesarian section (5 metropolitan and 4 country), the indications for such operation being heart disease, contracted pelvis (5), previous rupture of the uterus, toxæmia of pregnancy and ovarian cyst obstructing labour. In the case of previous rupture of the uterus the patient was a multipara who had Gilliam's operation performed after several normal labours and at the first labour subsequent to the operation the uterus had ruptured.

One death occurred during instrumental delivery, craniotomy being necessary, in a public hospital. Three attempts at forceps delivery had already been made outside.

The remaining 16 Casualties of Childbirth were due to various causes, such as precipitate labour, difficult instrumental delivery of a patient with myocarditis, ruptured ovarian cyst, pneumonia, obstructed labour in a patient with tubercular peritonitis, spontaneous inversion of the uterus (two cases), and labour which had continued for two days before medical aid was summoned. There was one death from puerperal mania.

THE ADMINISTRATIVE CONTROL OF MATERNAL MORTALITY.

The year 1931 being a year of extreme financial depression, the activities of the Division of Maternal and Baby Welfare have been able to undergo very little extension. They have, however, not undergone any diminution, so that the considerable increase in the scope of the work undertaken in 1929, when the medical and nursing staff was augmented, has been maintained, and the supervision of practising midwives and of private hospitals throughout the whole State has been continued.

Of the seven supervisory-nurses engaged in this work, four confined their activities entirely to country districts, every part of the State being visited. The remaining three supervisory-nurses confined their activities to the metropolitan area, and in addition to inspection and supervision of midwives and private hospitals conducted weekly ante-natal clinics in various suburban Baby Health Centres under medical direction.

The administrative control of maternal mortality in New South Wales will be considered under eight headings.

1. *The Training of Medical Practitioners and Midwives.*—The curriculum of the Medical School of the University of Sydney—especially in recent years since the establishment of a Chair of Obstetrics—continues to afford increased scope for the acquisition of both practical and theoretical knowledge in this subject by the medical student. Post-graduate facilities, also, have been considerably increased and full advantage is taken of these opportunities—as is shown by a higher standard of obstetrics among the younger general practitioners in particular. Ante-natal supervision of the mother and post-natal care of both mother and infant—with particular attention to breast-feeding and the care of premature infants—is especially emphasised in the course of study, which includes visits to Tresillian Mothercraft Training Home as well as to the obstetric hospitals.

The training of midwives is yearly becoming broader in its scope too. In all the metropolitan midwifery training schools now, special "Tresillian" trained sisters are in charge of the newborn infants, so that trainees receive a good groundwork in infant care as well as their training in obstetrics generally. Of the 4,176 midwives registered in New South Wales all but eleven per cent. are certificated nurses who have been trained at these institutions. Their registration is renewable annually and this fact, in addition to the regular inspection and supervision they receive, keeps them in close touch with the Nurses' Registration Board.

2. *The Supervision of Midwives' Practice.*—This, as has been stated, is carried out constantly by the supervisory nurses working under the director of this division, in close co-ordination with the Nurses' Registration Board.

The supervision includes inspection of midwifery bags, instruments, examination of registers and explanation of regulations and considerable assistance (especially in the case of the older and sometimes uncertified midwives) in practical everyday nursing problems. Ante-natal supervision and the correct care and feeding of premature infants are subjects on which information is often sought by the older women and special pamphlets dealing with these matters have been published by the division and are freely distributed by the supervisory nurses.

3. *The Control and Supervision of Private Hospitals.*—The present Private Hospitals Act is very limited in its scope and until a more modern one is passed many necessary reforms must be held up. Since the advent of the supervisory nurses, however, closer co-operation has been possible between this division and the private hospitals—not only with regard to their inspection generally, but particularly when cases of puerperal pyrexia occur therein.

Fuller details of their administration are to be found on pages 28 and 29.

4. *Provision of Adequate Public Maternity Accommodation.*—This is not a matter for this division, but falls under the jurisdiction of the Hospitals Commission.

There is, unfortunately, a great dearth of public maternity beds outside the metropolis, though some of the larger country hospitals have excellent maternity blocks and certain organizations—notably the Bush Nursing and Country Women's Associations—are trying to overcome the difficulty to a certain extent by the provision of nursing homes with maternity beds.

5. *Notification and Investigation of Cases of Puerperal Infection.*—Until the problem of puerperal sepsis is solved we shall not achieve the reduction of our high maternal mortality rate, as puerperal sepsis accounts for about one-third of the deaths. Since the introduction of new regulations under both the Nurses' Registration Act and Public Health Act, this condition is notifiable by both midwife and medical practitioner, and puerperal pyrexia—from whatever cause—is notifiable by the midwife.

Puerperal pyrexia is defined under the Nurses' Registration Act as follows:—"Every midwifery nurse shall immediately report to the Nurses' Registration Board in writing if she is in attendance on a case of puerperal pyrexia, and shall forthwith take all reasonable precautions to provide against the spread of possible infection until she obtains advice from a medical practitioner that the patient's condition is not due to infection of puerperal origin. If, however, the patient's condition is due to such infection, the midwifery nurse shall forthwith notify the Board accordingly, and she shall not attend any other pregnant or lying-in woman until she produces to the Board a certificate from a legally qualified medical practitioner that she is not liable to convey infection, and has received the written permission of the Board to resume practice."

For the purpose of this regulation "puerperal pyrexia" is defined as "any febrile condition occurring in a woman from the end of the first to the end of the tenth day after abortion, miscarriage or childbirth, in which a temperature of 100.4 degrees Fahrenheit (38 degrees Centigrade) or higher, occurs upon more than one day during that period."

Immediately upon receipt of a notification of a case of puerperal pyrexia by the Nurses' Registration Board, a copy is served to the Division of Maternal and Baby Welfare and a medical officer of the Division follows up the case and ascertains from the medical attendant the cause of the pyrexia. If the cause be infection of puerperal origin, the nurse as we have seen, may not attend other patients until given permission by the Board to do so. In this way, potential as well as actual cases of puerperal infection are checked and isolated.

Under the Private Hospitals Act, puerperal infection in private hospitals is notifiable and no new lying-in patients may be admitted until written permission is obtained from the President of the Board of Health (the Director-General of Public Health and Chairman also of the Nurses' Registration Board). In accordance with the Public Health Act, puerperal infection is now notifiable by the medical attendant, and this notification acts as a check upon midwives and licensees of private hospitals, for immediately upon receipt of such notification, information is obtained from the medical practitioner as to whether any midwifery nurse was in attendance or whether the patient was in a private hospital.

During 1931, 243 notifications of puerperal pyrexia—most of them occurring after full-time delivery—were received from midwives by the Nurses' Registration Board.

It rests entirely with the Chairman of the Board to decide how long shall elapse before a midwife who has been in attendance upon a case of puerperal pyrexia shall be allowed to resume practice. While the interests of the patients are naturally given first consideration it is endeavoured not to penalise the nurse unduly. Similarly, when a case of puerperal infection occurs in a private hospital the President of the Board of Health endeavours, while placing the interests of the patients first, not to close the hospital for a longer period than is considered necessary for safety.

During the year 1931, 320 notifications of puerperal infection were received from medical practitioners—sixty per cent. of cases (189) occurring after abortion. There is no doubt that there were many more cases than this, as many practitioners and the staff of many public maternity hospitals are still inclined to be very lax regarding these notifications—of the cases following abortion, particularly—so that unless the information is obtained through the Nurses' Registration Board (and this is seldom the case, as there is usually no midwife in attendance on an abortion) there must be many cases which do not come under notice at all, unless they end fatally. Puerperal infection after full-time delivery on the other hand, seldom fails to be notified though many practitioners resent having to make these notifications through a mistaken idea that the local authority will deal with the matter and that a certain amount of unavoidable publicity will result. This is not so, however, as the notification is not dealt with locally at all, but is sent on directly to this Department, where a medical officer attends to it.

Of the 131 (forty per cent.) cases of puerperal infection after full-term labour which were notified in 1931, the majority had been confined in their own homes (68 cases), 46 cases in private hospitals (several of them being already septic on admission, especially in the case of country hospitals, where there was no alternative but to admit such a case which had probably travelled a great distance), and the remainder in public institutions. These last named figures are not reliable for several reasons, one being that many cases of potential infection—such as "failed forceps"—are finally delivered in hospital and consequently notified from there, but cannot be regarded as having become infected there.

6. *Provision of Ante-natal Clinics.*—The importance of the ante-natal care of mothers continues to receive special attention as the necessity for such care becomes increasingly apparent. Everything possible is carried out in the way of propaganda—through lectures, radio talks, and articles in the press, and above all through personal contact on the part of the Baby Health Centre nurses.

These nurses have exceptional opportunities, in virtue of the particularly intimate nature of their work at the centres and in the homes of the majority of the mothers of the State, for emphasising the necessity for such care, but in spite of their urgings, the majority of mothers (even in the metropolitan area with every facility for obtaining this care to hand) continue to come into labour without having received any ante-natal supervision whatever. When such is the case with multiparæ, already in touch with the Baby Health Centres, it can readily be seen that the primipara presents an even greater problem, and no satisfactory scheme—here or elsewhere—has yet been evolved for getting in touch with the young mother before the birth of her first baby.

At present the work among such women is carried out mainly through the channels of literature, articles in the local press and the distribution of leaflets through the Baby Health Centres—but it is gratifying to note that these younger women are coming up to the ante-natal clinics in increasing—though very slowly increasing—numbers through the recommendations of their friends and also through the advice of the midwives. In the latter case, the supervisory nurses on their visits of inspection take particular care to urge upon the midwives the necessity for sending their patients—primiparæ in particular—to their doctor as early as possible, and, where no doctor will be in attendance, for persuading their patients to attend one of the ante-natal clinics. It is gratifying to note that the midwives are taking increasing advantage of these opportunities of co-operation.

All the metropolitan public maternity hospitals have ante-natal departments, and the necessity for such care is being increasingly insisted upon by the medical profession generally. Nevertheless, from what figures are available, it would appear that the number of expectant mothers throughout the State who avail themselves of the opportunities for such care is only increasing very slowly and still amounts to only about one-fifth of the number confined.

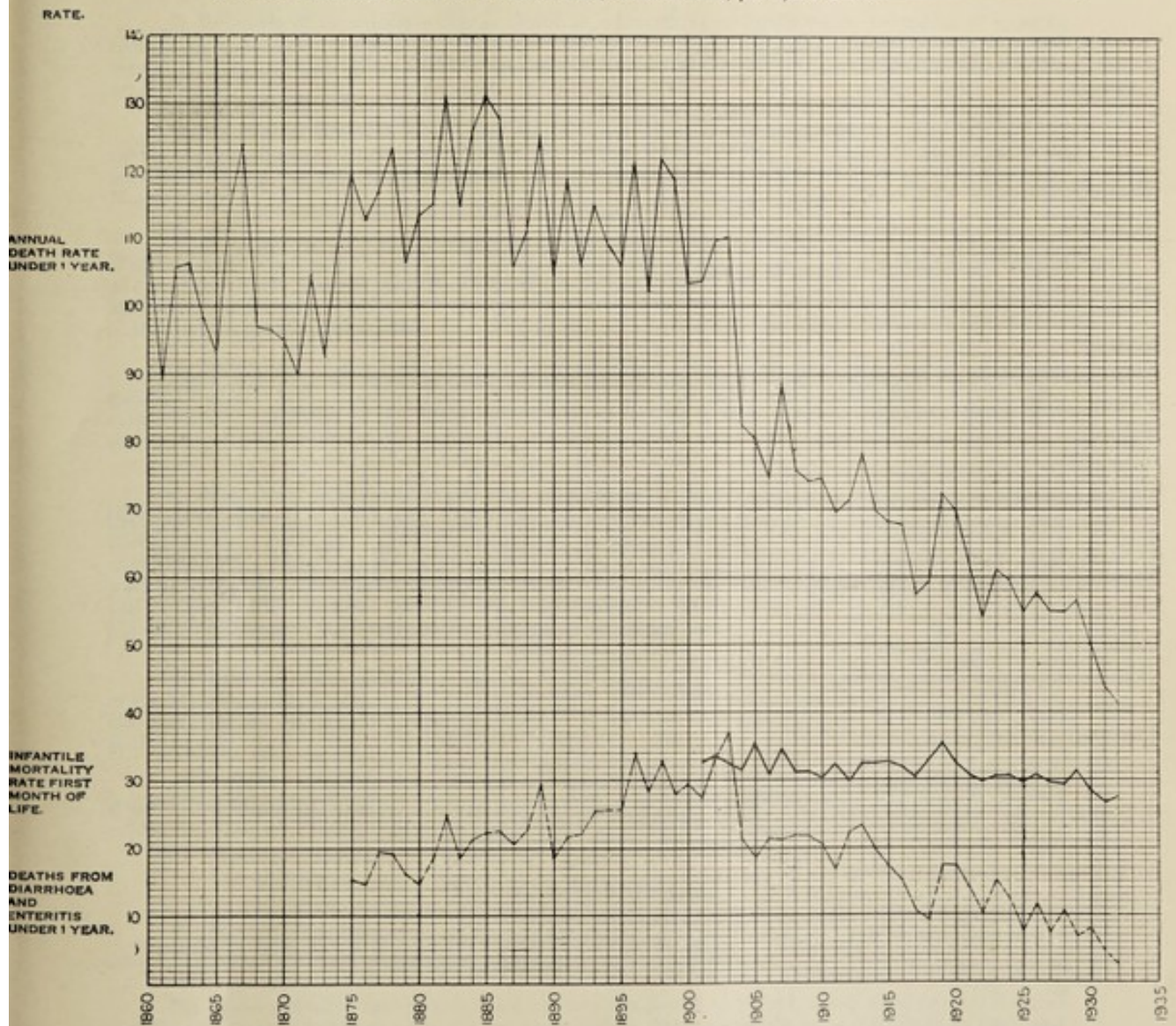
Nearly seven thousand expectant mothers attended the various Baby Health Centres throughout the State for advice during the year 1931, but, unfortunately, mainly for advice *re* baby clothes, requests for help in obtaining extra nourishment, and so on.

However, the initial ante-natal clinic held at a Baby Health Centre which was opened at Newtown (a metropolitan Centre) in 1929 and is conducted one night weekly, has continued to be so well attended (there being 817 attendances during 1931) that it was decided early in the year, to extend the facilities thus afforded to other suburbs in the metropolitan area. Accordingly in February, nine other weekly clinics

GRAPH No. 3.

INFANTILE MORTALITY IN NEW SOUTH WALES, 1875-1932.

Annual Death Rate of Children under 1 Year, per 1,000 Births —————
Deaths from Diarrhoea and Enteritis of Children under 1 Year, per 1,000 Births —————
Infantile Mortality in the 1st Month of Life, 1900 to 1932, per 1,000 Births —————



STATE OF NEW YORK

IN SENATE
January 15, 1907.

REPORT
OF THE
COMMISSIONERS OF THE
LAND OFFICE
FOR THE YEAR
1906.

were instituted at Health Centres—so arranged that one of them is within reasonable access of every suburb of Sydney. The response to these additional clinics has been fairly satisfactory, the total attendances during 1931 being 2,878, but it is fully realised still that—allowing for the number of cases who are urged by the Baby Health Centre nurses to report to their own doctors, as is always the case where a doctor is to be in attendance—our efforts are to be unremitting in order to ensure that all pregnant women in the metropolis, at least, shall be under ante-natal supervision.

Cases from these Departmental ante-natal clinics requiring special treatment are referred to private practitioners or to the public hospitals, and I take this opportunity of expressing my gratitude to the staffs of the public maternity hospitals, in particular, for the way in which they continue to co-operate in this work by admitting patients at all times without any delay and arranging for the treatment of abnormal cases.

I should also like to record my appreciation of the great amount of dental work performed on the patients from these clinics by the dental department of the Rachel Forster Hospital for Women and Children.

As oral hygiene plays such an important part in ante-natal care, it is fully realised how much of the satisfactory results obtained at the clinics is due to the dental facilities provided by this hospital.

7. *Education of the Public.*—This is aimed at wherever opportunity offers, by means of lectures, radio talks, and articles in the press. Some one hundred newspapers all over the State, are provided with regular articles, and leaflets and booklets dealing with ante-natal care and the care of infants and children are circulated.

During 1931, a 125-page booklet was compiled dealing with ante-natal care, infant welfare and the care of the pre-school child. This booklet has been distributed everywhere throughout the State and should particularly prove valuable to those mothers who are not in direct personal touch with any of the Baby Health Centres.

Much educational work is carried out by this division through the co-operation of the Country Women's Association, and the Women's Branch of the Agricultural Bureau. At the Annual Conference of the Agricultural Bureau held at Hawkesbury College, Dr. Sandford-Morgan addressed the women members, as in former years, and this opportunity of getting in personal touch with women from every part of the State is greatly appreciated.

Classes dealing with mothercraft, personal hygiene and public health have been held for school girls and Girl Guides. It is impossible to over estimate the scope for education in health matters generally—mothercraft in particular—of this latter organisation, as training in these subjects is given to Guides of all stages.

8. *Research.*—The question of maternal mortality is one which offers greater difficulties of solution than perhaps any other problem of medical science to-day. Closely interwoven with this problem is also that of neo-natal mortality. The first step towards the solution of these difficulties is a clear understanding of the conditions underlying the disasters which occur, so that, as a preliminary, to much more extensive work in the future, a thorough investigation of every maternal and every neo-natal death is carried out by this division. The neo-natal investigations were completed during 1931, and are now being classified, but those dealing with maternal deaths continue to be carried out.

The information thus obtained is meanwhile proving of great assistance to the Government Statistician in the finalising of his figures, as has been mentioned. Much of the information learned from investigation into the maternal deaths which occurred during 1931 has also been referred to in the earlier paragraphs of this report.

Although the activities of the division has been necessarily restricted during this year of financial stress, it is confidently felt that the foundations have been so securely laid that when conditions allow of full expansion of the work that has been planned the present policy will be found to have been a sound one.

PART II.—INFANT WELFARE.

In spite of financial stringency preventing the extension of the work by opening further Baby Health Centres infant welfare work continues to expand in New South Wales.

The infant mortality rate in this State reached the lowest on record, being 43.52 per 1,000 births in 1931, and 41.09 in 1932; the rate for the metropolitan area being 44.38 per 1,000 births in 1931, and 38.98 in 1932. This should be capable of still greater reduction, however, as the total number of infants who died under one year old—2,077 in 1931 and 1,844 in 1932—constituted a serious loss to the State.

One-half of these deaths occurred in the first month of life. These neo-natal deaths depend for their reduction on the same conditions as the reduction of the maternal mortality rate being mainly due to prematurity or injury at birth.

The progressive fall in the infant death rate has coincided too closely with the extension of infant welfare work, mainly through the teachings of the Baby Health Centres, for it to be accidental. At these

Centres, as well as by articles in the daily and weekly press, radio talks, personal correspondence, etc., the gospel of mothercraft is taught on the simplest lines and the importance of breast-feeding, particularly, is stressed.

It has been proved conclusively that all women can at least partially breast-feed their babies, but at the same time it is fully appreciated that difficulties are often encountered and that even partial artificial feeding ("complementary feeding") should not be advised until it has been proved definitely by means of test-feeds that such is necessary. These test-feeds are carried out at the Baby Health Centres, which were responsible for 26,277 such tests during the year 1931. "Modified" cows' milk (fresh or dried) is the principal food used for complementary feeding and the mother is shown how to take every precaution against contamination of the milk and feeding utensils.

In every epidemic of gastro-enteritis in the metropolis the success of our teachings is demonstrated by the small numbers of breast-fed babies (or even of artificially-fed babies who have been guided by the nurses at the Baby Health Centres) among the cases admitted to the Children's Hospital.

As soon as the registration of a birth is received from the local registrar—in the metropolis or in any country town where there is a Baby Health Centre—the mother is visited by the Centre nurses with offers of advice. In 1931, 20,236 of these visits to new-born babies were paid, that is to say, nearly one-half of the total number born in the State (47,724). 65,131 subsequent visits were paid to the homes of babies whose mothers were, for one reason or another, unable to bring them along to the Centres, many of them in response to requests from their own doctors.

The total number of attendances at the Baby Health Centres continues to increase year by year. During 1931, although the birth rate had declined (births numbering 47,724 as against 52,136 in 1930), the number of individual babies attending the Centres was almost 2,000 more than in the previous year (that is, 45,043 as against 43,188), and the total attendances—including expectant mothers—rose from 413,455 to 512,151, an increase of 98,706.

It is necessary to emphasise the fact that no sick babies are treated at the Baby Health Centres, but are passed on to institutions or to private practitioners. The Centres exist to teach mothercraft—"to keep the well baby well." The nurses in charge are all general and mothercraft ("Tressillian") trained and many also hold midwifery certificates. As all have received their training in mothercraft at the same institution, the advice given is uniform throughout the State, an advantage which is obvious.

Only three new Centres were opened during 1931, one metropolitan (Gladesville) and two in the country (Woodstock and Glen Innes), bringing the total number of Centres up to 87, 40 metropolitan and 47 country.

Many other country towns are awaiting the opening of Centres, of which, however, there is little prospect at present, owing to the financial position. It is particularly unfortunate that these new country Centres must be withheld, as, in most cases, the rooms have already been supplied and furnished by the Country Women's Association and it is deeply regretted that such offers of co-operation must at present be declined.

Infant welfare propaganda and instruction are carried out in schools and under the auspices of the Country Women's Association and Agricultural Bureau wherever opportunity offers. As has been stated, the Girl Guide Movement, in particular, offers opportunities for mothercraft propaganda, of which every advantage is taken.

Financial stringency, resulting in a reduced nursing staff and a marked decrease in the birth-rate, are the two factors which are reflected in the figures dealing with the work of the Baby Health Centres in New South Wales during 1932. For the first time since the work was established these figures show a downward tendency. Owing to a falling birth-rate, as well as to increased difficulties in transport, etc., the number of individual babies attending, as well as the new cases enrolled and the total number of attendances, are all less than in 1931.

Twelve new country Centres were opened during 1932, bringing the total number up to 99 (41 metropolitan, 58 country).

Once more the infant mortality rate for the State showed a gratifying fall—again reaching the lowest point on record, being 41.09 per 1,000 births. Moreover, the metropolitan rate fell below 40 per 1,000—being 39.01.

In concluding I desire to place on record my sincere appreciation of the practical assistance and co-operation of the Country Women's Association in furthering the scope of our activities and in helping to extend to country mothers the benefits of established Baby Health Centres. I wish to thank the honorary medical officers of the Centres for their great assistance during the year and to the staff generally I desire to express my sincere thanks for loyal support and co-operation under adverse circumstances.

E. SYDNEY MORRIS,

Director of Maternal and Baby Welfare.

GRAPH No. 4.

DIARRHOEA and ENTERITIS.

(Under 2 years, Black. Over 2 years, Red.)

Annual Death Rate per 100,000 of the Population in New South Wales, 1875-1932.

RATE PER
100,000 OF
POPULATION.



Diagram No. 1
DIARRHOEA AND ENTERITIS
Under 5 years of age, 1900-1901
Annual Death Rate per 100,000 of the Population of New South Wales, 1900-1901

DEATH RATE
PER 100,000
POPULATION



TABLE III.—Showing Work of Baby Health Centres.

Baby Health Centres.	Visits to Individual New-born Babies.		Subsequent Visits to Homes of Babies.		Total Attendances, including Expectant Mothers.		Individual Babies Attending Centres.	
	1931.	1932.	1931.	1932.	1931.	1932.	1931.	1932.
Alexandria	279	283	1,459	1,557	10,928	11,140	787	802
Annandale	354	288	951	1,004	4,743	4,810	331	360
Ashfield	528	330	1,316	821	10,335	10,504	783	831
Auburn and Depot	526	457	1,536	1,176	9,873	9,748	892	857
Balmain	385	393	1,593	558	13,652	10,286	728	839
Bankstown.....	460	308	562	488	9,031	7,109	740	729
Burwood.....	645	590	1,397	1,261	14,115	13,057	1,459	1,440
Campsie.....	769	596	615	452	16,019	14,738	1,363	1,326
Chatswood.....	412	306	1,017	876	12,663	12,364	1,112	914
Chippendale.....	306	321	559	677	5,248	6,325	480	386
Daceyville (S. Kensington).....	358	287	1,356	1,181	9,446	9,815	859	827
Glebe.....	166	191	939	1,287	7,645	6,297	633	495
Granville	408	321	929	430	7,726	6,710	902	570
Hornsby	257	263	632	673	4,590	4,434	429	393
Hurstville and Depot	524	426	973	623	14,183	12,672	1,187	1,137
Kogarah	289	215	912	336	8,018	7,665	776	564
Lane Cove.....	183	185	1,708	1,123	8,239	7,202	498	527
Leichhardt	485	432	1,155	950	12,075	10,109	1,003	910
Manly	268	174	1,295	1,570	15,286	12,812	1,165	1,258
Marrickville and Depot	652	512	1,766	944	9,749	8,516	793	652
Mascot	316	247	549	510	6,432	6,938	460	595
Miller's Point.....	48	51	393	307	1,430	1,489	91	84
Mosman.....	281	249	1,454	1,319	12,402	12,091	752	796
Newtown	424	439	920	975	15,585	13,932	1,412	1,213
North Sydney.....	598	507	614	680	13,896	11,219	1,193	1,066
Paddington	363	291	370	592	8,852	10,196	760	827
Parramatta	445	354	927	703	11,075	10,651	930	792
Peter haru.....	258	123	623	669	7,932	7,675	702	796
Pyrmont.....	99	88	676	583	3,394	3,312	203	200
Randwick.....	394	320	1,543	868	10,171	10,132	904	828
Rockdale	482	342	685	353	13,114	11,359	1,150	955
Rose Bay	444	368	1,465	894	11,882	11,580	1,130	1,047
Ryde and Depot	429	332	1,158	922	8,771	10,904	983	1,051
St. Peters	200	168	888	807	3,660	2,985	397	332
Surry Hills	208	243	882	849	7,953	7,968	585	641
Waverley.....	575	481	925	752	14,894	13,023	1,245	1,121
Woolloomooloo	184	204	1,049	815	9,292	10,325	805	857
Albury and Depot	145	106	889	588	5,656	6,046	436	440
Bathurst.....	153	168	590	500	3,886	4,323	272	516
Bowral (from Jan., 1932).....	...	94	...	44	...	1,094	...	152
Broken Hill—Central	226	200	1,096	472	9,248	7,134	553	387
" " North	130	81	525	261	4,972	4,331	239	218
" " Railway Town	62	47	590	235	4,586	3,841	287	256
" " South	67	62	593	453	3,470	2,777	167	150
Casino (from Oct., 1932).....	...	32	...	73	...	171	...	81
Cessnock and Depot	327	301	1,592	889	6,155	5,922	667	393
Cootamundra and Depot	170	145	779	933	3,132	3,454	314	336
Cowra and Depot	106	92	404	349	1,856	2,352	312	240
Dubbo and Depot.....	282	286	620	549	3,871	4,530	436	491
Forbes	113	101	623	518	2,526	2,804	278	290
Glen Innes.....	...	199	...	366	...	1,397	...	195
Gosford and Depots (from Nov., 1932).....	...	18	...	37	...	166	...	87
Goulburn and Depots.....	288	276	1,579	1,053	6,836	6,265	787	713
Grafton (from Oct., 1932).....	...	88	...	26	...	357	...	92
Hamilton and Depot	557	388	1,272	638	14,137	13,965	1,367	1,255
Inverell	115	119	691	383	2,040	2,119	257	242
Kurri and Depot	192	158	950	707	4,804	5,716	426	354
Lismore (from Oct., 1932).....	...	44	...	26	...	434	...	112
Lithgow.....	283	311	1,612	1,129	5,360	5,047	533	496
Mayfield and Depots	415	213	1,273	776	11,495	11,489	1,081	1,047
Moree.....	105	69	1,097	917	2,958	2,802	342	297
Muswellbrook	75	52	249	244	1,751	1,418	149	131
Newcastle and Depots.....	514	371	2,074	862	10,159	9,164	1,081	963
New Lambton and Depot	294	332	665	366	4,623	3,687	471	420
Orange	315	303	1,115	692	4,088	3,712	588	443
Singleton	74	52	475	417	1,627	1,630	204	161
Tamworth and Depots	254	250	1,199	790	6,843	6,745	703	783
Wagga and Depots	374	304	1,035	567	6,911	7,249	698	629
West Maitland and Depot	259	216	1,330	745	6,914	6,502	792	675
Wollongong.....	189	151	733	596	4,460	3,932	567	469
Yass	72	56	1,443	1,471	2,495	2,462	247	301
Young	77	74	247	259	1,083	1,942	147	257
Total	20,236	17,502	65,131	49,560	512,151	489,394	45,043	43,144

1932: Test Meals, 26,666 Expectant Mothers advised, 6,816 New Cases enrolled, 23,440

SECTION I—C.
COMMUNICABLE DISEASES.

1.—NOTIFIABLE INFECTIOUS DISEASES RECORDED IN NEW SOUTH WALES DURING THE YEARS ENDED 31ST DECEMBER, 1931 AND 1932.

(F. S. WEARNE.)

Public Health Acts, 1902–1932.

The Public Health Act, 1902, provides that the Governor may, by Proclamation in the *Government Gazette*, declare that any disease therein-named is an infectious disease. The only alteration to the existing list during the two years was the regazetting of Infantile Paralysis (including any form of acute anterior poliomyelitis, poliomyelitis or polio-myelo-encephalitis) in 1931.

Notifiable from—	Cases and Deaths Notified.						
	1930.		1931.		1932.		
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	
Typhoid fever and paratyphoid	1st January, 1898	380	48	340	35	233	31
Scarlet fever	"	4,400	54	4,477	36	4,905	57
Diphtheria or membranous croup	"	4,051	176	4,432	168	4,310	160
Bubonic plague	23rd January, 1900.....	...	...	...	...	...	...
Infantile paralysis (including any form of acute anterior poliomyelitis, poliomyelitis or polio-myeloencephalitis)	1st February, 1912. Re-proclaimed definition 14th August, 1931 ...	30	6	103	10	384	44
Epidemic cerebro-spinal fever (meningococcal meningitis)	11th October, 1915 ...	43	12	30	9	43	7
Encephalitis lethargica.....	1st April, 1926	14	20	20	16	12	18*
Cholera	12th August, 1927 .....	...	...	...	...	...	...
Typhus fever	"	2	...	1	...	2	1
Yellow fever .....	" .....	...	...	...	...	...	...
Puerperal infection	16th August, 1929	269	82	319	83	292	59
	Total	9,189	398	9,721	357	10,189	377
	Population at 31st Dec.	2,502,000		2,519,300		2,542,034	

The number of cases of the above diseases notified in each district in 1931 and 1932, and deaths therefrom are shown in Tables I–IV, pp. 41 and 46. For reasons of economy tables showing age and sex incidence and seasonal prevalence have been omitted. Pulmonary tuberculosis is notifiable under the Public Health (Amendment) Act, 1915, and venereal diseases under the Venereal Diseases Act, 1918 (see below).

The figures for both 1931 and 1932 show increases in the total case notifications as compared with 1930, viz., 9,721 cases in 1931 and 10,187 cases in 1932; but a decrease in the number of deaths in both years, the numbers being 398 in 1930; 357 in 1931; and 376 in 1932.

Typhoid Fever continues to decrease year by year. In 1931 the cases notified numbered 340, or 40 less than in 1930 (380 cases). In 1932 there was a gratifying further decrease to 233 cases, or 107 less than in 1931. There were 35 deaths in 1931 and 31 in 1932.

Scarlet Fever showed increases in the number of cases, in both 1931 and 1932.

Diphtheria was also somewhat more prevalent in 1931 and 1932, 4,432 and 4,310 cases being notified in those years respectively, as compared with 4,051 in 1930; but the fatality rate was lower, the deaths recorded being 168 and 160 in 1931 and 1932, and 176 in 1930.

Infantile Paralysis occurred in severe epidemic form in December, 1931, and the outbreak continued until the end of June, 1932. Between October, 1931, and July, 1932, 463 cases and 63 deaths were reported. An endeavour is being made to collect information as to the amount of permanent disability arising from the outbreak.

Cerebro-spinal Meningitis.—30 cases and 9 deaths were notified in 1931 and 43 cases and 7 deaths in 1932.

Encephalitis Lethargica.—20 cases and 16 deaths were notified in 1931 and 12 cases and 18 deaths* in 1932.

Bubonic Plague.—No case of plague was reported in 1931 or 1932. Systematic rat-trapping was continuous, and no infection was found in the rats examined in the Microbiological Laboratory of which there were 4,531 in 1931 and 3,812 in 1932.

Smallpox.—No case of smallpox was reported in the State during 1931 or 1932.

Leprosy.—The Annual Report on Leprosy in New South Wales will be found in Section III (p. 105). Three cases were reported during the year, and there were two deaths. At the end of 1931, 20 lepers (16 males and 4 females) were under detention in the Lazaret; and 19 (16 males and 3 females) on 31st Dec. 1932. Leprosy is notifiable in writing under Part III, Division 2, of the Public Health Act, 1902.

Typhus Fever.—One suspected case of endemic typhus was reported in the Metropolitan District in 1931, and two in 1932, one of which proved fatal.

PULMONARY TUBERCULOSIS—PUBLIC HEALTH (AMENDMENT) ACT, 1915.

A proclamation issued in 1929 extended notification of pulmonary tuberculosis to the whole State. 1,588 cases and 1,014 deaths were notified in 1931, compared with 1,917 cases and 1,022 deaths in 1930, and 1,485 cases and 1,071 deaths in 1932. Details of the work of this Division will be found in the appended Reports of the Director of Tuberculosis and of the Medical Superintendent of the Waterfall Sanatorium (p. 56 and p. 114 respectively).

VENEREAL DISEASES ACT, 1918.

The notifications for 1931 of the various forms of venereal disease numbered 4,617, a decrease of 608 on the figures for 1930. In 1932, the notifications numbered 4,842, an increase of 225 on the figures for 1931. The most pressing aspects of the problem are dealt with in the report of the Commissioner (p. 52).

*A percentage of the deaths are found on investigation to be caused by non-notifiable forms of Encephalitis, such as cerebral abscess, brain tumours, etc.

1931—TABLES I TO III (for Tables I to III, 1932, see pp. 46-50).

TABLE I.—Showing the number of notified cases of, and deaths from, the following diseases:—Cerebro-spinal Fever (Meningococcal Meningitis), Diphtheria and Membranous Croup, Encephalitis Lethargica, Infantile Paralysis (Acute Anterior Poliomyelitis), Scarlet Fever, Typhoid Fever (including Paratyphoid), Pulmonary Tuberculosis, and Puerperal Infection in the METROPOLITAN COMBINED DISTRICTS for the year ended 31st December, 1931.

Municipality or Shire.	Estimated Mean Population.	Typhoid and Paratyphoid.		Scarlet Fever.		Diphtheria.		Infantile Paralysis.		Cerebro-spinal Meningitis.		Encephalitis Lethargica.		Pulmonary Tuberculosis.		Puerperal Infection.	
		C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.
METROPOLITAN MUNICIPALITIES.																	
Sydney, City of ...	109,470	5	...	152	...	141	7	2	...	1	1	1	...	163	84	25	3
Alexandria	10,380	1	...	39	...	8	...	2	...	...	...	...	...	12	2	5	...
Annandale	13,140	...	...	18	1	27	2	...	...	1	...	...	...	16	5	3	1
Ashfield	39,790	...	...	76	...	44	2	3	...	...	...	2	1	28	19	4	...
Auburn	19,910	6	1	41	1	49	2	...	...	...	...	...	...	17	10	3	1
Balmain	33,250	1	...	88	3	23	...	2	...	1	1	...	...	18	16	4	...
Bankstown	22,370	2	...	70	1	37	2	3	1	...	...	...	...	17	9	2	...
Bexley	20,380	...	...	54	1	18	1	2	...	1	...	...	...	8	8	...	...
Botany	8,000	1	1	27	...	27	...	...	...	...	...	...	...	5	1	1	...
Barwood	19,570	1	...	28	...	12	...	1	1	...	...	1	...	22	7	...	...
Canterbury	73,940	5	...	233	...	118	4	12	1	...	...	1	1	56	37	15	5
Concord	22,440	1	...	77	1	48	1	2	...	1	...	...	...	7	8	1	2
Darlington	3,660	...	...	11	...	5	...	...	...	...	...	...	...	4	3	1	...
Drummoyne	29,100	2	...	82	1	17	1	4	...	...	...	...	1	29	18	6	...
Eastwood	2,960	...	...	8	...	10	...	...	...	...	...	...	...	6	5	1	...
Enfield	14,020	...	...	43	...	18	...	...	...	...	...	1	...	17	2	3	...
Erskineville.....	7,620	...	1	12	1	7	...	4	...	...	...	...	...	5	3	1	...
Glebe	23,170	3	1	53	...	26	...	...	...	1	1	...	...	20	12	12	...
Granville	19,250	3	...	58	1	32	5	1	...	...	...	1	1	13	11	2	2
Homebush	3,190	6	...	15	...	4	1	...	1	...	...	...	...	10	6	3	...
Hunter's Hill	9,770	...	...	9	...	15	...	...	...	...	...	...	...	6	2	1	...
Hurstville	21,740	3	...	54	1	39	3	3	...	...	...	...	...	20	13	5	1
Kogarah	29,740	1	...	94	...	71	1	2	...	...	...	...	...	13	10	3	...
Kuring-gai	28,560	1	...	50	...	12	1	2	...	...	...	...	...	35	13	1	...
Lane Cove	14,920	1	...	38	1	14	...	...	...	...	...	...	...	9	2	...	1
Leichhardt	31,480	3	1	105	...	39	2	3	...	...	...	1	...	20	11	9	4
Lidcombe	15,750	1	...	31	...	25	1	1	...	1	...	...	...	39	11	2	2
Manly	26,250	3	1	29	...	51	2	1	...	...	...	...	...	15	3	3	1
Marrickville	46,620	1	...	102	1	64	...	1	...	...	...	1	1	34	21	6	...
Mascot	13,920	...	...	76	1	26	1	1	...	2	...	...	2	10	10	...	...
Mosman	25,160	2	...	45	...	9	...	...	...	...	...	...	...	14	11	5	...
Newtown	28,670	...	...	79	...	49	...	2	...	...	...	...	...	20	9	2	1
North Sydney.....	55,150	3	2	85	...	63	1	1	...	1	1	...	...	30	26	2	2
Paddington	27,080	2	1	48	...	48	1	2	...	...	...	...	...	32	25	7	...
Parramatta	17,730	...	...	46	...	20	5	...	...	...	...	...	...	21	10	1	1
Petersham	28,350	2	...	42	...	21	...	1	...	2	...	...	...	26	14	10	1
Randwick	74,160	9	...	216	1	81	4	2	1	1	...	1	2	58	39	17	2
Redfern	24,160	1	...	35	...	37	2	2	...	1	...	...	...	29	22	5	3
Rockdale	37,700	...	...	119	2	58	3	2	...	...	...	2	2	18	13	6	...
Ryde	26,080	...	...	76	1	36	...	2	...	...	...	2	...	22	11	3	...
St. Peters	13,890	...	...	37	...	20	1	1	...	1	1	...	...	14	5	9	2
Strathfield	12,290	...	...	30	...	11	1	...	...	...	...	1	...	6	4	1	...
Vaucluse	7,420	...	...	13	...	3	...	...	...	...	...	...	...	5	4	1	...
Waterloo	12,920	3	...	37	1	11	...	...	...	...	...	...	...	6	8	1	...
Waverley.....	52,400	6	...	90	1	81	2	2	1	1	...	...	...	41	21	12	2
Willoughby	42,450	2	...	73	1	55	3	...	...	...	...	...	...	30	17	6	2
Woollahra	34,510	...	...	71	1	43	3	1	...	...	...	...	...	50	20	6	...
Total	1,254,480	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
EXTRA METROPOLITAN MUNICIPALITIES.																	
Cabramatta and Canley Vale.	4,870	1	...	11	...	13	1	...	...	...	...	...	...	1	...	...	...
Dundas	5,610	1	...	20	...	10	...	1	...	...	...	...	...	3	2	...	...
Ermington and Rydalmere.	2,240	...	...	...	...	1	...	...	...	...	...	...	...	3	1	...	...
Fairfield	7,880	...	...	16	...	8	...	...	...	...	...	...	...	8	2	1	...
Holroyd	14,920	...	1	57	1	24	...	...	...	...	...	...	...	6	7	2	...
Ingleburn	1,580	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...
Liverpool.....	6,300	...	...	10	...	14	1	...	...	...	...	...	...	16	2	1	1
SHIRES.																	
Hornsby	21,540	2	...	47	...	46	1	2	...	1	1	...	...	25	31	...	...
Warringah	15,780	1	...	32	...	49	2	...	...	...	...	...	...	9	4	...	...
Harbour of Port Jackson.	...	...	...	1	...	...	...	...	...	...	...	...	...	4	...	...	...
Totals	1,335,200	86	10	3,108	24	1,838	70	73	6	17	6	15	11	1,151	671	220	40

TABLE II.—Showing the number of notified cases of, and deaths from, Cerebro-spinal Fever (Meningococcal Meningitis), Diphtheria or Membranous Croup, Encephalitis Lethargica, Infantile Paralysis (Acute Anterior Poliomyelitis), Scarlet Fever, Typhoid Fever, including Paratyphoid, Pulmonary Tuberculosis, and Puerperal Infection in the HUNTER RIVER COMBINED DISTRICT, for the year ended 31st December, 1931.

Municipality or Shire.	Estimated Mean Population.	Typhoid and Paratyphoid.		Scarlet Fever.		Diphtheria.		Infantile Paralysis.		Cerebro-spinal Meningitis.		Encephalitis Lethargica.		Pulmonary Tuberculosis.		Puerperal Infection.	
		C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.
MUNICIPALITIES.																	
Adamstown.....	4,950	...	...	9	...	14	2	...	...	...	...	...	...	3	1	1	...
Carrington	3,170	...	...	3	...	5	...	...	...	...	...	...	...	2	...	1	1
Cessnock	13,900	3	...	33	...	17	...	...	...	...	...	...	...	6	1	...	...
Greta	1,430	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Hamilton.....	21,420	1	...	25	...	22	3	...	...	...	...	...	...	4	4	3	1
Lambton	4,370	...	1	10	...	3	...	...	...	...	...	...	...	1	2	...	...
Maitland, East	4,060	1	...	2	...	20	1	...	...	...	...	...	...	3	1	...	...
.. West	7,820	...	...	14	...	28	1	...	...	...	...	...	...	5	4	...	...
Mercwether	8,190	4	1	8	...	9	...	...	...	...	...	...	...	3	5	1	...
Morpeth	1,070	4	...	...	...	8	...	...	...	...	...	...	...	...	...	...	...
Newcastle	13,950	2	...	11	...	7	...	...	...	...	1	2	...	10	9	4	3
New Lambton	6,110	1	...	11	1	12	...	...	...	1	...	...	...	2	3	1	...
Raymond Terrace	880	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Singleton	3,460	1	...	3	...	6	...	1	...	...	...	...	...	...	...	...	...
Stockton	5,360	...	...	1	...	9	1	...	...	...	...	...	...	3	3	...	...
Wailend	7,320	3	...	17	...	29	...	...	...	...	...	...	...	6	2	1	1
Waratah	17,690	...	...	20	...	55	2	...	...	...	...	...	...	10	2	5	...
Wickham.....	11,430	...	...	17	...	23	2	...	...	...	...	...	...	3	3	2	...
SHIRES.																	
Bolwarra	3,250	2	...	2	...	8	...	...	...	...	...	...	...	7	9	1	...
Kearsley	21,830	2	...	28	...	26	...	...	1	1	...	...	...	7	9	1	...
Lake Macquarie	26,820	1	...	15	1	44	2	...	1	1	1	...	...	6	9	5	2
Port Stephens.....	3,870	...	...	...	...	3	...	...	...	...	...	...	...	...	1	...	...
Tarro	6,720	...	...	5	...	20	1	...	1	...	...	...	...	5	2	1	...
Harbour of Port Hunter.	.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	201,050	27	2	244	2	389	16	1	4	2	2	2	79	61	26	8	...

TABLE III.—Showing the number of notified cases of, and deaths from, Cerebro-spinal Fever (Meningococcal Meningitis), Diphtheria or Membranous Croup, Encephalitis Lethargica, Infantile Paralysis (Acute Anterior Poliomyelitis), Scarlet Fever, Typhoid Fever, including Paratyphoid, Pulmonary Tuberculosis, and Puerperal Infection, in the REMAINDER OF STATE for the year ended 31st December, 1931.

Municipality.	Estimated Mean Population.	Typhoid and Paratyphoid.		Scarlet Fever.		Diphtheria.		Infantile Paralysis.		Cerebro-spinal Meningitis.		Encephalitis Lethargica.		Pulmonary Tuberculosis.		Puerperal Infection.	
		C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.
MUNICIPALITIES.																	
Aberdeen	920	...	...	3	...	3	...	...	...	...	...	...	...	1	...	...	...
Albury	9,540	...	...	6	...	164	5	...	...	...	...	...	...	3	4	2	1
Armidale	7,030	...	...	45	...	21	...	...	...	...	...	...	...	1	2	2	2
Ballina	3,870	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Batrnald	1,020	1	...	17	...	...	...	1	...	...	...	...	...	...	...	...	...
Barraba	1,230	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...
Bathurst	9,870	...	...	10	...	17	1	...	...	...	...	...	...	4	5	2	2
Bega.....	2,040	1	...	...	...	5	...	...	...	...	...	...	...	...	...	...	...
Berry	2,610	...	...	8	...	...	...	...	...	...	...	...	...	...	...	...	...
Bingara	1,130	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...
Blackheath	2,570	...	...	6	...	...	...	...	...	...	...	...	...	...	...	...	1
Blayney	1,510	...	...	2	...	1	...	...	...	...	...	...	...	...	...	1	...
Bombala	1,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bourke.....	1,700	3	1	1	...	2	...	...	...	...	...	...	...	...	1	1	1
Bowral	3,190	...	...	2	...	1	...	...	...	...	...	...	...	...	...	...	...
Braidwood	1,090	...	...	1	...	3	...	...	...	...	...	...	...	1	1	...	...
Brewarrina	680	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...
Broken Hill.....	22,970	109	4	38	...	52	1	4	1	...	...	...	...	33	16	16	1
Broughton Vale	260	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Barrowa	1,200	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Camden	2,250	...	...	1	...	2	...	1	...	...	...	...	...	...	1	...	...
Campbelltown	2,770	...	...	3	...	...	...	...	...	...	...	...	...	...	...	2	1
Carcoar	420	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...
Casino	4,130	...	...	6	...	11	1	...	...	...	1	1	...	3	3	...	1
Castlereagh	670	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...
Cobar	1,050	1	...	1	...	3	...	...	...	...	...	...	...	1	2	...	...
Condobolin	2,010	2	...	1	...	2	...	...	...	...	...	...	...	2	...	...	...
Cooa	1,950	...	...	7	...	2	...	...	...	...	...	...	...	...	...	1	1
Coonamble	2,400	...	...	1	...	12	...	...	...	...	...	...	...	...	1	...	...
Cootamundra	4,300	...	...	21	...	3	...	...	...	...	...	...	...	...	...	...	...
Coraki	1,270	...	...	5	...	1	...	...	...	...	...	...	...	...	...	...	...
Corowa	2,720	...	...	6	...	37	...	...	...	...	...	...	...	1	1	...	1
Cowra	4,540	...	...	5	...	4	...	...	...	...	...	...	...	...	1	...	...

REMAINDER OF STATE.—Return showing the number of Cases, etc., from Country Municipalities—*continued*.

Municipality.	Estimated Mean Population.	Typhoid and Paratyphoid.		Scarlet Fever.		Diphtheria.		Infantile Paralysis.		Cerebro-spinal Meningitis.		Encephalitis Lethargica.		Pulmonary Tuberculosis.		Puerperal Infection.	
		C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.
<i>MUNICIPALITIES—continued.</i>																	
Deniliquin	3,250	1	...	...	...	3	...	1	...	...	...	...	...	3	1	...	...
Dubbo	6,270	...	...	8	...	53	1	...	...	...	...	...	...	4	3	2	...
Dungog	1,750	...	...	2	...	3	...	1	...	...	...	...	...	5	2	...	...
Forbes	5,120	6	1	13	1	3	...	...	...	...	...	...	...	5	3	...	...
Gerrington	690	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...
Glen Innes	4,460	...	...	7	...	1	...	...	...	...	...	...	...	1	1	...	1
Goulburn	12,570	1	...	29	...	12	1	...	...	...	...	...	...	3	2	1	...
Grafton	4,850	...	1	12	2	17	...	...	...	...	...	...	...	1	1	1	...
Grafton South	1,910	...	...	1	...	12	...	...	...	...	...	...	...	...	...	...	...
Grenfell	2,270	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Gulgong	1,550	...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	...
Gunnedah	2,770	1	1	...	...	5	...	...	...	...	...	...	...	2	1	...	...
Hay	2,750	4	...	4	...	1	...	...	...	...	...	...	...	2	2	...	...
Hillston	870	...	...	3	...	1	...	...	...	...	...	...	...	2	2	...	...
Illawarra Central	7,010	...	...	9	...	13	...	...	...	...	...	...	...	5	2	1	...
" North	6,050	...	...	9	...	6	...	...	...	...	...	...	...	1	1	1	...
Inverell	5,400	...	...	6	...	18	2	...	...	...	...	...	...	...	1	1	1
Jamberoo	1,030	...	...	1	...	2	1	...	...	...	...	...	...	2	1	...	...
Juncie	2,980	...	...	11	2	10	...	...	...	...	...	...	...	2	1	...	...
Katoomba	9,800	...	...	11	...	...	...	...	...	...	...	...	...	21	11	...	1
Kempsey	3,680	...	...	5	...	19	...	...	...	...	...	...	...	1	...	1	...
Kiama	2,070	...	...	3	...	3	...	...	...	...	...	...	...	...	1	...	...
Lismore	10,440	1	...	10	...	15	...	...	1	...	...	...	...	6	2	...	...
Lithgow	15,180	2	...	31	...	29	2	...	...	...	...	...	...	8	3	...	...
Macleay	1,650	...	...	...	...	1	...	...	...	...	...	...	...	...	...	2	...
Manilla	1,480	1	...	1	...	...	...	...	...	...	...	...	...	1	1	...	...
Mittagong	1,600	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...
Murrumbidgee	640	...	...	...	...	1	...	...	...	...	...	...	...	1	1	...	...
Molong	1,550	...	...	1	...	1	...	...	...	...	...	...	...	...	3	...	...
Murrumbidgee	4,000	...	...	1	...	2	...	1	...	...	...	...	...	8	3	...	...
Moss Vale	1,940	...	...	10	...	4	...	...	...	...	...	...	...	...	1	...	...
Mudgee	3,120	...	...	8	...	6	...	...	...	...	...	...	...	1	1	1	...
Mullumbimby	1,280	...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	...
Murrumbidgee	2,940	1	...	2	...	6	1	...	...	...	...	...	...	...	1	...	1
Murrumbidgee	1,330	...	...	4	...	2	1	...	...	...	...	...	...	...	...	...	...
Murrumbidgee	2,840	...	...	6	...	18	...	...	...	...	...	...	...	...	...	...	...
Murrumbidgee	2,640	1	...	14	1	3	1	...	...	...	...	...	...	1	...	1	...
Murrumbidgee	2,700	...	...	...	...	9	...	...	...	...	...	...	...	1	1	...	1
Narrabri	990	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Narrabri West	3,710	...	1	4	...	27	...	1	...	...	...	...	...	2	2	1	...
Narrabri	1,260	1	1	9	...	5	...	...	...	...	...	...	...	1	1	...	...
Norah	3,030	...	...	6	...	...	...	...	...	...	...	...	...	...	...	...	1
Nyngan	1,410	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2	...
Orange	8,610	1	1	16	...	19	1	...	...	...	...	...	...	5	2	...	...
Parkes	5,760	7	2	...	...	32	1	...	...	...	...	...	...	4	2	...	...
Peak Hill	1,050	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Penrith	4,160	...	...	3	...	8	...	...	...	...	...	...	...	2	2	1	...
Picton	1,040	...	...	...	...	...	...	...	...	...	...	...	...	2	2	...	...
Port Macquarie	1,880	...	...	1	...	4	...	...	...	...	...	...	...	1	2	2	...
Queanbeyan	3,830	...	...	5	...	3	3	...	...	...	...	...	...	1	1	1	...
Quirindi	2,470	...	...	1	...	...	...	...	...	...	...	...	...	1	1	1	...
Richmond	2,680	...	...	17	...	5	1	...	...	...	...	...	...	...	...	1	...
Scone	1,970	...	...	9	...	3	1	...	...	...	...	...	...	1	2	1	...
Shellharbour	1,660	...	...	2	...	2	...	...	...	...	...	...	...	1	1	...	...
Shoalhaven South	1,140	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
St. Marys	2,640	...	...	8	...	4	2	1	...	...	...	...	...	...	1	...	...
Tamworth	7,740	1	...	11	...	35	1	...	1	...	...	...	...	3	3	...	...
Taree	2,450	2	...	3	...	14	1	...	...	...	...	...	...	...	...	...	1
Temora	3,430	2	1	2	...	4	...	...	...	...	...	...	...	1	1	...	...
Tenterfield	2,890	...	...	1	...	1	...	...	...	...	...	...	...	1	1	...	...
Ulladulla	1,410	...	...	3	...	3	...	...	...	...	...	...	...	1	2	...	...
Umarra	2,250	...	...	...	...	9	...	...	...	...	...	...	...	...	...	1	...
Uralla	950	...	...	3	...	2	...	...	...	...	...	...	...	...	...	...	1
Wagga Wagga	9,020	1	...	49	...	63	1	...	1	...	...	...	...	11	3	1	1
Walcha	1,390	...	...	4	...	1	...	...	...	...	...	...	...	...	...	...	...
Wallendbeen	730	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Warren	1,330	2	...	11	...	3	...	...	...	...	...	...	...	3	3	2	1
Wellington	3,570	...	...	13	...	7	...	...	...	...	...	...	...	...	...	...	...
Wentworth	870	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Wilcannia	490	...	...	...	...	...	...	1	...	...	...	...	...	7	4	...	...
Windsor	3,370	...	...	10	...	5	1	...	...	...	...	...	...	1	...	...	...
Wingham	1,160	...	...	2	...	4	1	...	...	...	...	...	...	2	2	2	2
Wollongong	10,460	...	...	9	...	24	1	...	...	...	...	...	...	1	...	...	...
Wyalong	830	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...
Yass	2,880	1	1	2	...	1	...	...	...	...	...	...	...	1	1	...	...
Young	3,880	3	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...
Total, Municipalities....	360,710	157	15	617	6	929	34	13	1	3	...	1	1	188	131	65	23

REMAINDER OF STATE.—Return showing the number of Cases, &c., from Country Shires.

Shire.	Estimated Mean Population.	Typhoid and Paratyphoid.		Scarlet Fever.		Diphtheria.		Infantile Paralysis.		Cerebro-spinal Meningitis.		Encephalitis Lethargica.		Pulmonary Tuberculosis.		Puerperal Infection.	
		C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.
SHIRES.																	
Abercrombie	3,560	...	...	2	...	5	...	...	...	...	...	...	...	...	1	...	...
Amaroo	3,260	...	...	2	...	6	...	...	...	...	...	...	...	...	...	...	...
Apsley	2,720	...	...	2	...	2	...	...	...	...	...	...	...	...	...	...	...
Ashford	2,530	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bannockburn	3,230	...	...	3	...	...	...	...	...	...	...	...	...	1	1	...	...
Barraba	2,110	...	...	...	...	2	1	...	...	...	...	...	...	...	1	...	...
Baulkham Hills ...	6,340	1	...	31	...	9	...	1	...	...	...	...	...	3	1	...	...
Bellingen	5,140	...	...	1	...	18	...	...	...	...	...	1	...	2	...	1	...
Berrigan	4,420	...	...	1	...	8	...	...	...	...	...	...	...	...	...	...	...
Bibbenluke	2,810	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Blacktown	11,820	1	...	30	...	31	1	3	1	...	...	...	...	1	5	...	1
Bland	8,440	1	...	8	...	1	...	1	...	...	...	...	...	...	1	...	1
Blaxland	8,340	3	...	28	1	9	...	...	...	...	...	...	...	3	1	...	...
Blue Mountains ...	7,150	...	...	14	...	3	1	...	...	...	...	...	...	42	22	...	...
Bogan	2,070	...	...	...	...	...	...	...	...	...	...	...	...	1	2	...	...
Booolaroo	3,240	4	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...
Boomi	5,030	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...
Boree	6,580	...	...	2	1	23	3	1	1	...	...	...	...	...	1	...	...
Bulli	11,950	3	...	14	...	67	1	...	...	...	...	...	...	10	10	...	...
Burrangong	5,230	1	...	2	...	...	...	...	...	...	...	...	...	1	...	...	...
Byron	7,310	...	...	1	...	15	1	...	...	...	...	...	...	...	...	...	...
Cambewarra	1,370	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Canoblas	5,540	...	...	15	...	...	...	...	...	...	...	...	...	2	5	...	...
Carrathool	4,070	1	1	1	...	2	...	...	...	...	...	...	...	1	1	...	...
Clyde	1,640	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cobborah	5,370	1	...	6	...	...	...	...	...	...	...	...	...	...	...	...	...
Cockburn	3,750	2	...	...	...	12	1	...	...	...	...	...	...	2	1	...	...
Colo	5,390	...	...	4	...	4	1	...	...	...	...	...	1	...	...	...	...
Conargo	980	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Coolah	1,600	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Coolamon	7,470	...	...	11	...	10	...	...	...	...	...	...	...	...	1	...	...
Coonabarabran ...	5,940	...	...	3	...	8	...	...	...	...	...	...	...	1	1	...	...
Copmanhurst	3,060	1	...	...	...	7	...	...	...	...	...	...	...	...	1	...	1
Coreen	3,270	...	...	8	...	40	...	1	...	...	...	...	...	1	...	...	...
Crookwell	5,880	...	...	...	...	5	...	...	...	...	...	...	...	...	...	...	...
Cudgegong	5,320	...	...	7	...	2	1	...	...	...	...	...	...	...	1	...	...
Culsirn	5,420	...	...	3	...	52	...	...	...	...	...	...	...	2	3	...	...
Dalgely	3,450	1	...	2	...	...	...	...	...	...	...	...	...	...	...	1	...
Demondrille	3,320	...	...	2	...	3	1	...	...	...	...	...	...	1	...	...	...
Dorrigo	8,250	...	...	2	...	15	...	...	...	1	...	...	...	3	2	...	...
Dumaresq	4,530	...	...	12	...	13	...	...	...	...	...	...	...	...	...	...	...
Erina	16,470	4	...	14	...	18	4	...	...	...	...	...	...	2	5	1	1
Eurobodalla	4,690	...	...	...	...	2	1	...	...	...	...	...	...	2	4	...	...
Gilgandra	4,000	...	...	3	...	23	...	...	...	...	...	...	...	...	...	...	...
Gloucester	4,010	1	...	9	...	6	1	...	...	...	...	...	...	...	...	...	...
Goobang	5,980	5	...	1	...	8	1	...	...	...	...	...	...	2	3	...	...
Goodradigbee ...	3,140	...	...	6	...	9	...	...	...	...	...	...	...	...	...	...	...
Gostwyck	4,250	...	...	2	...	8	...	...	...	...	...	...	...	1	2	1	...
Gundagai	5,030	...	...	4	...	16	1	...	...	...	...	...	...	1	1	...	...
Gundarimba	3,850	...	...	4	...	8	...	...	...	...	...	...	...	1	...	...	...
Gunning	3,350	...	...	1	...	2	...	...	...	...	...	...	...	1	1	...	...
Guyra	6,430	...	...	5	...	4	...	...	...	...	...	...	...	1	...	1	...
Gwydir	1,140	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Harwood	4,860	...	...	1	...	21	...	...	...	...	...	...	...	1	...	...	...
Hastings	7,480	...	...	...	...	15	...	...	...	...	...	...	...	...	1	...	...
Holbrook	2,150	...	...	...	...	4	...	...	...	...	...	...	...	...	1	...	...
Hume	4,590	...	...	2	...	82	...	...	...	...	...	...	...	1	...	...	...
Illabo	2,850	...	...	2	...	3	...	...	...	...	...	...	...	2	3	...	...
Imlay	4,540	...	...	...	...	1	...	...	...	...	...	...	...	3	3	...	...
Jemalong	3,530	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...
Jerilderie	1,570	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Jindalee	1,950	...	...	2	...	2	...	...	...	...	...	...	...	...	...	...	...
Kyeamba	4,290	...	...	9	...	5	...	...	...	...	...	...	...	1	1	1	...
Kyogle	8,600	...	...	2	...	19	4	...	...	1	1	...	...	2	2	...	...
Lachlan	5,310	...	...	2	...	8	...	...	...	...	...	...	...	2	2	...	...
Liverpool Plains...	5,100	1	...	5	...	3	...	...	...	...	...	...	...	1	1	...	...
Lockhart	6,030	...	...	13	...	53	...	...	...	...	...	...	...	2	...	...	...
Lyndhurst	5,010	...	...	...	...	9	2	...	...	...	...	...	...	...	...	1	1
McIntyre	2,000	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...
Macleay	7,420	...	...	2	...	20	1	...	...	...	...	...	...	...	...	...	...
Macquarie	4,280	...	...	...	...	3	...	...	...	...	...	...	...	3	2	...	...
Mandawa	2,440	1	4	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Manning	13,490	...	...	2	...	54	4	...	...	...	...	...	...	2	1	...	...
Marthagay	1,770	1	...	4	...	2	...	...	...	...	...	...	...	...	1	1	1
Merriwa	2,370	...	...	...	...	3	...	...	...	...	...	...	...	1	1	...	...
Mitchell	4,500	...	...	3	...	7	...	...	...	...	...	...	...	...	1	...	...
Monaro	2,690	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mulwaree	7,770	...	...	3	...	5	...	1	...	...	...	...	...	5	6	1	...
Mumbulla	4,180	...	...	...	...	14	1	...	...	...	...	...	...	...	...	...	...
Murray	2,580	...	...	1	...	19	...	...	...	...	...	...	...	2	3	...	...
Murrumbidgee ...	610	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
Murrungal	2,280	...	...	2	...	1	...	...	...	...	...	...	...	...	1	...	...

1932—TABLES I TO III.

TABLE I.—Showing the number of notified cases of, and deaths from, the following diseases:—Cerebro-spinal Fever (Meningococcal Meningitis), Diphtheria and Membranous Croup, Encephalitis Lethargica, Infantile Paralysis (Acute Anterior Poliomyelitis), Scarlet Fever, Typhoid Fever (including Paratyphoid), Pulmonary Tuberculosis and Puerperal Infection in the METROPOLITAN COMBINED DISTRICTS for the year ended 31st December, 1932.

Municipality or Shire.	Estimated Mean Population.	Typhoid and Paratyphoid.		Scarlet Fever.		Diphtheria.		Infantile Paralysis.		Cerebro-spinal Meningitis.		Encephalitis Lethargica.		Puerperal Infection.	
		C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.
METROPOLITAN MUNICIPALITIES.															
Sydney, City of	109,470	5	...	189	...	161	4	2	1	2	1	1	2	37	2
Alexandria	10,380	2	...	19	...	14	1	...	...	...	...	1	...	5	1
Annandale	13,140	1	...	46	3	17	3	1	...	...	...	...	...	1	...
Ashfield	39,790	1	...	97	...	31	1	...	...	4	1	...	...	10	...
Auburn	19,910	7	1	24	...	44	1	1	...	...	...	...	...	3	...
Balmain	33,250	1	...	64	2	51	3	2	...	1	...	...	...	5	1
Bankstown	22,370	1	...	81	2	22	3	6	...	...	...	...	...	3	1
Bexley	20,380	2	...	52	...	36	3	2	...	...	...	1	...	5	...
Botany	8,000	1	...	13	...	28	5	2	...	...	...	...	...	5	4
Burwood	19,570	3	...	59	...	16	2	...	...	...	...	...	...	4	...
Canterbury	73,940	4	1	183	2	117	4	23	2	1	...	...	...	8	1
Concord	22,440	2	...	100	1	49	1	4	...	...	...	...	...	4	1
Darlington	3,660	...	...	3	...	6	...	...	...	...	...	...	...	3	...
Drummoyne	29,100	...	...	48	...	45	3	3	1	1	1	...	...	2	...
Eastwood	2,960	...	...	1	...	...	...	1	1	...	...	...	...	...	...
Enfield	14,020	6	...	41	...	20	...	3	...	...	...	...	...	3	...
Erskineville	7,620	...	...	16	...	9	...	...	...	...	...	...	...	1	1
Globe	23,170	5	...	41	...	36	...	2	...	...	...	...	...	10	2
Granville	19,250	1	...	30	...	43	1	1	...	...	...	...	...	2	...
Homebush	3,190	10	...	9	...	6	2	1	...	...	...	...	...	...	...
Hunter's Hill	9,770	1	...	49	...	17	...	1	...	...	...	...	...	1	...
Hurstville	21,740	2	1	39	2	86	3	4	...	...	...	1	1	4	...
Kogarah	29,740	...	...	70	3	51	1	2	2	1	...	...	1	1	1
Kuring-gai	28,560	2	...	54	...	44	...	4	1	2	...	...	...	...	...
Lane Cove	14,920	2	...	61	...	26	...	3	...	...	...	...	...	1	...
Leichhardt	31,480	2	...	100	...	65	2	1	...	1	...	...	...	3	...
Lidcombe	15,750	1	...	37	...	25	...	1	1	...	...	...	...	1	2
Manly	26,250	1	1	41	...	29	...	...	...	1	...	...	...	...	...
Marrickville	46,620	1	...	88	1	48	2	6	...	1	1	...	...	5	2
Mascot	13,920	4	...	48	1	28	2	3	...	...	...	...	...	4	...
Mosman	25,160	...	...	39	...	16	...	2	...	...	...	...	...	5	...
Newtown	28,670	...	...	42	1	43	...	3	...	...	...	...	...	7	1
North Sydney	55,150	...	...	109	1	94	3	4	...	1	...	...	...	3	2
Paddington	27,030	2	...	73	1	46	2	3	...	...	...	...	...	13	...
Parramatta	17,730	3	...	21	...	15	2	1	...	1	...	1	1	4	1
Petersham	28,350	2	2	65	...	26	2	1	...	1	1	...	...	3	...
Randwick	74,160	9	...	191	1	104	3	8	...	...	...	1	2	13	1
Redfern	24,160	2	...	42	...	37	...	...	...	...	...	...	...	4	...
Rockdale	37,700	2	...	116	1	82	3	2	...	...	...	...	...	5	2
Ryde	26,080	...	...	85	1	62	2	5	...	2	...	...	...	4	...
St. Peters	13,890	...	...	21	1	23	1	...	...	...	...	...	...	4	1
Strathfield	12,290	1	...	29	...	7	...	1	...	...	...	...	...	2	...
Vaucluse	7,420	1	...	10	...	3	...	1	...	...	...	...	...	...	...
Waterloo	12,920	...	1	33	1	24	1	1	...	...	...	1	...	3	...
Waverley	52,400	2	1	147	...	58	4	6	...	...	...	...	...	20	1
Willoughby	42,450	...	...	126	...	49	2	6	2	2	...	...	1	1	2
Woollahra	34,510	4	...	67	1	25	1	2	...	...	...	...	...	6	...
Total	1,254,480	...	...	...	...	...	...	...	...	...	...	...	...	...	...
EXTRA METROPOLITAN MUNICIPALITIES.															
Cabratta and Can- ley Vale	4,870	1	...	5	...	15	...	1	...	1	...	...	...	...	...
Dundas	5,610	...	1	8	...	10	...	1	...	...	...	1	1	1	...
Ermington and Ry- dahmore	2,240	...	...	1	...	3	...	...	...	...	...	...	...	...	...
Fairfield	7,880	...	...	7	...	14	...	1	...	...	...	1	...	...	1
Holroyd	14,920	1	...	21	...	26	...	...	1	...	...	...	...	1	...
Ingleburn	1,580	...	...	4	...	3	...	...	...	...	...	...	...	...	...
Liverpool	6,300	...	...	5	...	10	1	...	...	...	...	...	...	2	...
SHIRES.															
Hornsby	21,540	1	...	35	...	39	...	9	1	...	...	...	...	3	2
Warringah	15,780	2	...	26	...	34	...	3	...	...	...	...	...	1	...
Harbour of Port Jack- son .....	.....	1	...	...	...	1	...	...	...	...	...	...	...	1	...
Totals	1,335,200	102	9	3,031	26	2,049	74	140	13	23	5	9	9	236	33

REMAINDER OF STATE.—Return showing the number of Cases, etc., from Country Municipalities—*continued.*

Municipality.	Estimated Mean Population.	Typhoid and Paratyphoid.		Scarlet Fever.		Diphtheria.		Infantile Paralysis.		Cerebro-spinal Meningitis.		Encephalitis Lethargica.		Puerperal Infection.	
		C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.
MUNICIPALITIES— <i>continued.</i>															
Deniliquin.....	3,250	...	...	7	...	2	...	...	...	...	...	...	...	...	...
Dubbo.....	6,270	1	...	13	...	13	...	...	...	...	...	...	...	2	...
Dungog.....	1,750	...	...	5	...	11	1	...	...	...	...	...	...	...	...
Forbes.....	5,120	4	2	7	...	...	...	2	...	...	...	...	...	...	...
Gorrington.....	690	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Glen Innes.....	4,460	2	...	6	...	2	...	8	...	...	...	...	...	...	...
Goulburn.....	12,570	3	...	18	...	53	2	...	...	...	...	...	...	...	...
Grafton.....	4,850	...	...	6	...	21	...	1	...	...	...	...	...	...	...
Grafton South.....	1,910	...	...	...	...	16	...	...	...	...	...	...	...	...	...
Grenfell.....	2,270	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Gulgong.....	1,530	...	...	6	...	...	...	...	...	...	...	...	...	...	...
Gunnedah.....	2,770	...	...	21	...	29	1	1	...	...	...	...	...	1	...
Hay.....	2,750	...	...	37	...	...	...	2	...	...	...	...	...	...	...
Hillston.....	870	...	...	1	...	4	...	...	...	...	...	...	...	...	...
Illawarra Central.....	7,010	1	...	1	...	29	...	...	...	...	...	...	...	1	...
" North.....	6,650	1	...	21	...	33	1	2	...	...	...	...	...	...	...
Inverell.....	5,400	...	...	2	...	9	...	1	...	...	...	...	...	...	...
Jamberoo.....	1,030	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Junee.....	2,980	...	...	5	...	9	...	...	...	...	...	...	...	1	...
Katoomba.....	9,800	1	...	6	...	2	...	...	...	...	...	...	...	...	...
Kempsey.....	3,680	...	...	8	...	9	1	1	...	...	...	...	...	1	...
Kiama.....	2,070	...	...	2	1	9	1	...	...	...	...	...	...	...	...
Lismore.....	10,440	1	1	11	...	15	1	2	...	...	...	...	...	...	...
Lithgow.....	15,180	1	...	66	...	18	1	1	1	...	...	...	...	...	...
Maclean.....	1,650	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Manilla.....	1,480	1	...	3	...	4	...	1	...	...	...	...	...	...	...
Mittagong.....	1,690	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mosma.....	640	1	...	1	...	17	...	...	...	...	...	...	...	...	...
Molong.....	1,550	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Moree.....	4,000	...	...	3	...	21	...	1	...	...	...	...	...	...	...
Moss Vale.....	1,940	...	...	4	...	2	...	...	...	...	...	...	...	...	...
Mudgee.....	3,120	...	...	24	...	4	...	...	...	...	...	...	...	2	...
Mullumbimby.....	1,280	...	...	...	...	4	...	...	...	...	...	...	...	...	...
Murrumbarrak.....	2,940	...	...	4	...	4	...	1	...	...	...	...	...	...	...
Murrurundi.....	1,330	...	...	1	...	3	...	1	...	...	...	...	...	...	...
Murwillumbah.....	2,840	...	...	4	...	4	...	...	...	...	...	...	...	...	...
Muswellbrook.....	2,640	...	...	6	...	4	...	1	...	...	...	...	...	...	...
Narrabri.....	2,700	2	...	2	...	9	...	...	...	...	...	...	...	...	...
Narrabri West.....	990	...	1	1	...	9	...	...	...	...	...	...	...	...	...
Narrandera.....	3,710	...	1	7	...	18	...	2	...	...	...	...	...	...	...
Narromine.....	1,260	...	...	6	...	9	...	...	...	...	...	...	...	2	...
Nourra.....	3,030	1	...	2	1	5	...	...	...	...	...	...	...	2	...
Nyngan.....	1,410	...	...	1	...	1	...	...	...	...	...	...	...	1	...
Orange.....	8,610	...	...	2	...	14	...	...	...	1	...	...	...	1	...
Parke.....	5,760	3	...	8	...	4	...	...	...	...	...	...	...	1	...
Peak Hill.....	1,050	1	...	...	...	3	...	...	...	...	...	...	...	1	1
Penrith.....	4,160	...	...	5	...	6	...	...	...	...	...	...	...	...	...
Pieton.....	1,040	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Port Macquarie.....	1,880	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Queanbeyan.....	3,830	...	...	10	...	...	...	...	...	...	...	...	...	1	...
Quirindi.....	2,470	...	...	4	...	1	2	...	...	...	...	...	...	...	...
Richmond.....	2,080	...	...	2	...	1	...	...	...	...	...	...	...	1	1
Scone.....	1,970	...	...	4	...	3	...	...	...	...	...	...	...	...	...
Shellharbour.....	1,660	...	...	...	...	6	...	...	...	...	...	...	...	...	...
Shoalhaven South.....	1,140	...	...	...	...	...	...	...	...	...	...	...	...	...	...
St. Marys.....	2,640	...	...	3	...	5	...	...	...	...	...	...	...	1	...
Tamworth.....	7,740	1	...	101	1	40	...	8	...	...	...	...	...	...	...
Taree.....	2,450	1	...	7	...	8	...	2	...	...	...	...	1	...	...
Tomara.....	3,430	1	1	3	...	2	...	...	...	...	...	...	1	...	...
Tenterfield.....	2,890	...	...	3	...	...	...	...	...	...	...	...	...	...	...
Ulladulla.....	1,410	...	...	...	...	1	...	...	...	...	...	...	...	...	...
Umarra.....	2,250	...	...	5	...	4	...	...	...	...	...	...	...	...	...
Uralla.....	950	...	...	8	...	3	...	...	...	...	...	...	...	...	...
Wagga Wagga.....	9,020	...	...	27	...	39	2	3	1	...	...	...	...	...	...
Walcha.....	1,390	...	...	14	...	1	...	...	...	...	...	...	...	...	...
Wallendbeen.....	730	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Warren.....	1,330	...	...	8	...	3	...	...	...	...	...	...	...	...	...
Wellington.....	3,570	...	...	1	...	19	2	...	...	1	...	...	...	...	1
Wentworth.....	870	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Wilcannia.....	490	...	...	...	...	2	...	...	...	...	...	...	...	...	...
Windsor.....	3,370	...	...	15	1	7	1	1	...	...	...	...	...	...	...
Wingham.....	1,160	...	...	1	...	1	1	...	...	...	...	...	...	...	...
Wollongong.....	10,460	...	...	19	1	51	3	1	...	...	...	...	...	...	...
Wyalong.....	830	...	...	...	...	3	...	2	1	...	...	...	...	...	...
Yass.....	2,880	...	...	4	...	3	...	...	...	...	...	...	...	...	...
Young.....	3,880	3	2	4	...	...	...	...	...	...	...	...	...	...	...
Total, Municipalities.....	360,710	56	11	723	8	907	35	69	9	4	...	...	3	25	7

REMAINDER OF STATE.—Return showing the number of Cases, etc., from Country Shires.

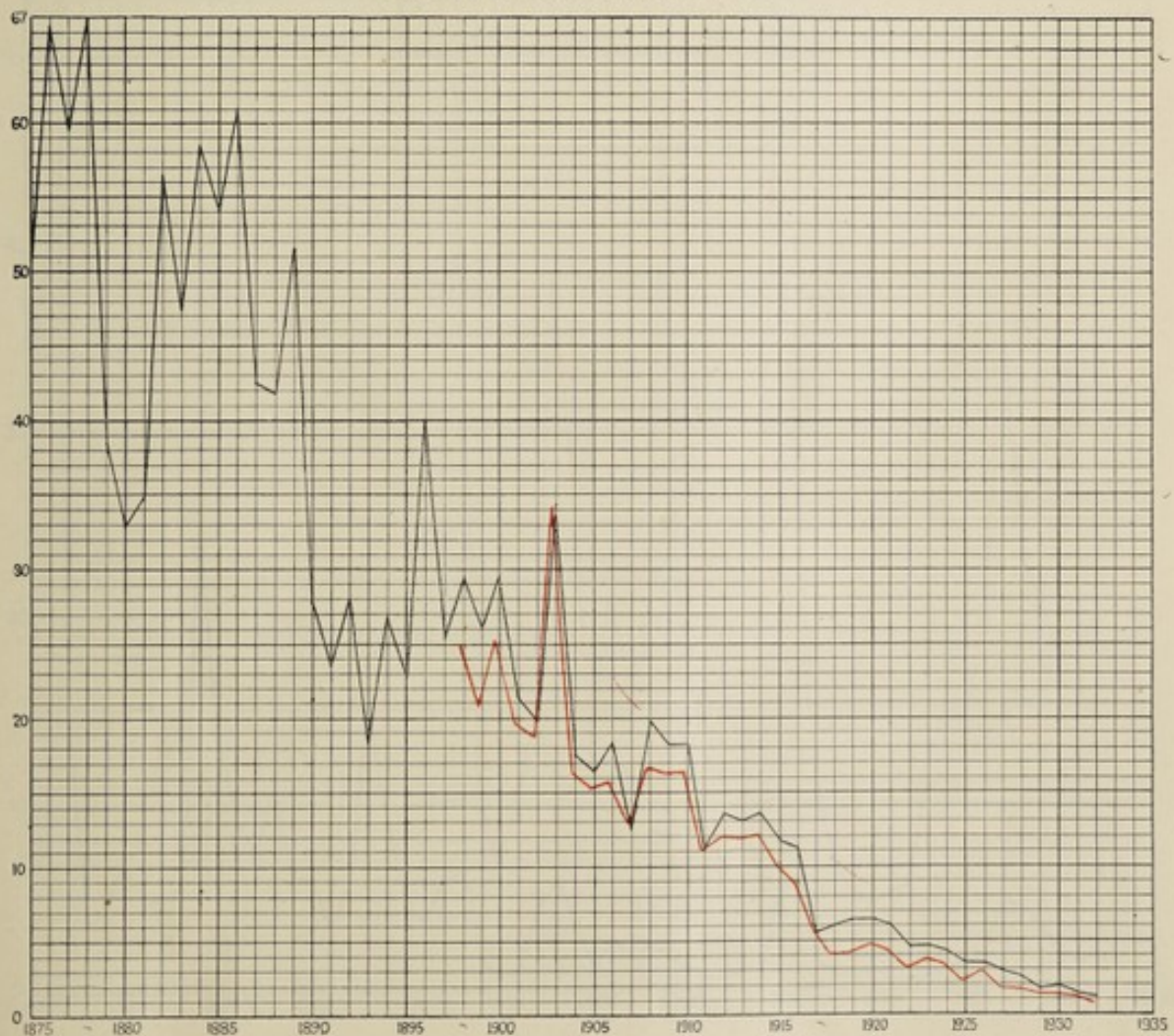
Shire.	Estimated Mean Population.	Typhoid and Paratyphoid.		Scarlet Fever.		Diphtheria.		Infantile Paralysis.		Cerebro-spinal Meningitis.		Encephalitis Lethargica.		Puerperal Infection.	
		C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.
SHIRES.															
Abercrombie.....	3,560	...	...	...	...	...	...	1	...	...	...	...	...	...	...
Amaroo	3,260	...	...	4	...	4	...	...	...	...	...	...	...	...	...
Apsley	2,720	...	...	8	...	...	...	...	...	...	...	...	...	...	...
Ashford	2,530	...	...	1	...	2	...	...	...	...	...	...	...	...	...
Bannockburn	3,230	...	...	4	...	1	...	...	...	...	...	...	...	...	...
Barraba	2,110	...	...	...	...	2	...	...	...	...	...	1	...	...	...
Baulkham Hills	6,340	...	...	8	...	3	...	...	...	1	1	...	...	...	...
Bellingen	5,140	...	...	1	...	5	...	...	...	...	...	...	...	1	...
Berrigan	4,420	...	...	2	...	1	...	...	...	...	...	...	...	...	...
Bibbenluke	2,810	...	...	1	...	...	...	...	...	...	...	...	...	1	...
Blacktown	11,820	...	...	16	...	18	1	2	...	...	...	...	...	1	...
Bland	8,440	6	...	4	...	...	...	4	1	...	...	...	...	2	1
Blaxland	8,340	...	...	17	1	30	3	...	...	...	...	...	...	...	...
Blue Mountains	7,150	1	...	6	...	7	...	1	1	...	...	...	...	...	...
Bogan	2,070	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Booolooroo	3,240	2	...	...	...	1	...	...	...	...	...	...	...	...	1
Boomi	3,030	...	...	1	...	1	...	...	...	...	...	...	...	...	...
Boree	6,580	...	...	2	...	11	1	1	...	...	...	...	...	1	...
Bullii	11,950	1	...	16	...	94	2	2	...	...	...	...	...	3	...
Burrangong	5,230	3	...	5	...	1	...	...	...	...	...	...	...	...	...
Byron	7,310	...	1	5	...	6	...	...	...	...	...	...	...	...	...
Cambewarra	1,370	...	...	...	...	1	...	...	...	...	...	...	...	...	...
Canobolas.....	5,540	...	...	9	...	4	...	...	...	...	...	...	...	...	...
Carrathool	4,070	1	...	7	...	3	...	...	...	...	...	...	...	1	...
Clyde	1,640	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Cobbarah	5,370	1	1	1	...	13	...	...	...	...	...	...	...	...	...
Cockburn	3,750	1	...	16	...	13	3	...	...	...	...	...	...	...	...
Colo	5,390	...	...	2	...	1	...	...	...	...	...	...	...	...	...
Conargo.....	980	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Coolah	1,600	...	...	2	...	...	...	1	...	1	...	...	...	...	...
Coolamon	7,470	...	...	3	...	6	...	2	...	...	...	...	...	...	...
Coonabarabran	5,940	...	...	5	1	2	...	...	...	...	...	...	...	...	...
Copmanhurst	3,060	...	...	...	...	3	...	...	...	...	...	...	...	...	...
Coreen	3,270	...	...	4	...	34	...	1	...	...	...	...	...	...	...
Crookwell	5,880	...	...	17	...	6	...	1	...	...	...	...	...	...	...
Cudgong	5,320	1	...	7	...	1	...	1	...	...	...	...	...	...	...
Calcairn	5,420	...	...	4	...	9	1	...	...	1	...	...	...	1	...
Dalgety	3,450	...	...	22	...	11	...	1	...	...	...	...	...	...	...
Demondrille	3,320	...	...	2	...	4	...	1	...	1	...	...	...	...	...
Dorrigo	8,250	...	...	2	...	9	1	...	...	...	...	...	...	...	...
Dumaresq	4,530	...	...	6	...	3	...	5	...	...	...	...	...	...	...
Erins	16,470	1	...	20	2	18	2	6	...	2	...	...	...	2	1
Eurobodalla	4,690	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Gilgandra	4,900	...	...	5	...	11	...	...	...	...	...	...	...	...	...
Goucester.....	4,010	...	...	4	...	10	...	2	...	...	...	...	...	...	...
Goobang	5,980	...	...	2	...	1	...	...	...	...	...	...	...	...	...
Goodradigbee	3,140	...	...	2	...	2	...	1	...	...	...	...	...	...	...
Gostwyck	4,250	1	1	26	2	3	...	2	...	...	...	...	...	...	...
Gundagai	5,030	...	...	6	...	5	...	3	...	...	...	...	...	...	...
Gundarimba	3,850	...	...	2	...	2	...	...	...	...	...	...	1	...	...
Gunning	3,350	...	...	5	...	1	...	...	...	...	...	...	...	...	...
Guyra	6,430	...	...	16	...	16	1	...	...	...	...	...	1	...	...
Gwydir	1,140	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Harwood	4,860	...	...	...	...	5	...	1	...	1	1	...	...	...	...
Hastings	7,480	...	...	2	...	2	...	...	...	...	...	...	...	...	...
Holbrook	2,150	1	...	1	...	4	...	...	...	...	...	...	...	...	...
Hume	4,590	2	...	7	...	29	1	1	1	...	...	...	...	...	...
Illabo.....	2,850	...	...	...	...	7	...	...	...	...	...	...	...	...	...
Inlay	4,540	...	...	1	...	7	1	...	...	...	...	...	...	...	...
Jemalong	3,530	1	...	4	...	2	...	...	...	...	...	...	...	...	...
Jerilderie	1,570	...	...	2	...	...	...	...	...	...	...	...	...	...	...
Jindalee	1,950	...	...	1	...	3	1	...	...	...	...	...	...	...	...
Kyeamba	4,290	...	...	3	...	5	...	...	...	...	...	...	...	...	...
Kyogle	8,600	...	...	6	...	39	1	2	...	1	...	1	...	1	...
Lachlan	5,310	...	...	6	...	2	...	2	...	...	...	...	...	...	...
Liverpool Plains	5,100	1	1	16	1	16	...	1	1	...	...	...	1	...	...
Lockhart	6,030	...	...	7	...	6	...	...	...	...	...	...	...	...	...
Lyndhurst	5,010	...	...	5	1	3	...	...	...	...	...	...	...	...	...
McIntyre	2,000	...	...	...	...	4	...	...	...	...	...	...	...	...	...
Macleay	7,420	...	...	7	...	13	...	...	...	...	...	...	...	...	...
Macquarie	4,280	...	...	...	...	12	...	1	...	...	...	...	...	...	...
Mandowah	2,440	2	...	2	...	...	...	...	1	...	...	...	...	...	...
Manning	13,490	...	...	3	1	16	1	2	1	...	...	1	...	...	1
Marthaguy	1,770	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Merriwa	2,370	...	...	4	1	1	...	3	2	...	...	...	...	...	...
Mitchell	4,500	1	...	5	...	2	...	1	...	...	...	...	...	...	...
Monaro	2,690	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Mulwaree	7,770	1	...	5	...	44	2	...	...	...	...	...	...	...	...
Mumbulla	4,180	...	...	2	...	3	1	...	...	...	...	...	...	...	...
Murray	2,580	1	...	...	...	2	...	...	...	...	...	...	...	...	...
Murrumbidgee	610	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Murrungal.....	2,280	...	...	1	...	1	...	...	...	...	...	...	...	...	...

TYPHOID FEVER, NEW SOUTH WALES.

Annual Death Rate per 100,000 of Population, 1875-1932, and Annual Case Rate per 10,000 of Population, 1898-1932.

Black.—Deaths per 100,000 of mean population.

Red.—Cases per 10,000 of mean population.



TYPHOID FEVER, NEW SOUTH WALES.

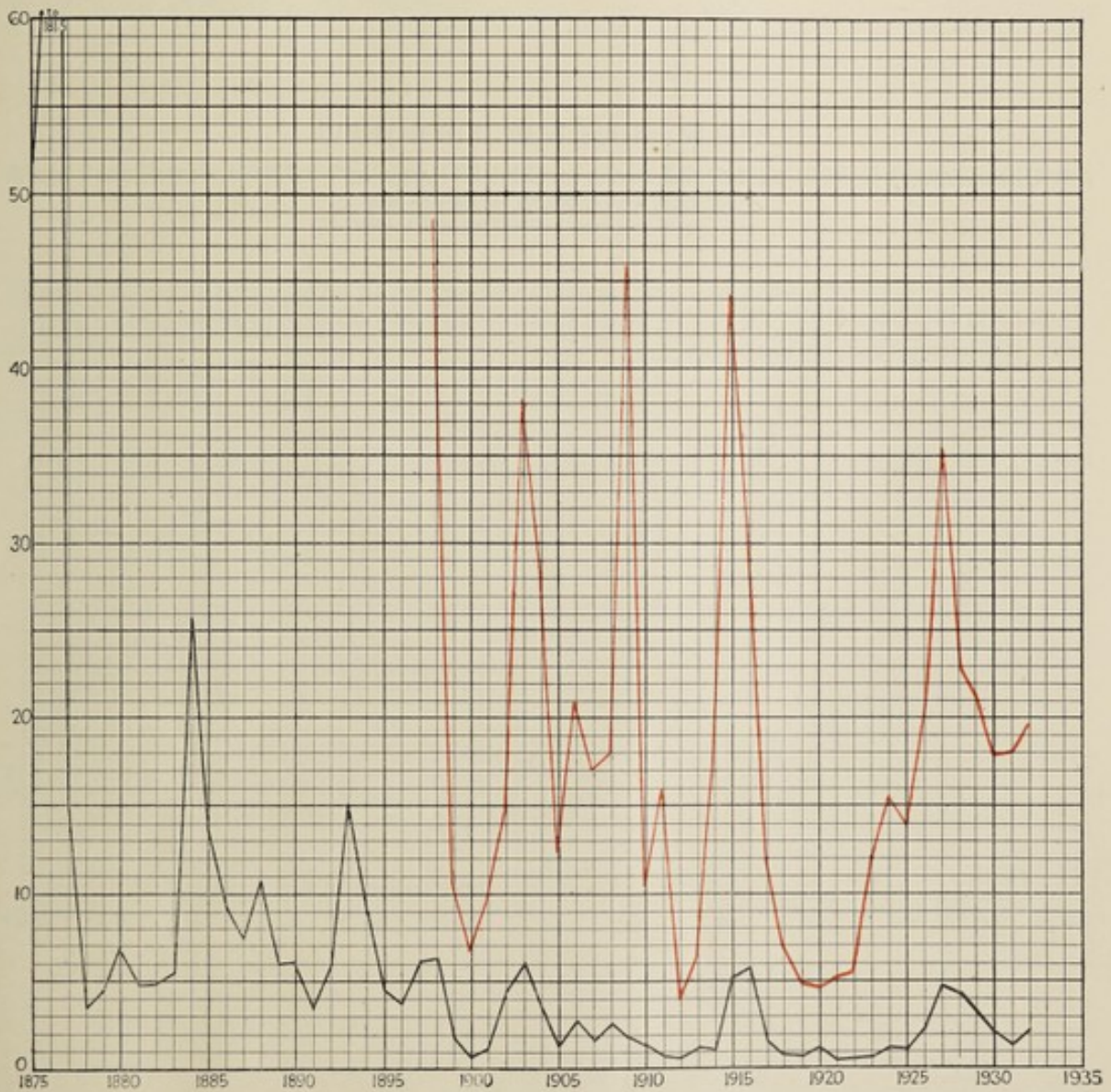
Annual Data from the 1880's to 1921, and Annual Data from 1922 to 1931 at Sydney, New South Wales.



SCARLET FEVER, NEW SOUTH WALES.

Annual Death Rate per 100,000 of the Population, 1875-1932, and Annual Case Rate per 10,000 of the Population, 1898-1932.

Black Line—Death Rate.
Red Line —Case Rate.



SHARPLEY FEVER, NEW SOUTH WALES

General Description and History of the Fever, 1872-1873, and General Remarks
on its Cause and its Prevention

By
THE DOCTOR

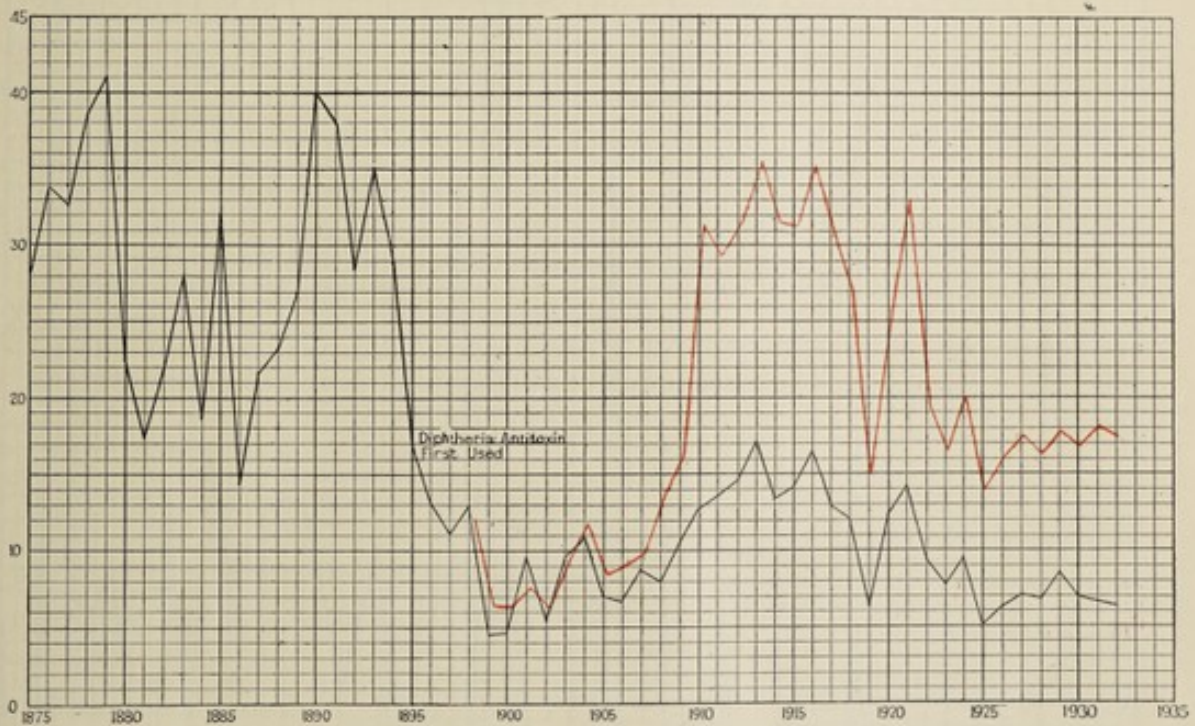


DIPHTHERIA, NEW SOUTH WALES.

Annual Death Rate per 100,000 of Population, 1875-1932, and Annual Case Rate per 10,000 of Population, 1898-1932.

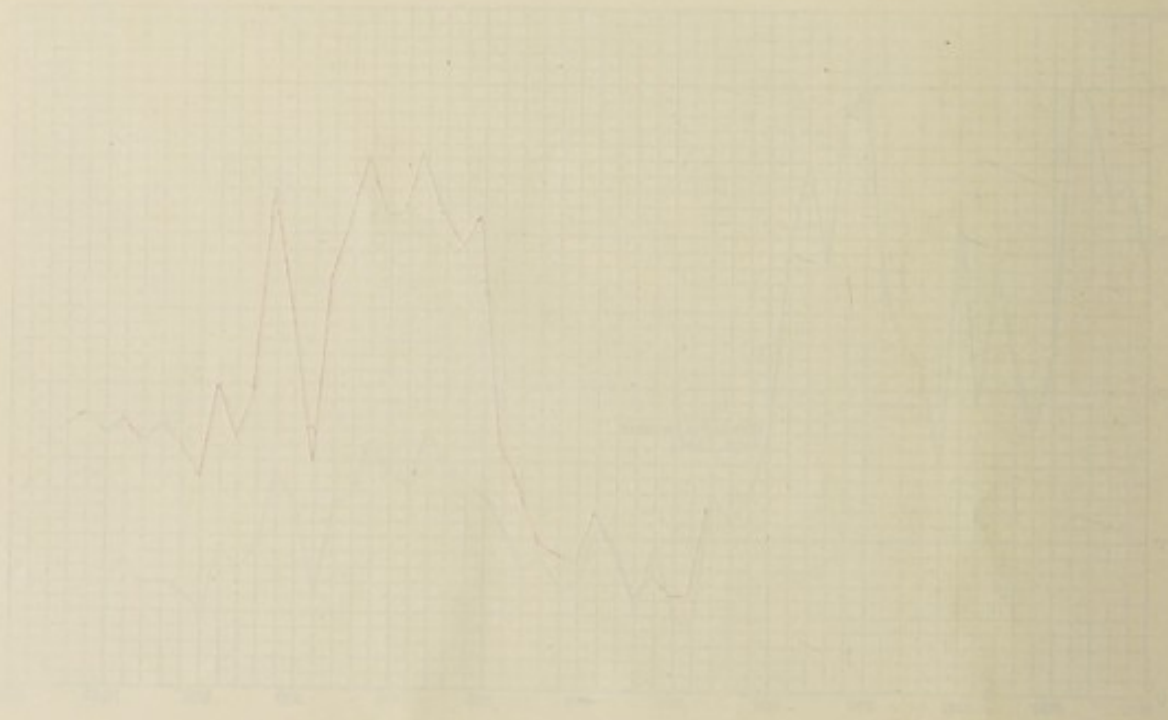
Black.—Deaths per 100,000 of mean population.

Red.—Cases per 10,000 of mean population.



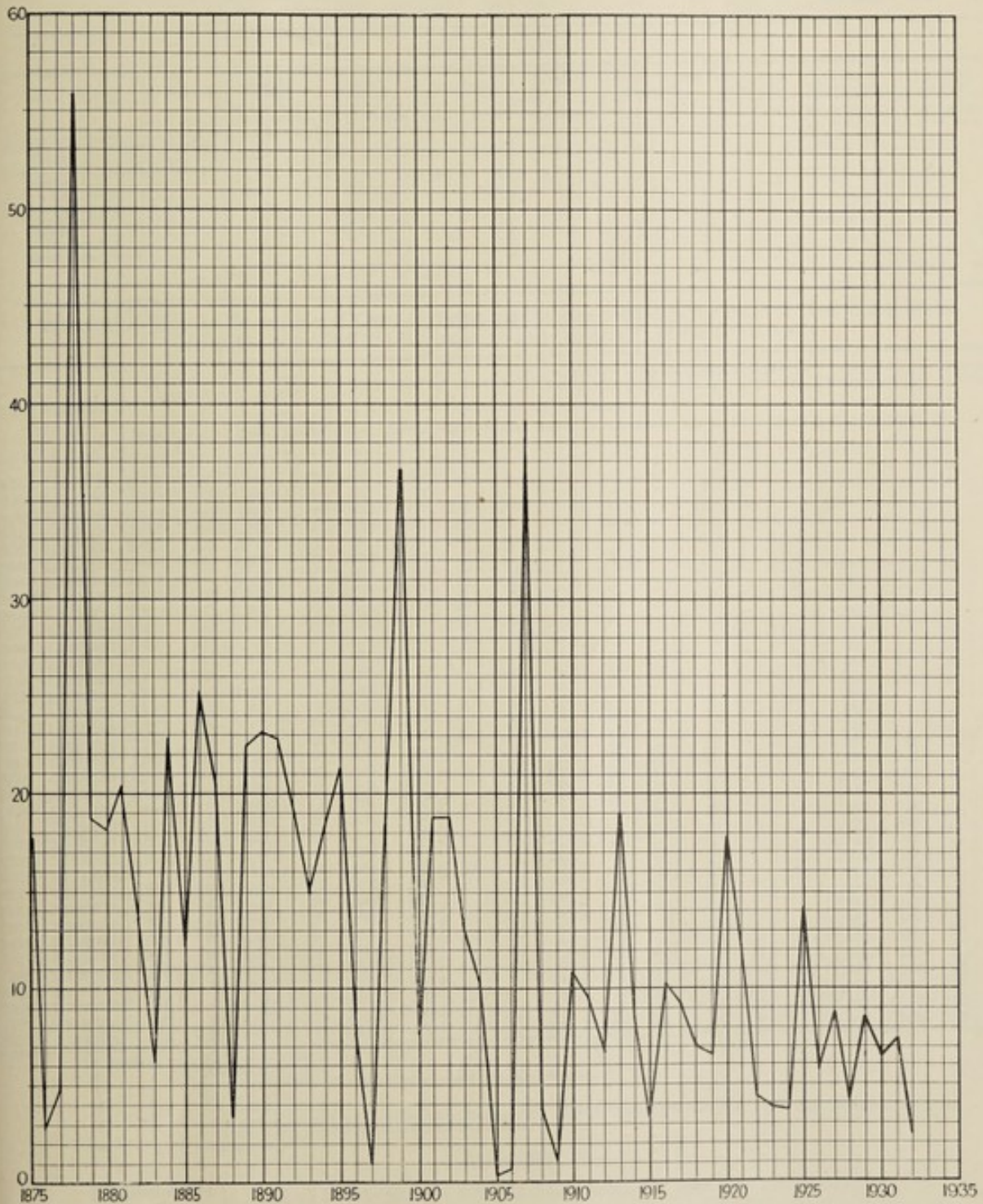
MONTHLY NEW BIRTHS

Annual birth rate for 1920 at population 1,000,000. The birth rate for 1920 is 20.0 per 1,000. The birth rate for 1919 is 18.0 per 1,000. The birth rate for 1918 is 16.0 per 1,000. The birth rate for 1917 is 14.0 per 1,000. The birth rate for 1916 is 12.0 per 1,000. The birth rate for 1915 is 10.0 per 1,000. The birth rate for 1914 is 8.0 per 1,000. The birth rate for 1913 is 6.0 per 1,000. The birth rate for 1912 is 4.0 per 1,000. The birth rate for 1911 is 2.0 per 1,000. The birth rate for 1910 is 1.0 per 1,000.



WHOOPING COUGH.

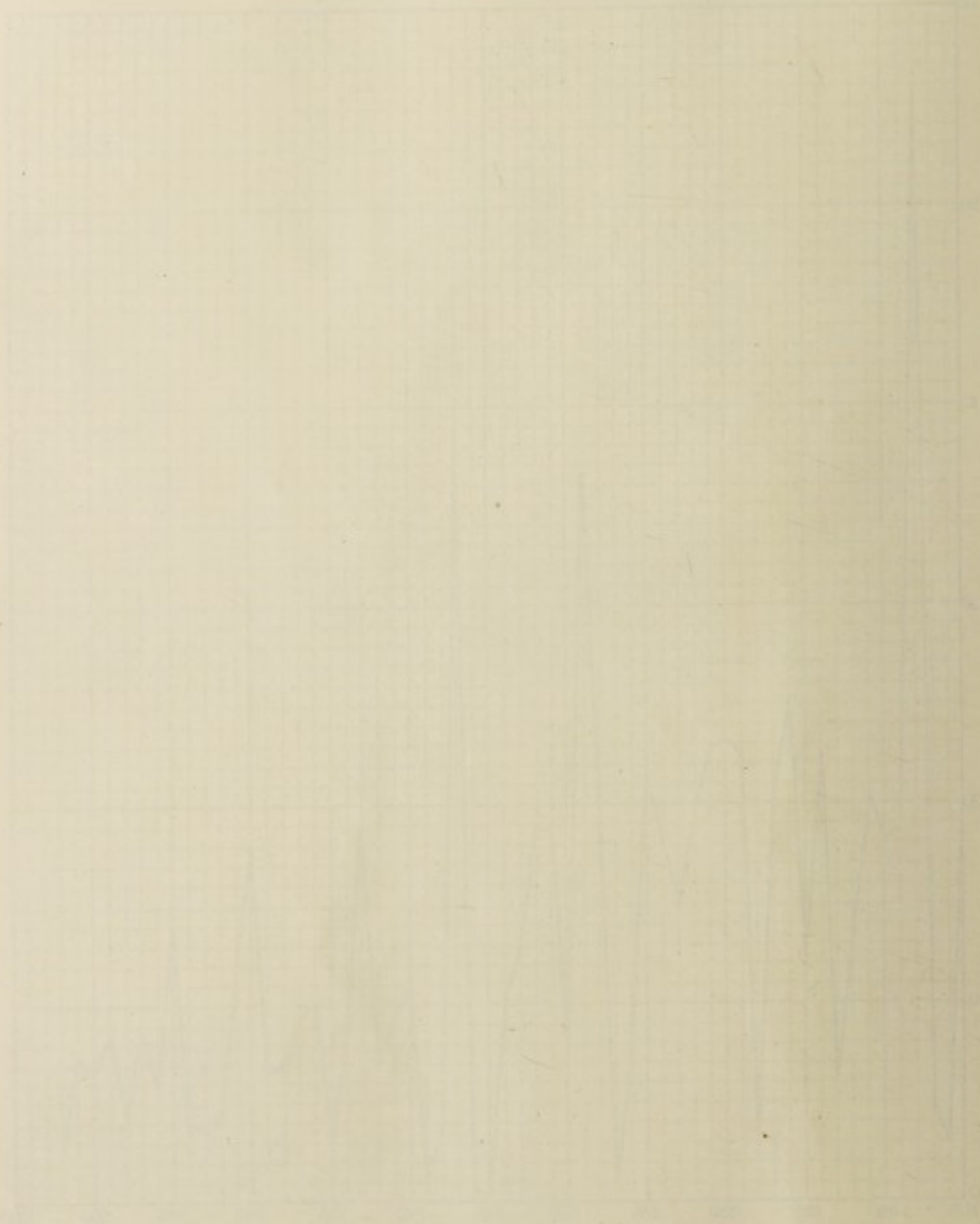
Annual Death Rate per 100,000 of the Population in New South Wales, 1875-1932.



*93229

WHIPPING TONGUE

Annual Report for 1908 of the Fisheries of New South Wales 1912-1913



SUMMARY, 1931.

Distr.ct.	Typhoid Fever.		Scarlet Fever.		Diphtheria.		Infantile Paralysis.		Cerebro-spinal Meningitis.		Encephalitis Lethargica.		Pulmonary Tuberculosis.		Puerperal Infection.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Metropolitan Combined Sanitary District	86	10	3,108	24	1,838	70	73	6	17	6	15	11	1,151	671	220	40
Hunter River Combined Sanitary District	27	2	244	2	389	16	1	...	4	2	2	2	79	61	26	8
Broken Hill District	109	4	38	...	52	1	4	1	...	...	...	...	33	16	16	1
Remainder of State—																
Municipalities	48	11	579	6	877	33	9	...	3	...	1	1	155	115	39	22
Shires	60	6	507	4	1,273	47	16	3	6	1	2	2	169	149	17	12
Police Districts	10	2	1	...	3	1	...	...	...	...	...	...	1	2	1	...
Lord Howe Island .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	340	35	4,477	36	4,432	168	103	10	30	9	20	16	1,588	1,014	319	83

SUMMARY, 1932.

District.	Typhoid Fever.		Scarlet Fever.		Diphtheria.		Infantile Paralysis.		Cerebro-spinal Meningitis.		Encephalitis Lethargica.		Pulmonary Tuberculosis.		Puerperal Infection.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Metropolitan Combined Sanitary District	102	9	3,031	26	2,049	74	140	13	23	5	9	9	1,083	645	236	33
Hunter River Combined Sanitary District	22	5	517	9	486	16	59	3	4	...	1	2	84	58	9	7
Broken Hill District	20	1	15	...	29	2	5	1	...	...	...	...	11	...	6	...
Remainder of State—																
Municipalities	36	10	708	8	878	33	64	8	4	...	3	3	307	134	19	7
Shires	52	6	626	14	860	34	113	19	10	2	2	4	307	128	21	10
Police Districts	1	...	8	...	8	1	3	...	2	...	...	...	...	4	1	2
Lord Howe Island .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	233	31	4,905	57	4,310	160	384	44	43	7	12	18	1,485	969	292	59

TABLE IV.—Showing the number of Cases of Infectious Diseases notified in the State of New South Wales during the years 1898 to 1932, inclusive, and the number of deaths therefrom.

Year.	Population.	Typhoid Fever.*		Scarlet Fever.*		Diphtheria.*		Plague.†		Infantile Paralysis.‡		Cerebro-spinal Meningitis.‡		Encephalitis Lethargica.		Pulmonary Tuberculosis.§		Puerperal Infection.**	
		Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1898	1,323,130	3,302	387	6,342	83	1,493	169	...	...	...	...	...	...	...	...	...	...	...	...
1899	1,344,080	2,783	347	1,389	25	741	60	...	...	...	...	...	...	...	...	...	...	...	...
1900	1,364,590	3,442	398	895	9	726	63	303	103	...	...	...	...	...	...	...	...	...	...
1901	1,376,199	2,702	291	1,288	16	922	131	...	...	...	...	...	...	...	...	...	...	...	...
1902	1,397,858	2,624	276	2,010	61	757	74	110	41	...	...	...	...	...	...	...	...	...	...
1903	1,416,879	4,855	475	5,358	87	1,214	134	2	...	...	...	...	...	...	...	...	...	...	...
1904	1,440,919	2,370	249	4,056	50	1,584	156	12	6	...	...	...	...	...	...	146	...	...	...
1905	1,469,153	2,226	239	1,773	21	1,118	102	56	21	...	...	...	...	...	...	128	...	...	...
1906	1,498,609	2,373	271	3,085	42	1,219	100	20	8	...	...	...	...	...	...	118	...	...	...
1907	1,531,980	1,972	189	2,570	26	1,375	133	51	20	...	...	...	...	...	...	161	...	...	...
1908	1,560,026	2,607	307	2,755	40	2,601	123	6	3	...	...	...	...	...	...	112	...	...	...
1909	1,596,685	2,615	287	7,178	30	2,419	166	24	7	...	...	...	...	...	...	196	...	...	...
1910	1,638,220	2,714	294	1,642	23	4,989	207	...	...	...	...	...	...	...	...	184	...	...	...
1911	1,698,735	1,864	184	2,618	11	4,784	226	...	...	...	...	...	...	...	...	222	...	...	...
1912	1,778,962	2,126	236	662	11	5,440	253	...	...	...	...	...	...	...	...	265	...	...	...
1913	1,832,546	2,187	236	1,120	23	6,380	310	...	47	10	...	...	...	...	...	228	...	...	...
1914	1,862,028	2,284	250	3,207	21	5,831	247	...	79	14	...	...	...	...	...	293	...	...	...
1915	1,868,644	1,941	219	8,335	97	5,838	264	...	63	11	50	33	...	...	...	361	86	...	...
1916	1,846,736	1,742	209	5,769	107	6,588	309	...	311	21	309	145	...	...	...	1,499	666	...	...
1917	1,886,701	1,091	103	2,255	27	5,805	247	...	16	12	197	98	...	...	...	1,319	584	...	...
1918	1,928,174	810	112	1,308	15	5,151	221	...	50	12	120	80	...	...	...	1,308	586	...	...
1919	2,000,173	867	106	959	10	2,826	114	...	8	3	28	23	...	...	...	1,102	678	...	...
1920	2,099,763	1,016	132	937	24	5,043	263	...	45	10	34	27	...	...	...	1,509	674	...	...
1921	2,128,786	949	129	1,060	8	6,854	306	2	1	184	22	30	28	...	...	1,240	791	...	...
1922	2,174,688	706	99	1,153	11	4,094	207	33	9	33	5	21	22	...	...	1,045	517	...	...
1923	2,211,106	873	104	2,623	13	3,480	176	1	1	104	8	27	22	...	...	1,218	657	...	...
1924	2,256,649	768	97	3,421	29	4,364	222	...	...	108	6	29	38	...	...	1,096	730	...	...
1925	2,300,081	533	80	3,043	27	3,004	118	...	...	57	14	37	27	...	...	1,195	617	...	...
1926	2,349,401	698	80	4,755	53	3,579	147	...	...	81	21	32	23	...	...	1,265	705	...	...
1927	2,401,884	460	68	8,369	113	4,059	179	...	...	25	4	25	10	3	27	1,158	632	...	...
1928	2,446,874	453	60	5,531	105	3,835	168	...	...	30	2	31	8	18	23	1,212	815	...	...
1929	2,479,147	438	45	5,219	78	4,274	215	...	...	241	29	28	10	26	30	1,215	1,152	44	79
1930	2,502,039	380	48	4,400	54	4,051	176	...	...	30	6	43	12	14	20	1,917	1,022	269	82
1931	2,519,300	340	35	4,477	36	4,432	168	...	...	103	10	30	9	20	16	1,588	1,014	319	83
1932	2,542,034	233	31	4,905	57	4,310	160	...	...	384	44	43	7	12	18	1,485	969	292	59

* Notifiable from 1st January, 1898.

† Proclamation re-issued 14th August, 1931.

‡ 1st February, 1912.

§ 1st April, 1926.

** 11th October, 1915.

1904, city of Sydney only; from 1915, Metropolitan, Hunter River Districts; from 1916, Blue Mountain Districts.

Notification extended to whole State, March, 1929.

16th August, 1929.

GRAPHS

Typhoid Fever } Annual Death-rate per 100,000 (1875-1932) and case rate per 10,000
 Scarlet Fever } of population (1898-1932)—
 Diphtheria ... }
 Whooping Cough } Annual Death-rate per 100,000 of population in New South Wales
 Infantile Paralysis } 1875-1932 (see page 51).
 } (1912-1932). Yearly and epidemic incidence (see page 2).

VENEREAL DISEASES ACT, 1918.

REPORT ON OPERATION OF THE ACT FOR THE YEARS ENDED 31ST DECEMBER, 1931 AND 1932.

Commissioner ROBERT DICK, M.B., M.S., D.P.H.
Director of Division JOHN COOPER BOOTH, M.B., B.S.

Notifications.—4,617 notifications of venereal disease were received during 1931, a decrease of 608 compared with 1930. Of these notifications, 48·58 per cent. came from private medical practitioners as compared with 45·36 per cent. in 1930. Notifications received in 1932 numbered 4,842, an increase of 225 compared with 1931. Of these notifications 40·92 per cent. came from private medical practitioners, as compared with 48·58 per cent. in 1931.

Syphilis.—Of the 4,617 total notifications received in 1931, 1,120 were for cases of syphilis (males 822 and females 298), a figure 292 below that for 1930. Of the 4,842 total notifications received during 1932, 1,410 were for cases of syphilis (males 1,059, females 351), a figure 290 above that for 1931. The sex ratio of notified cases of syphilis for 1931 was 2·76 males to 1 female case as compared with 2·22 to 1 in 1930 and 2·49 to 1 in 1929. In 1932 the sex ratio was 3·02 males to 1 female case. Of the cases of syphilis notified in 1931, 26·7 per cent. were being treated privately as compared with 19·76 per cent. in 1930 and 30·95 per cent. in 1929. In 1932, 15·9 per cent. were being treated privately. Of the total notifications of venereal disease in 1931, syphilis contributed 24·26 per cent. as compared with 27·02 per cent. in 1930 and 19·04 per cent. in 1929. In 1932 they constituted 29·16 per cent.

In 1932 the notifications of syphilis gave a rate of 55·66 per 100,000 of population, compared with a rate of 44·6 per 100,000 for 1931, 56·7 per 100,000 in 1930, and 40·4 per 100,000 in 1929.

Gonorrhœa.—Of the 4,617 total notifications received during 1931, 3,184 were cases of gonorrhœa (males 2,559 and females 625), a figure 373 less than that for 1930. Of the 4,842 total notifications received during 1932, 3,164 were cases of gonorrhœa (males 2,595, females 569) or 20 less than in 1931.

The sex ratio of notified cases of gonorrhœa for 1931 was 4·1 males to 1 female as compared with 5·64 to 1 in 1930 and 6·30 to 1 in 1929. In 1932 the ratio was 4·6 male cases to 1 female case. In 1932 47·66 per cent. of the cases of gonorrhœa notified were being treated privately compared with 52·17 per cent in 1931; 52·23 per cent. in 1930, and 51·99 per cent. in 1929.

The percentage of cases of gonorrhœa notified in the total notifications of venereal disease was 65·34 per cent. in 1932; 68·96 per cent. in 1931; 68·08 per cent. in 1930, and 76·14 per cent. in 1929.

The notifications of gonorrhœa gave a rate of 124·99 per 100,000 of population for 1932, compared with 126·8 in 1931; 142·9 in 1930; and 161·4 in 1929.

Other Forms of Venereal Disease.—*Soft Chancre* is uncommon in this State, and notifications were ·10 per cent. of the total notifications of venereal disease for 1932 as compared with ·30 per cent. in 1931, ·42 per cent. in 1930, and ·27 per cent. in 1929.

Gonorrhœal Ophthalmia accounted for ·12 per cent. of the total notifications for 1932; ·15 per cent. for 1931 and 1930, and ·06 per cent. for 1929.

Venereal Warts reported were ·25 per cent. of the total notifications as compared with ·22 per cent. for 1931; ·32 per cent. in 1930, and ·25 per cent. in 1929.

Gleet.—Notifications of this condition accounted for 4·98 per cent. of the total notifications of venereal disease in 1932, as compared with 6·1 per cent. in 1931; 4 per cent. in 1930; and 4·25 per cent. in 1929.

FAILURE TO CONTINUE TREATMENT.

If a patient has discontinued treatment before being discharged as free of infection, the Act provides that his name and address must be forwarded by his medical attendant to the Commissioner in order that steps may be taken to secure resumption of treatment.

During 1932 the names and addresses of 572 defaulters (370 males and 202 females) were notified, or 137 less than in 1931 when there were a total of 709 defaulters (463 males and 246 females). The defaulters in 1932 represented 11·81 per cent. of the total notifications of venereal disease, as compared with 15·36 per cent. in 1931 and 14·81 per cent. in 1930.

Owing to wrong information having been given by patients, 229 letters in 1932 and 306 in 1931 (a decrease of 77 in 1932 and 35 in 1931) were returned unclaimed, giving 40·03 per cent. undelivered letters for 1932; 43·16 per cent. for 1931, and 45·35 per cent. for 1930.

As has been mentioned in previous reports, it is difficult to locate defaulters on account of false names and addresses. Present economic conditions have contributed to the difficulty in tracing those who have (originally) given correct names and addresses but who have been forced to move from place to place in search of work and/or shelter.

The following table shows the percentage of notified defaulters in the last seven years who remained apparent permanent defaulters:—

Year.	Total Defaulters Notified.	Resumed Treatment, Died, or left State.	Remained in Default.	Percentage Remaining in Default.
1926	1,060	280	780	73·58
1927	1,210	304	906	74·88
1928	1,113	441	672	60·38
1929	842	368	474	56·29
1930	774	400	374	48·32
1931	709	325	384	54·16
1932	572	268	304	53·15

CLINICS.

Metropolitan District.—Parramatta Hospital was added in 1931 to the list of general hospitals giving clinic treatment for venereal diseases; and attendance returns from the clinic at St. George District Hospital which has functioned for some years, were made available for the first time in 1932.

Continuous Clinic.—Although it was not found possible to bring this into being in 1931 or 1932 the Minister of Health, Hon. R. D. W. Weaver, M.L.A., immediately on taking office realised the urgent need for such a clinic and had sufficient funds made available to convert an annexe existing at the Health Department into an up to date clinic. The extensive alterations required occupied several months and the building was eventually opened for use on 12th June, 1933. A full report on the clinic and its activities will be given in the annual report for that year.

Until the opening of the new clinic as much use as possible was made of the Coast Hospital Clinic and its auxiliary; but the situation of the Coast Hospital about 10 miles from the city centre with a tram journey of about 40 minutes, was too far from the city to be of particular value as an out-patient clinic for the treatment of acute gonorrhœa.

Until the opening of the continuous clinic in 1933, the clinic attached to the Coast Hospital for the treatment of syphilis—males only—was the largest in the State. Its city auxiliary functioned on two nights a week and was staffed from the Hospital. The practice was for an attendant to come in ahead of the "unit" to prepare the rooms and issue numbered cards. Each patient, when he called, any time after 4-40 p.m., was given a numbered card, and left his name with the attendant. He need not return then until 7-30 p.m., at which hour clinic work began. Each patient was seen in the order of the card number he had for that particular night. The number only was called, for the patient's name had already been entered opposite the number he held for that night by the attendant who supervised issue of the cards, and his history card was already in order of sequence. There could be no argument as to order, and the man who came for his number early was seen early. There was no noise, and the clinic worked rapidly, smoothly and efficiently. This clinic has been in operation since 1924, and will be merged into the new continuous clinic referred to above.

In these difficult times it has been found impossible to give treatment in the manner desired in all cases, and in many instances prolonged courses of bismuth have been carried out when the patient has been unable to attend regularly for intravenous injections of an arsenical preparation. Results have been surprisingly satisfactory, all things being considered.

At present every patient is kept under treatment at the departmental clinic for one year after the first "negative" Wassermann and Kahn's. Both tests must be negative and remain so during the year. The patient then reports for blood tests every six months for the next two years, and once yearly for the following three years. All being well, he is then advised to have blood tests twice more, after a lapse of five years in each instance. This scheme of control aims at keeping the patient under observation for fifteen years after apparent cure. One wonders if a period of control extending over fifteen years is adequate.

As much care is given at the beginning of treatment as with its finalisation. In all cases where a patient presents himself with a sore, treatment is delayed until the diagnosis has been supported by a "positive" dark ground finding, or, failing that, by a "positive" Kahn's or Wassermann reaction. When the examination of the sore (on several occasions) fails to demonstrate the presence of the spirochaete, and no other signs are apparent, a blood serum re-action is awaited and general treatment is begun as soon as this occurs. It is considered better to wait than to condemn a patient to unnecessary treatment, and, in our opinion, the delay is fully justified.

There has been an increase of 486 in the number of patients admitted to public clinics and a decrease of 261 in the number treated privately. Notifications received from private practitioners represent 40.93 per cent. of the total number received, as compared with 48.6 per cent. in 1931 and 45.4 per cent. in 1930. Once again attention is drawn to the fact that the number of notifications received from private medical practitioners cannot be taken as a true indication of the amount of venereal disease that is being treated privately, as many of the attending doctors fail to notify cases diagnosed by them, although the Venereal Diseases Act requires them to do so.

In the attempt to estimate the yearly numbers of cases of venereal disease, that shadowy army of people who probably seek treatment at the hands of unqualified persons must not be overlooked, and it would not be surprising if its numbers at least equalled those of the notified cases.

Legislation is urgently required to limit the practice of medicine in all its branches to those who are registered as legally-qualified medical practitioners. Only by such action can there be any reasonable prospect of protecting the public from the activities of the rapidly-growing body of unqualified persons who, unchecked by adequate legislation, advertise their questionable "arts" to a gullible public, or tout in secret when open advertisement would infringe the law.

Attendances at clinics for males numbered 69,542 for 1932, as compared with 67,892 for 1931 and 58,637 in 1930. At the clinics for females the figures were 26,431 for 1932, compared with 26,886 in 1931 and 22,860 in 1930.

Newcastle District.—There has been a decrease in the number of notifications received from this district in 1931 to 51 and an increase to 157 in 1932 as compared with 266 in 1930 and 142 in 1929. These figures are grotesque for a seaport industrial city which, with its suburbs, has a total of over 120,000 inhabitants.

Bed Accommodation.—The Coast Hospital provides bed accommodation for 91 male patients and at other institutions there is a total of 50 beds for women, 17 for children, and 5 beds for either women or children.

Pathological Examination.—Table 2B shows the use made of laboratory tests for diagnostic purposes and progress reports during treatment. In 1932, 30,041 serological tests were made on 13,219 specimens; in 1931, 28,223 on 12,700 specimens, and in 1930, 30,381 on 13,418. In 1932, 6,505 smears were examined for detection of gonococci, as compared with 5,714 smears in 1931, and 5,734 in 1930. Examinations for spirochaetes numbered 130 in 1932, compared with 107 in 1931 and 56 in 1930.

VENEREAL DISEASE NOTIFICATIONS, 1927 TO 1932 INCLUSIVE.

Year.	Total Notifications.	Percentage Grouping in Notifications for Year.			Mean Population.	Rate per 10,000 of Mean Population.		
		Syphilis.	Gonorrhoea.	Other V.D.		Syphilis.	Gonorrhoea.	Other V.D.
1927	5,674	22.15	72.86	4.99	2,374,264	5.29	17.41	1.19
1928	5,226	24.01	71.09	4.90	2,426,300	5.17	15.31	1.05
1929	5,226	19.04	76.14	4.82	2,464,510	4.04	16.14	1.02
1930	5,225	27.02	68.08	4.90	2,489,657	5.67	14.29	1.03
1931	4,617	24.26	68.96	6.78	2,510,033	4.46	12.68	1.25
1932	4,842	29.16	65.34	5.50	2,531,230	5.57	12.5	1.06

The above table shows very slight fluctuation for 1931, but for 1932 there has been a decided increase in the notifications of syphilis. Its percentage in yearly notification is the highest since the Venereal Diseases Act came into force over a decade ago; though in incidence (per 10,000 of mean population) it has been exceeded on four previous occasions (viz., 1921, 1922, 1923 and 1930). It is hoped that, as prosperous times return, and the Division is enabled to function more extensively, figures giving a truer indication of the prevalence of venereal disease will be available. In over 8,000 blood examinations of inmates of a State Hospital and Home, the percentage of positive syphilitic blood reactions fluctuated between 9 and 10 per cent. On this basis, one might reasonably suggest that perhaps 5 per cent. of the total adult population might be expected to be infected with syphilis in either an apparent or an unsuspected form.

EDUCATIONAL PROPAGANDA.

A short article on the "Campaign Against Venereal Disease" was published and widely circulated in the free booklet issued during the Health Week held in October. The Division contributed to the Health Exhibition, and numerous people sought medical advice as a result of the information displayed there.

During the year the various films in the possession of this Department were screened at public meetings in conjunction with lectures and addresses.

The Racial Hygiene Association organised meetings, displayed films, and distributed literature.

PROSECUTIONS.

There were two prosecutions under the Venereal Diseases Act in 1931, namely:—

1. Action taken for breach of Section 4. Fine of £30 inflicted, plus 8s. costs.
2. Action taken for breach of Section 3 (1). Charge proved; no penalty.

There were no prosecutions in 1932.

The following tables are appended:—

Table 1.—Notifications received during the years 1929–1932, arranged in order of district from which the notifications were received.

Table 2a.—Notifications received during 1931 and 1932, showing (a) forms of disease and age and sex of patients notified; and 2 (b) diagnostic examinations in the Microbiological Laboratory, 1929–1932.

Table 3.—Summary of annual attendances at public clinics, 1929–1932.

TABLE 1.—Notifications received during 1929–1932, arranged in districts.

	Metropolitan Area.				Newcastle District.				Remainder of State.			
	1929.	1930.	1931.	1932.	1929.	1930.	1931.	1932.	1929.	1930.	1931.	1932.
	Gonorrhoea	3,651	3,046	2,977	2,884	122	215	30	126	206	296	177	154
Syphilis	928	1,333	1,037	1,346	15	44	20	31	52	35	43	33
Soft chancre	14	22	13	5	...	...	...	...	...	...	1	...
Gleet	213	196	280	239	5	7	...	...	4	4	1	2
Venereal warts	13	17	10	12	...	...	...	...	...	...	...	...
Gonorrhoeal ophthalmia	2	7	5	6	...	...	1	...	1	1	1	...
Venereal granuloma .....	...	...	1	3	...	...	...	...	...	...	...	1
Total	4,821	4,623	4,343	4,495	142	266	51	157	263	336	223	190

TABLE 2 (a).—Return of cases of Venereal Disease notified during 1931 and 1932, showing forms of disease, and age and sex of patients.

1931.	0 to 5		6 to 10		11 to 15		16 to 20		21 to 25		26 to 30		31 to 35		36 to 40		41 to 45		46 to 50		Over 50		Age not Stated.		Total.		Total.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		
	Gonorrhoea ...	3	35	5	47	15	20	297	146	701	176	617	108	334	42	259	26	158	13	87	4	70	6	13	2	2,559		625	3,184
Syphilis ...	14	13	7	17	8	8	29	33	91	52	109	46	112	34	75	34	80	19	69	19	217	20	11	3	822	298	1,120	
Soft chancre ...	...	...	...	...	...	...	3	...	2	...	1	...	4	...	...	...	...	...	3	...	1	...	...	...	14	...	14
Gleet ...	...	...	...	...	...	...	7	...	38	...	67	2	53	...	55	...	...	...	29	1	...	7	...	...	278	3	281
Venereal warts ...	...	...	...	...	...	...	1	...	1	3	1	3	...	...	1	...	...	...	...	...	...	...	...	...	3	7	10
Gonorrhoeal ophthalmia ...	5	1	1	6	1	7
Venereal granuloma	1	1	...	1
Total	22	49	12	64	23	28	336	180	834	231	796	159	503	76	390	60	267	33	180	23	295	26	25	6	3,073	934	4,017	

TABLE 2 (a).—Return of cases of Venereal Diseases notified during 1932, showing forms of disease, and age and sex of patients.

1932.	0 to 5		6 to 10		11 to 15		16 to 20		21 to 25		26 to 30		31 to 35		36 to 40		41 to 45		46 to 50		Over 50		Age not Stated.		Total.		Total.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		
	Gonorrhoea ...	2	39	2	38	4	5	290	95	698	180	587	105	403	47	204	30	146	10	192	14	82	5	14	1	2,595		569	3,164
Syphilis ...	5	16	4	11	9	9	31	35	123	76	147	47	146	36	130	38	102	30	125	25	227	24	11	4	1,059	351	1,410	
Gleet ...	...	...	...	...	...	...	8	...	31	...	49	...	58	4	45	...	31	1	10	...	3	...	1	...	236	5	241
Soft chancre ...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	1	...	1	...	...	...	1	...	...	...	3	2	5
Venereal warts ...	...	...	...	...	...	...	...	1	1	3	3	...	4	...	...	...	...	...	...	...	...	...	...	...	8	4	12
Gonorrhoeal ophthalmia ...	1	1	2	1	1	2	4	6
Venereal granuloma	1	...	1	...	1	1	4	...	4
Totals ...	9	56	6	49	13	14	329	133	835	261	787	152	612	87	440	68	281	41	237	40	312	29	26	5	3,907	935	4,842	

TABLE 2 (b).—Diagnostic examinations for Venereal Diseases made in the Microbiological Laboratory during the years 1929-1932, inclusive.

Year.	Gonorrhoea. (Smears and Urine.)	Gonorrhoea. (Complement Deviation Test.)	Syphilis. (Wassermann Reaction.)	Syphilis. (Kahn's Test.)	Syphilis. (Smears for Spirochetes.)
1929	4,924	3,737	9,160	8,249	43
1930	5,734	4,226	13,418	12,737	56
1931	5,714	3,627	12,700	11,866	107
1932	6,505	4,433	13,210	12,389	130

TABLE 3.—Showing Annual Attendance Returns at Public Clinics for treatment of Venereal Diseases, 1929-1932.

Year.	Attendances.			New Cases.					
	Males.	Females.	Total.	Gonorrhoea.			Syphilis.		
				Males.	Females.	Total.	Males.	Females.	Total.
<i>Royal Prince Alfred Hospital.</i>									
1929	29,261	7,126	36,387	515	141	656	166	70	236
1930	24,274	5,785	30,059	300	117	417	121	80	201
1931	29,588	7,104	36,692	248	120	368	88	76	164
1932	29,187	6,547	35,734	323	122	445	77	56	133
<i>Sydney Hospital.</i>									
1929	10,755	3,718	14,473	246	49	295	149	78	227
1930	10,284	4,241	14,525	170	72	242	179	67	246
1931	11,428	4,567	15,995	233	83	316	185	71	256
1932	13,258	4,889	18,147	125	36	161	157	58	215
<i>Royal Alexandra Hospital for Children.</i>									
1929	912	1,906	2,818	1	28	29	13	19	32
1930	731	2,466	3,197	...	35	35	15	43	58
1931	835	2,706	3,541	1	31	32	16	25	41
1932	917	2,595	3,512	...	17	17	11	25	36
<i>Royal South Sydney Hospital.</i>									
1929	3,215	522	3,737	138	2	140	14	7	21
1930	3,763	554	4,317	115	5	120	27	8	35
1931	3,706	1,082	4,738	116	6	112	23	6	29
1932	3,262	993	4,255	139	14	153	15	14	29
<i>Royal North Shore Hospital.</i>									
1929	3,893	1,853	5,746	76	30	106	3	10	13
1930	3,591	1,938	5,529	106	30	136	28	16	44
1931	3,946	1,513	5,459	85	13	98	13	9	22
1932	5,441	1,819	7,260	128	38	166	14	9	23
<i>Coast Hospital, Night Clinic for Syphilis (Men only).</i>									
1. Hospital Admission Depot, Head Office (Coast Hospital Staff).									
1929	9,875	...	9,875	...	...	...	436	...	436
1930	10,332	...	10,332	...	...	...	425	...	425
1931	10,653	...	10,653	...	...	...	386	...	386
1932	8,822	...	8,822	...	...	...	328	...	328
2. Coast Hospital, Little Bay.									
1929	6,438	...	6,438	...	...	...	...	...	...
1930	5,341	...	5,341	...	...	...	...	...	...
1931	6,932	...	6,932	1,000	...	1,000	...	...	...
1932	3,751	...	3,751	817	...	817	...	...	...
<i>Rachel Forster Hospital for Women and Children.</i>									
1929	...	5,404	5,404	...	103	103	...	68	68
1930	...	7,101	7,101	...	182	182	...	127	127
1931	...	8,760	8,760	...	192	192	...	99	99
1932	...	8,395	8,395	...	169	169	...	126	126
<i>Balmain District Hospital.</i>									
1930	321	775	1,096	...	4	4	11	19	30
1931	610	1,040	1,650	...	...	...	10	18	28
1932	844	1,151	1,995	...	...	...	15	13	28
<i>Parramatta District Hospital.</i>									
1931	194	114	308	7	4	11	11	1	12
1932	711	187	898	...	...	...	...	...	...
<i>St. George District Hospital, Kogarah.</i>									
Records unavailable before 1932.									
1932	60	40	102	12	4	16	4	1	5

SECTION I.—D.

TUBERCULOSIS DIVISION.

REPORT OF THE DIRECTOR FOR THE TWO YEARS 1931 AND 1932.

STAFF.

Director—Dr. H. K. DENHAM, B.A., LL.B., M.B., Ch.M., D.S.O., V.D.

1 Clerk, 4 Visiting Nurses.

The work of the Division during the past two years has again been directed towards popularising the work of the anti-tuberculosis dispensaries or clinics. Besides being a diagnostic centre, the clinic or dispensary must be regarded as an educative centre for patients and as a "clearing-house" to the sanatorium. It aims at securing for individual patients early diagnosis, prompt treatment and admission to a suitable sanatorium, and providing instructions for both patients and contacts in personal and domestic hygiene.

Notification.—Although notification of pulmonary tuberculosis is now compulsory over the whole of the State of New South Wales there are still some medical practitioners who fail to notify cases. Every effort is being made to impress on medical men their obligations in this important matter.

The total notifications numbered (1931) 1,588 and (1932) 1,485 a decrease of 329 and 432 on the total—1,917—for 1930; the decreases were, Metropolitan area, 114 and 182; Hunter River District, 19 and 14; Broken Hill District, 123 and 145; and the remainder of State 73 and 91. Details of the distribution and age and sex incidence of the notified cases are given in Table 1; and in Table 2 the monthly incidence of notified cases, and also the numbers of "To be visited" and "Not to be visited" cases.

TABLE 1.—Showing the age and sex incidence of the cases of Pulmonary Tuberculosis notified during 1931 and 1932.

Age Period.	Metropolitan Combined Sanitary District. Mean Population: 1931—1,337,410. 1932—1,341,390.						Hunter River Combined Sanitary District. Mean Population: 1931—201,050. 1932—202,460.						Broken Hill Combined Sanitary District. Mean Population: 1931—22,970. 1932—23,106.									
	1931.			1932.			1931.			1932.			1931.			1932.						
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.				
0-4 years	2	1	3	...	2	2	1	...	1	...	...	...	...	...	...	...	...	...
5-9 "	2	2	4	6	2	8	...	...	...	...	...	...	...	...	...	...	...	...
10-19 "	26	46	72	28	49	77	...	6	6	12	10	11	21	1	4	5	...	1	1	...	1	1
20-29 "	117	155	272	116	152	268	6	6	12	10	11	21	1	4	5	...	...	...	...	...	...	...
30-39 "	181	118	299	155	160	315	12	11	23	12	9	21	5	3	8	2	2	4	...	...	...	...
40-49 "	172	60	232	166	52	218	14	7	21	13	7	20	5	1	6	1	2	3	...	...	...	...
50 years and over	184	66	250	192	56	248	10	5	15	11	6	17	12	1	13	2	1	3	...	...	...	...
Age not stated	14	5	19	4	3	7	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
All ages	698	453	1,151	667	416	1,083	44	35	79	47	37	84	23	10	33	5	6	11	...	...	...	...

Age Period.	Remainder of State. Population: 1931—948,633; 1932—964,374.						Whole State. Population: 1931—2,510,083; 1932—2,531,330.					
	1931.			1932.			1931.			1932.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
0-4 years	1	...	1	...	...	...	4	1	5	...	2	2
5-9 "	...	...	...	2	3	5	2	2	4	8	5	13
10-19 "	10	16	26	8	12	20	36	60	105	37	66	103
20-29 "	26	45	71	33	48	81	150	210	360	150	211	370
30-39 "	54	32	86	32	31	63	252	164	416	201	142	343
40-49 "	48	17	65	45	12	57	239	85	324	225	73	298
50 years and over	50	22	72	58	21	79	256	94	350	263	84	347
Age not stated	2	2	4	1	1	2	17	7	24	5	4	9
All ages	191	134	325	179	128	307	956	632	1,588	898	587	1,485

Federal Capital Territory (1), F. 19 years (1932).

TABLE 2.—Showing monthly incidence of notified cases of Pulmonary Tuberculosis and also incidence of cases "To be Visited" and cases "Not to be Visited."

Month.	Metropolitan Combined Sanitary District.				Hunter River Combined Sanitary District.				Broken Hill Combined Sanitary District.				Remainder of State.				Whole State.			
	To be Visited.		Not to be Visited.		To be Visited.		Not to be Visited.		To be Visited.		Not to be Visited.		To be Visited.		Not to be Visited.		To be Visited.		Not to be Visited.	
	1931.	1932.	1931.	1932.	1931.	1932.	1931.	1932.	1931.	1932.	1931.	1932.	1931.	1932.	1931.	1932.	1931.	1932.	1931.	1932.
January	68	61	20	22	2	4	2	4	2	2	1	...	9	17	20	13	81	84	43	39
February	94	53	14	36	9	3	...	...	1	4	1	...	15	16	9	16	119	76	24	52
March	70	78	25	43	7	4	2	2	9	1	1	...	17	22	12	21	103	105	40	66
April	76	56	10	23	5	4	3	3	3	...	...	...	17	14	16	10	101	74	38	36
May	104	50	23	30	3	5	2	5	...	1	...	...	24	10	5	12	131	66	30	47
June	59	65	21	38	4	6	4	4	...	2	1	...	14	12	5	11	77	85	31	53
July	62	62	20	28	2	5	2	4	1	...	...	...	21	7	11	9	86	74	33	41
August	73	47	18	38	1	7	...	2	2	...	4	...	10	12	6	10	86	66	28	50
September	68	62	21	40	3	5	...	2	2	...	...	...	10	9	7	11	83	76	28	53
October	92	44	20	19	3	1	2	3	4	...	...	...	13	11	17	15	112	56	39	37
November	70	69	16	21	3	3	4	2	1	...	...	...	21	12	18	9	95	84	38	32
December	70	54	28	44	13	5	3	1	...	1	...	...	15	12	13	16	98	72	44	61
Totals	906	701	245	382	55	52	24	32	25	11	8	...	186	154	139	153	1,172	918	416	567

Of the 1,588 notified cases in 1931, 927 were seen in hospital or dispensary practice, and 611 in private practice. In only 57 of the 927 cases seen in hospital or dispensary practice were requests made that the patient should not be visited by a departmental nurse. Of the 661 cases seen in private practice, the notifying doctor requested that 350 of the patients should not be visited; the other 303 patients were visited by a departmental nurse. It would thus appear that private practitioners do not desire the services of a visiting nurse in about one half of the cases notified.

Deaths.

TABLE 3.—Showing the number of deaths from all forms of Tuberculosis in (a) Metropolitan, (b) whole State, during the years ended 31st December, 1931 and 1932.

	Metropols.			Whole State.		
	Males.	Females.	Total.	Males.	Females.	Total.
1931.						
Respiratory system	373	248	621	609	406	1,015
Meninges and nervous system	18	12	30	27	18	45
Other	16	21	37	36	29	65
Total	407	281	688	672	453	1,125
1932.						
Respiratory system	361	231	592	582	387	969
Meninges and nervous system	18	7	25	24	21	45
Other tubercular diseases.....	22	9	31	40	17	57
Total	401	247	648	646	425	1,071

Of the 1,125 deaths in 1931, 1,026 were notified by District Registrars on their occurrence as required by regulation. Arrangements are now in operation whereby District Registrars, when sending a notification of death from pulmonary tuberculosis to the Department, send a duplicate copy of such notification to the Local Authority for the district within which are situated the premises in which the death occurred. This action has been taken with a view to necessary disinfection of such premises being carried out promptly.

TABLE 4.—Showing the age and sex of the 1,026 and 969 persons whose deaths from Pulmonary Tuberculosis were notified during the years ended 31st December, 1931 and 1932, respectively.

Age Period.	Metropolitan Combined Sanitary District. Mean Population: 1931 ... 1,337,410 1932 ... 1,341,390			Hunter River Combined Sanitary District. Mean Population: 201,050 202,460			Broken Hill Combined Sanitary District. Mean Population: 22,970 23,106			Remainder of State. Mean Population: 948,053 964,374			Whole State. Mean Population 2,510,083 2,531,330		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
1931.															
0-4 years	1	1	2	...	...	...	...	...	...	2	2	4	1	3	4
5-9 .....	...	...	...	1	1	2	...	...	...	1	1	2	2	2	4
10-19	9	17	26	1	...	1	...	...	...	3	9	12	13	26	39
20-29	51	75	126	2	3	5	1	1	2	26	32	58	80	111	191
30-39	86	70	156	4	7	11	1	1	2	50	34	84	141	112	253
40-49	105	45	150	2	8	10	5	...	5	44	14	58	156	67	223
50 years and over	137	55	192	6	5	11	7	...	7	66	20	86	216	80	296
Age not stated	2	1	3	1	1	2	...	...	...	4	7	11	7	9	16
All ages	391	264	655	17	25	42	14	2	16	194	119	313	616	410	1,026
1932.															
0-4 years .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5-9 .....	...	1	1	...	...	...	...	...	...	...	6	10	13	24	37
10-19	9	18	27	...	...	...	...	...	...	4	31	30	76	109	185
20-29	47	70	117	7	7	14	3	1	4	19	31	50	113	119	232
30-39	75	72	147	8	11	19	6	1	7	24	35	59	113	119	232
40-49	112	37	149	7	9	16	4	...	4	31	19	50	154	65	219
50 years and over	155	49	204	10	5	15	3	1	4	58	14	72	226	69	295
All ages	398	247	645	32	32	64	16	3	19	136	105	241	582	387	969

The downward trend of tuberculosis in this State during the past 45 years is shown in appended Graphs 1 and 2.

Institutional Accommodation.—Table 5 shows the number of institutional beds at present available for the treatment of tuberculosis patients.

TABLE 5.—Showing Institutional Accommodation available for patients suffering from Pulmonary Tuberculosis.

Sanatoria and Hospitals.	Type of Cases Received.	Number of Beds.					
		1931.			1932.		
		M.	F.	Total.	M.	F.	Total.
1. Waterfall Sanatorium (under Government control)	Intermediate	293	124	417	280	136	416
2. Randwick Auxiliary Hospital (under Government control)	Late	60	30	90	60	30	90
3. Queen Victoria Homes (subsidised)—							
Thirlmere	Early female .....	...	54	54	...	54	54
Wentworth Falls	Early male	54	...	54	54	...	54
4. Red Cross Society (subsidised)—							
" Bodington " at Wentworth Falls	Early male and female .....	...	...	62	...	...	98
" Malahide " at Pennant Hills	Late male and female .....	...	...	21	...	...	21
" Southern " at Exeter	Male quiescent	20	...	20	20	...	20
(The above institutions work in full co-operation with the Tuberculosis Division.)							
R. T. Hall Sanatorium .....	.....	8	8	16	4	4	8
Private Hospitals (approximately) .....	.....	...	...	40	...	...	40
Repatriation Department—							
Prince of Wales Hospital .....	.....	65	...	65	65	...	57
Lady Davidson Home .....	.....	77	...	77	77	...	80
				916	...	...	938

Details of the numbers of patients treated at each Institution, and their condition on admission to, and discharge from, Sanatoria are given in Tables 6 to 8 below:—

TABLE 6.—Showing number of patients receiving Institutional treatment during 1931 and 1932.

	Queen Victoria Sanatorium, Wentworth Falls.	Queen Victoria Sanatorium, Thirlmere.	Red Cross Sanatorium, Wentworth Falls.	Waterfall Sanatorium.	Red Cross Hospital, Pennant Hills.	Coast Auxiliary Hospital, Randwick.	Red Cross Convalescent Home, Exeter.
1931.							
1. Number of patients in Institution on 1st Jan., 1931	53	51	56	407	16	84	18
2. Number of patients admitted during 1931	52	71	81	490	36	339	26
3. Number of patients discharged (including deaths) during 1931	56	76	82	483	32	336	25
4. Number of patients remaining in Institution on 31st December, 1931	49	46	55	414	20	87	19
5. Average daily number of beds occupied	47	47.59	46	407.7	18	84.9	18.51
1932.							
1. Number of patients in Institution on 1st Jan., 1932	45	52	55	414	20	107	17
2. Number of patients admitted during 1932	65	75	104	476	30	397	28
3. Number of patients discharged (including deaths) during 1932	63	79	95	487	30	395	24
4. Number of patients remaining in Institution on 31st December, 1932	50	48	64	403	20	108	11
5. Average daily number of beds occupied	48.3	47.5	58	394	20	...	17.4

TABLE 7.—Showing the average residence in days and condition on discharge from Sanatoria and Hospitals of patients under treatment during 1931 and 1932.

Condition on Discharge.	Queen Victoria Sanatorium, Wentworth Falls.		Queen Victoria Sanatorium, Thirlmere.		Red Cross Sanatorium, Wentworth Falls.		Waterfall Sanatorium.		Red Cross Hospital, Pennant Hills.		Red Cross Convalescent Home, Exeter.	
	No. of Patients.	Average Residence in Days.	No. of Patients.	Average Residence in Days.	No. of Patients.	Average Residence in Days.	No. of Patients.	Average Residence in Days.	No. of Patients.	Average Residence in Days.	No. of Patients.	Average Residence in Days.
1931.												
1. Arrested (A.) .....	...	...	...	...	...	...	3	1,985	...	...	...	...
2. Quiescent (Q.)	23	359	26	299	13	371	18	663	1	115	...	...
3. Much Improved (M.I.) ...	13	417	13	284	30	257	80	196	1	152	22	152
4. Improved (I.)	12	262	14	162	22	116	172	241	3	310	...	...
5. Stationary (S.) .....	...	...	8	100	10	134	21	13	4	149	...	...
6. Worse (W.)	7	149	13	151	4	195	90	168	1	117	3	201
7. Dead (D.)	1	469	1	215	3	129	91	309	22	165	...	...
Total	56	...	75*	...	82	...	475†	...	32	...	25	...
1932.												
1. Arrested (A.) .....	...	...	...	...	...	...	6	1,781	...	...	4	240.4
2. Quiescent (Q.)	33	351	30	254.9	30	316	23	249	2	320.3	...	...
3. Much Improved (M.I.) ...	20	300	25	265.5	24	236	0	000	2	255.5	10	210.3
4. Improved (I.)	6	210	14	206.5	15	123	129	241	10	106.1	9	125.6
5. Stationary (S.)	2	89	5	182.6	12	79	27	13	7	185	...	...
6. Worse (W.)	1	435	8	143.6	9	162	123	270	14	80.9	1	85
7. Dead (D.)	1	60	...	...	5	18	106	410	15	168.6	...	...
Total	63	...	79	...	95	...	482	...	50	...	24	...

* 1 Not classified.

† 8 Not classified.

TABLE 10.—Comparative Statement of work performed by visiting nurses in the metropolitan area for the years 1929-1932, inclusive.

Year.	Total Visits by Nurses.			Total Visits by Departmental Nurses.		No. of Homes visited by all Nurses.		No. of Visits paid by all Nurses.		Average Number of Visits per Patient per Year.		
	Departmental Nurses.	Non-Departmental Nurses.	Total.	Dispensary Cases.	Non-Dispensary Cases.	Dispensary Cases.	Non-Dispensary Cases.	Dispensary Cases.	Non-Dispensary Cases.	Dispensary Cases.	Non-Dispensary Cases.	All Cases.
1929 ...	4,023	5,610	9,633	2,455	1,568	1,720	533	7,872	1,761	4.5	3.3	4.2
1930 ...	7,052	4,826	11,878	3,618	3,434	1,780	1,080	8,444	3,434	4.7	3.1	4.1
1931 ...	8,170	5,205	13,375	4,305	3,865	2,046	1,022	9,510	3,865	4.6	3.7	4.4
1932 ...	5,178	5,596	10,774	2,990	2,188	2,497	835	8,647	2,127	3.5	2.4	3.2

It is considered necessary that more attention should be given to this important work, but this will only be made possible by the appointment of additional nurses.

Board of Control of the Campaign against Tuberculosis.—It is with regret that I have to report the loss, through death, of the services of the late Dr. C. P. Stewart, Principal Medical Officer, Education Department.

Dr. A. J. Collins has been appointed to succeed the late Russell Sinclair, Esq., as the representative of the Red Cross Society and Dr. A. E. Machin, Department of Education, to succeed the late Dr. C. P. Stewart.

During 1931 and 1932, the previous policy of the Board has been continued and many important aspects of the campaign have received consideration in the endeavour to improve the welfare of the tuberculous patient and his family, and to generally combat the disease.

It is with much satisfaction that the Board are able to announce through the courtesy and co-operation of Professor Lambie, Dean of the Faculty of Medicine, that the study of Tuberculosis has been brought more prominently into the medical course at the Sydney University.

In addition to receiving instruction by means of lectures and demonstrations, each student will be required in future, to attend for a definite period at one of the Anti-Tuberculosis Clinics for practical work in this subject.

Publicity.—During the year publicity work in connection with tuberculosis has been continued. This has taken the form of display of models and posters during Health Week; the distribution of leaflets on the disease, its treatment, and the precautions to be taken to avoid infection; and the publication of articles dealing with the disease, etc., in the country and suburban newspapers.

The local film has been shown at numerous country centres and attracted considerable attention. This film was shown continuously in the departmental section of the Health Exhibition held in the Sydney Town Hall in October; it is also used at the lectures at the School of Public Health and Tropical Medicine at Sydney University.

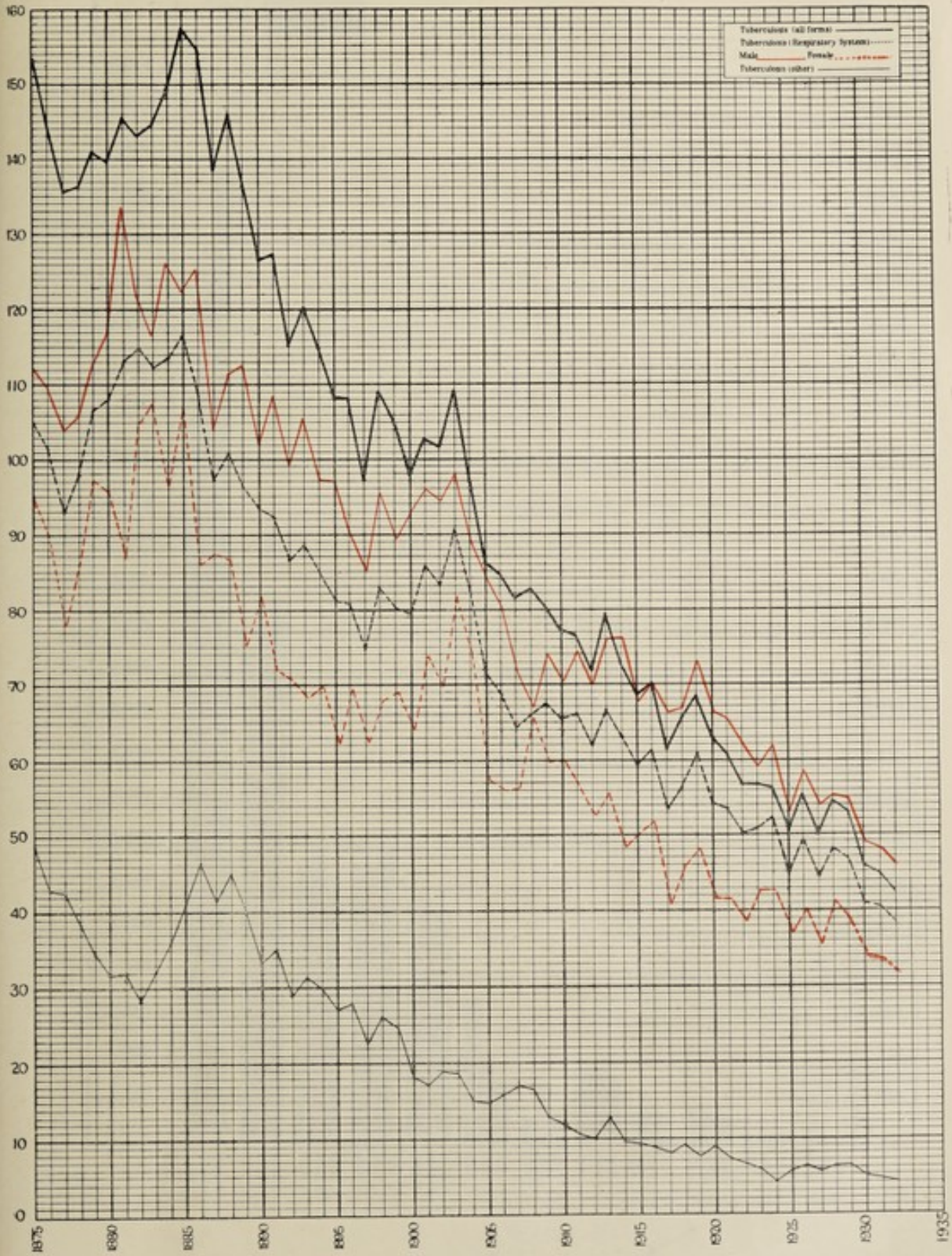
Urgent Requirements.—The following are the more important requirements in furtherance of the campaign against tuberculosis:—

1. Visiting nurses: two additional nurses are required to more effectively cope with the work in the metropolitan area.
2. A clinic in the western suburbs which could serve both the Liverpool and Parramatta districts; and a clinic at Broken Hill.
3. The establishment of preventoria. These are homes for undernourished children, and as the name indicates their purpose is to prevent the effects of poor health and unhygienic conditions in childhood from manifesting themselves in later years.
4. Suitable accommodation for patients who are not in an early enough stage of the disease to warrant their admission to the Queen Victoria Homes, and who could pay a moderate sum (one to two guineas a week) for their maintenance.

Co-operation.—Thanks are due to the members of the Board of Control and to the various hospitals, associations, and other agencies for active co-operation throughout the year in the work of this Division.

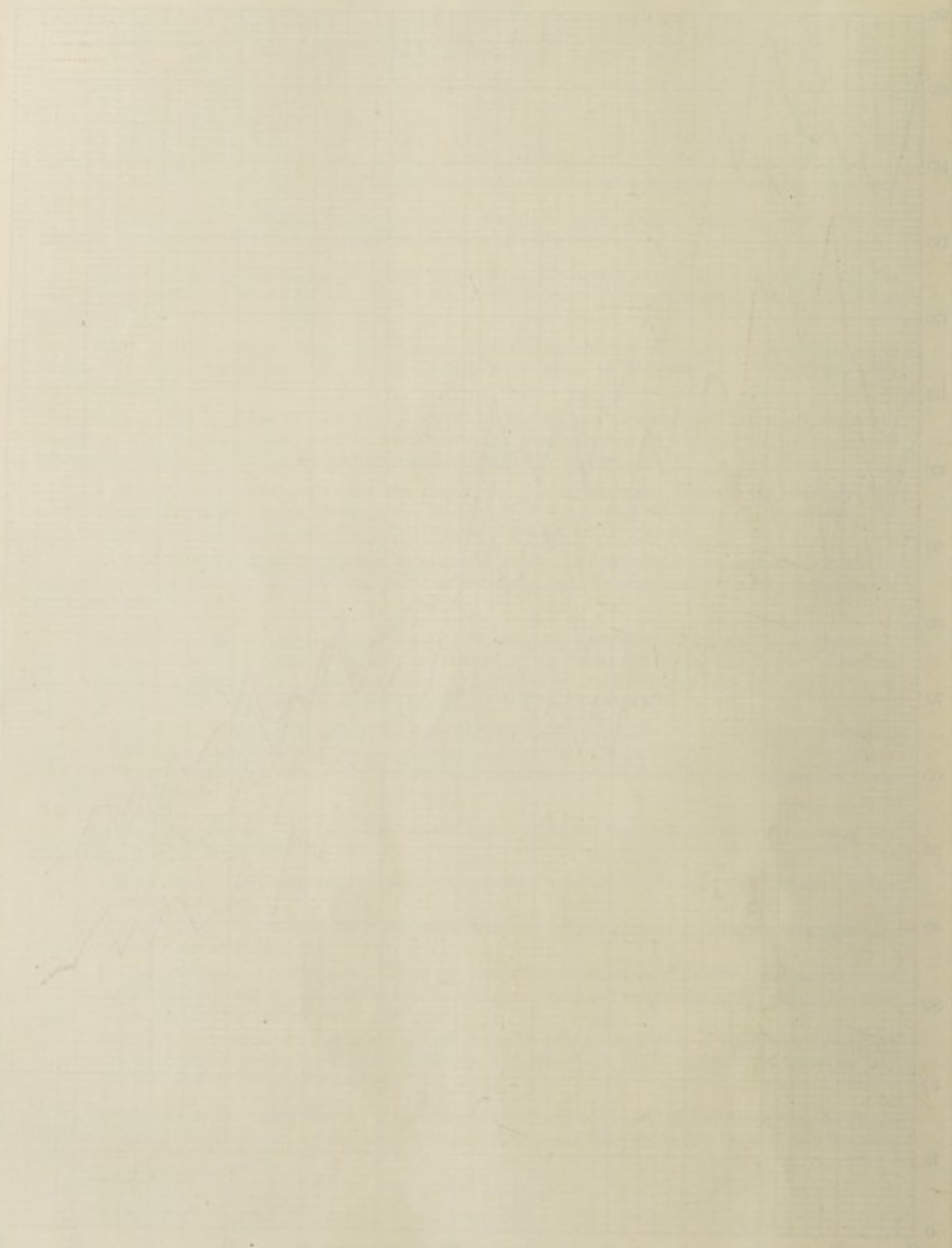
TUBERCULOSIS.

Annual Death Rate per 100,000 of the Population in New South Wales, 1875-1932.



EXPERIMENTAL

THE EFFECT OF TEMPERATURE ON THE RATE OF REACTION

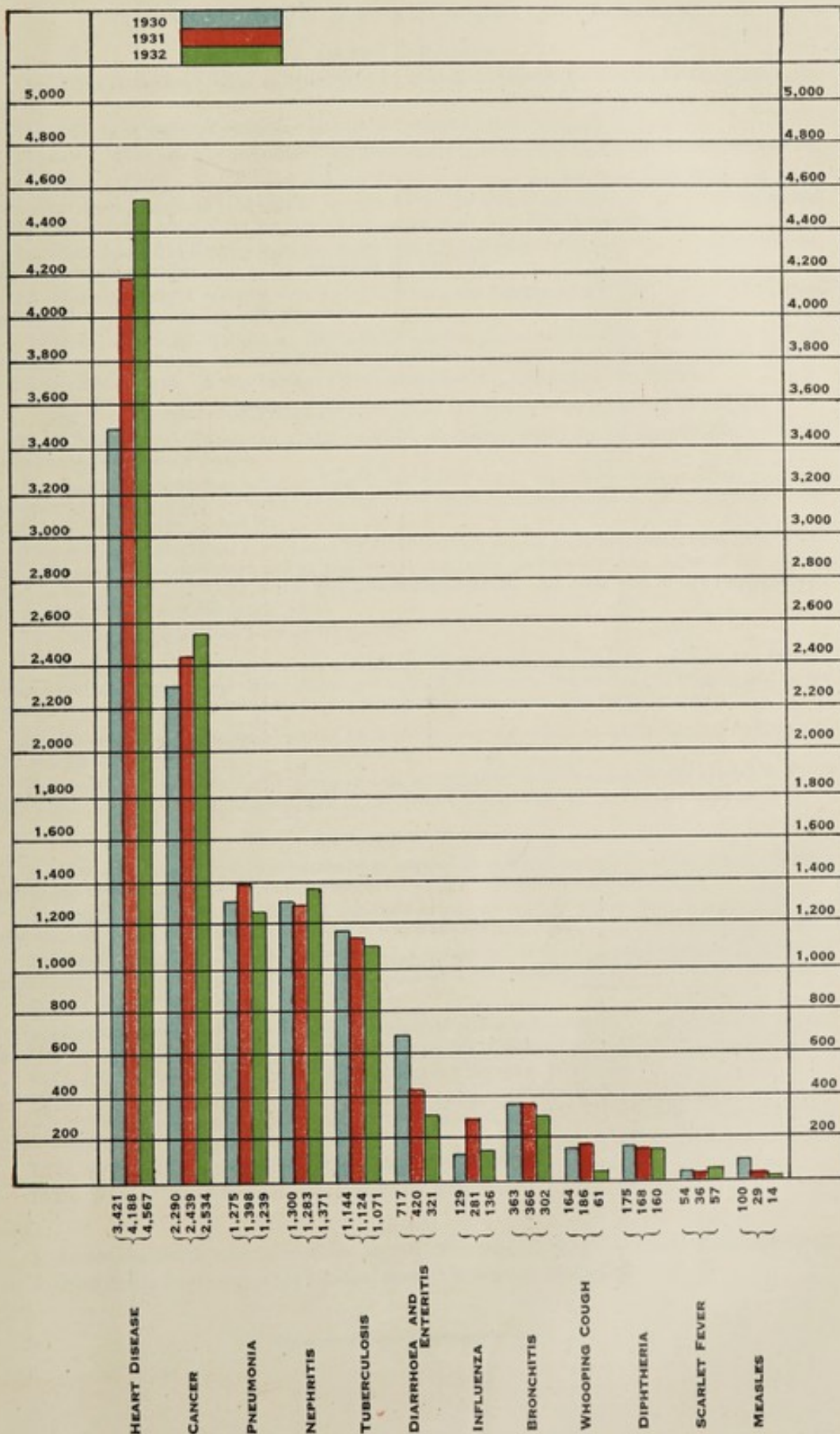


TUBERCULOSIS.

Graph 2.

NEW SOUTH WALES.

Total Deaths from Some of the Principal Diseases, 1930-1932.



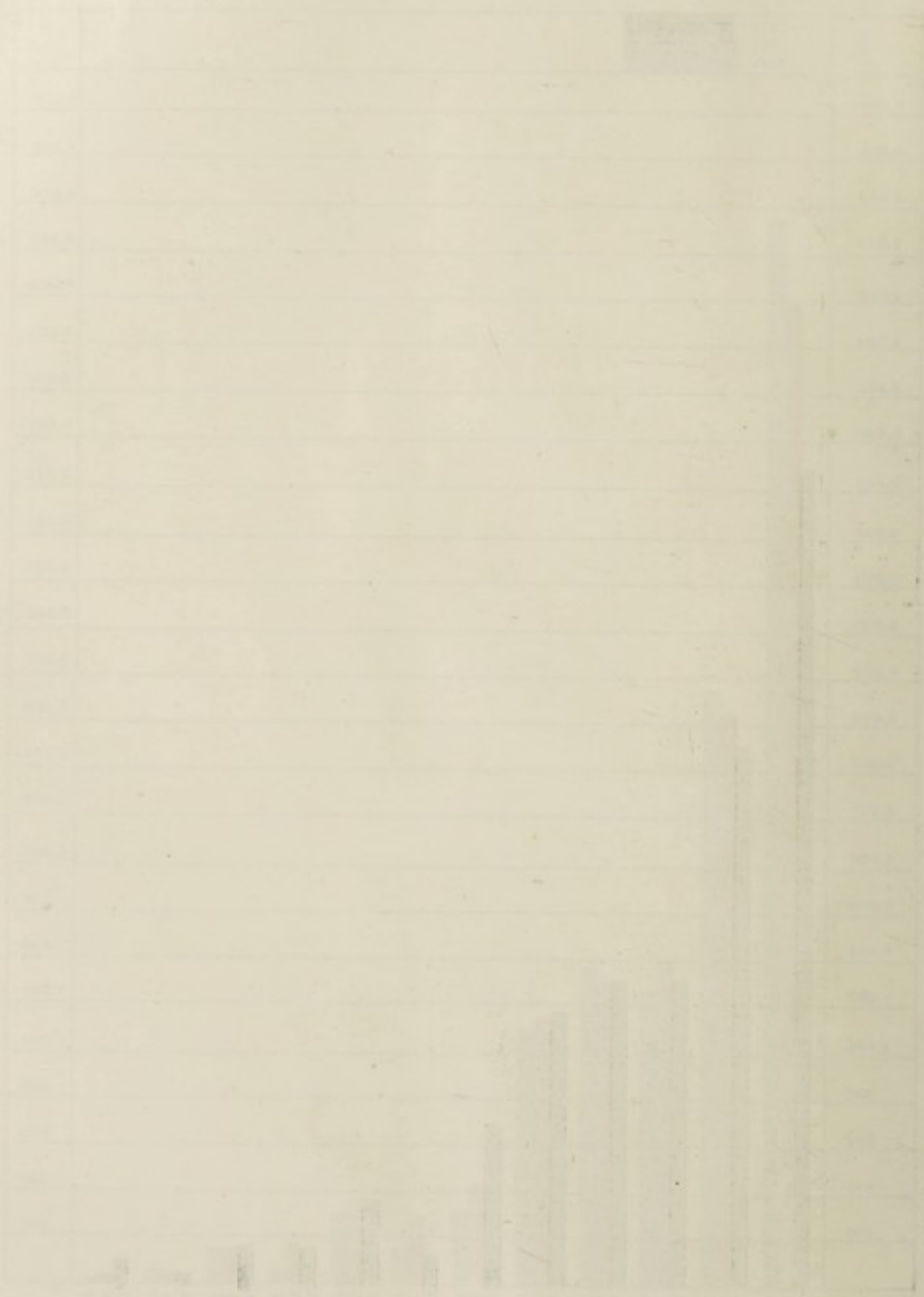
NOTE—IN 1895, TUBERCULOSIS OCCUPIED FIRST PLACE AS A CAUSE OF DEATH; IN 1928, IT HAD FALLEN TO FOURTH PLACE; SINCE 1928, IT HAS OCCUPIED FIFTH PLACE.

REPORT

NO. 100

BY

THE



TABLE

APPENDIX "A."

SCHEME FOR THE CLASSIFICATION OF TUBERCULOUS PATIENTS.
(Formulated by Board of Control of the Campaign against Tuberculosis.)*On First Examination.*

The extent of the lung lesion as determined by clinical findings to be denoted by the symbols L1, L2 and L3.

The Toxicity or degree of systemic effect to be denoted by the symbols T1, T2 and T3.

The extent of the lesion as determined radiographically to be denoted by the symbols R1, R2 and R3.

Definitions.—L1—Lesion of slight severity affecting at most the apices of both lungs not lower than the spine of the scapula and the clavicle on each side or the apex of one lung not lower than the second rib in the front and the spine of the scapula behind, or an equivalent area in any one lobe.

L2.—Lesion of slight severity more extensive than L1, but affecting at most the volume of one lobe, or severe disease extending at most to the volume of one half lobe.

L3.—Lesion of slight severity more extensive than the volume of one lobe; severe lesion more extensive than the volume of one half lobe.

NOTE.—By lesion of slight severity is to be understood disseminated foci of infiltration or slight fibrosis; by severe lesion, consolidation, excavation or dense fibrosis—in each case as indicated by the obvious physical signs. A small area of dry pleurisy should not exclude a case from L1.

For the purpose of classification, the right upper and middle lobes are to rank as one lobe.

T1.—Constitutional disturbance absent or slight, as judged mainly by the temperature, pulse-rate and effect on nutrition and strength.

For example, temperature after an hour's rest should rarely exceed 99 degrees in the mouth at maximum or, if higher, should be reducible to the lower figure by a week's rest in bed. Pulse rate after an hour's rest should rarely exceed 90.

T3.—Severe constitutional disturbance or deterioration; one or more symptoms present in severe degree. For example, temperature during rest at the maximum persistently over 100·8 in the mouth, or 101·3 in the rectum; pulse-rate during rest persistently over 96. All cases with severe complications, whether tuberculous or not, fall in this grade.

T2.—All cases intermediate between T1 and T3.

NOTE.—Rectal temperatures are preferable; when mouth temperatures are used, the thermometer should be kept in the closed mouth for at least 5 minutes. In the case of women, add to the temperature limits given 0·6 degrees for the premenstrual rise which may normally occur.

R1, R2 and R3 to be expressed on the basis of the same definitions as for the clinical findings, i.e., L1, L2 and L3.

The presence of tubercle bacilli in the sputum at any time to be denoted by the symbol B+. If tubercle bacilli have never been demonstrated in the sputum at any time the symbol B— to be used.

On Subsequent Observation.

A. Arrested.—A case should not be classed as arrested until it has been quiescent two years. Sputum to be free on at least three consecutive occasions at intervals of one week prior to discharge.

Q. Quiescent.—I.e., no symptoms of tuberculosis and no signs of tuberculosis except such as are compatible with a completely healed lesion and in which the sputum, if present, is free from tubercle bacilli.

M.I. Much Improved.—I.e., the condition is not quiescent but (i) the general health is good, (ii) the signs and symptoms of tuberculosis are materially diminished, (iii) working capacity is more or less restored.

S.—Stationary. W.—Worse. D.—Dead.

Subsequently the Board decided on the following standards to be adopted by the Examining Medical Officers for the various institutions with regard to the suitability of applicants for admission:—

L1T1, L2T1.—Early case, suitable for Queen Victoria Homes or Bodington.

L1T2.—To be kept under observation in bed for 14 days—if marked improvement, suitable Queen Victoria Homes or Bodington; if no improvement, suitable for Waterfall; if retrogression, suitable for Hospital.

L2T2, L3T1, L3T2.—Intermediate case, suitable for Waterfall.

L1T3, L2T3, L3T3.—Advanced case, suitable for Hospital.

Graphs.

1. Annual death-rate from Tuberculosis per 100,000 of population in New South Wales 1875-1932.
2. Total deaths from some of the principal diseases New South Wales 1930-1932.

SECTION I.—E.

DIVISION OF INDUSTRIAL HYGIENE.

REPORT OF THE MEDICAL OFFICER OF INDUSTRIAL HYGIENE FOR THE YEARS
ENDED 31ST DECEMBER, 1931 AND 1932.

Staff: Medical Officer of Industrial Hygiene, CHARLES BADHAM, B.Sc., M.B., Ch.M., D.P.H.;
Physicist Assistant, H. E. RAYNER, B.Sc.; Engineer Assistant, H. D. BROOSE, B.E.

This Division undertakes the investigation of hazards to health in factories, mines and industry generally; the ventilation of theatres, cinemas, and other places; the examination of factory children; and the diagnosis of cases of occupational disease.

PULMONARY DUST FIBROSIS.

Our work on the study of dust diseases of the lungs, as mentioned in the last report, has continued, and interesting and important results have been obtained. With Dr. Taylor, of the Government Analyst Branch, the study of the lungs of coal-miners has progressed. Elsewhere* we have published a preliminary account of the chemical analysis and pathology of the lungs of coal-miners in New South Wales. A summary of this work states:—

The industrial history, chemical analysis and pathology of the lungs of 31 individuals are given, of whom 19 worked as coal-miners, some of whom had coal-miner's lung, and 10 had pulmonary fibrosis, due to their various occupations.

A method of analysis was employed by which it is considered that the free silica not previously determined in any series of lungs is correctly estimated.

A case of nodular pulmonary fibrosis in a coal-miner not due to free silica, but to the carbon or the combined silica of coal dust (silicates) is described.

A case of non-tuberculous cavitation in silicotic fibrosis in a foundry worker is described.

The essential features of coal-miner's lung—upper lobe consolidation, fibrotic nodules, non-tuberculous cavitation, and coal-dust accumulation, as found in various lungs—is described.

A criticism of radiological practice is made, and a discussion on medico-legal aspects is given.

EXPERIMENTAL DUSTING CHAMBERS.

The action of dusts found in coal-mines has been investigated in four large dusting chambers on some 250 animals, the majority of which have been exposed for two years. This work, which is planned to last for some years, had a fortunate beginning; during the first year the loss of animals through disease and accident was minimal (about 8 per cent.). Where the exposure has been to coal, shale, or limestone dust, or a mixture of these, the death-rate in the second year has also been very small, but 50 per cent. of the animals exposed to quartz for two years have died. The great majority of the quartz series of animals died from the consolidation of the lungs by dust cells, a stage of massive consolidation has resulted with great hypertrophy of the tracheo-bronchial glands in advance of, but in line with, the conditions so far described by Gardner. This gross development of dust-cell consolidation and early fibrotic changes, which occurs about the 700-day stage of heavy quartz dust inhalations, is a useful guide to future work and in allotting the time of exposure to quartz dust and the time to be allowed for the fibrotic reaction of the lung tissue.

Our knowledge of the technique of this work, which includes numerous difficulties of dust suspensions and dust sampling, as well as the study of pathological changes in the lungs, is progressing satisfactorily.

The investigation of other dusts alleged to be inimical to health has also been undertaken in these chambers.

LEAD POISONING.

In previous years the accumulator factories have been a source of concern to me, but I am pleased to report that the incidence of lead poisoning in the industry has, during the year 1931, reached a minimum. Much of this improvement is due to the assistance given by the management of the two largest factories by providing medical inspection for the personnel. In each of these places, no cases of lead poisoning were reported for the year, and by alternating non-lead processes with lead work they have been able to maintain their trained staffs unchanged. I have been able to assist their medical officer by the examination of blood smears in doubtful cases. At each fortnightly examination he examines the haemoglobin and urine of each lead process worker, and, in selected cases, makes a blood smear which is examined and punctate basophilic red cells enumerated.

* Coal Miners' Lung, (Badham, C., and Taylor, H.B.), *Medical Journal of Australia*, vol. 1, 1933, p. 511.

If medical supervision could be extended to the smaller factories, the lead-poisoning hazard from the manufacture of electric accumulators would be greatly reduced.

The accumulator industry was, however, indirectly responsible for two severe and one minor case of lead poisoning. These men were engaged recovering lead from old battery plates, etc., in small furnaces. In one case the work was discontinued after the man became incapacitated. In the other, I visited the works and recommended improvements in handling the plates which should minimise the risk, but whilst this work is done without medical supervision and periodical examination of the personnel, the hazard will exist.

In 1932 several new accumulator factories began to manufacture and within a few months cases of poisoning came under my notice. Since then a number of employees have been severely poisoned.

Medical inspection has been provided in the larger of the new factories similar to that in the other factories, but cases are still occurring. Improved ventilation and working conditions in the mixing and pasting departments will, I hope, reduce the incidence, but the whole factory is congested and badly designed, so that non-lead workers are exposed to lead dust. The lead reclaim and oxide plants are enclosed, and as long as they are allowed to remain in their present position workers at or near them may be poisoned. Our difficulties in bringing this factory up to the standard of the others are increased by the management failing to appreciate that the lead dust in the air of this factory makes lead poisoning inevitable.

In one of the smaller factories, which employs five or six hands and specialises in plate making, three men have been severely poisoned—one of them a second time. Owing to unsatisfactory working conditions the factory was recently moved to another building, and a carpenter engaged for one month in dismantling and re-erecting the benches and tables was badly poisoned.

These smaller places, where there is no medical inspection, will always be a source of lead poisoning.

SPRAY PAINTING, ETC.

At the request of the Minister for Health, I examined 50 spray painters and painters' labourers employed at the Chullora Railway Works. The spraying was done in a large open building with some through ventilation. Few showed any decrease in haemoglobin, and of 34 painters examined 16 showed punctate basophilia varying from 50 to 800 basophils per million red cells, and 5 labourers out of 16 showed stippling varying from 50 to 100 per million red cells. No other marked changes in the blood picture were noted.

An inspection was made of the personnel engaged in the use of pneumatic paint-removing machines on an old railway bridge. From an examination of the blood of each man, it appeared that they were inhaling some lead dust, but that when working in the open the amount of dust was not great. The greatest danger was when using a chisel-shaped tool in confined spaces. I advised the use of goggles and a simple form of mask for obviously dusty operations.

TETRA-ETHYL LEAD.

The question of allowing the mixing and distribution of ethyl lead petrol came up for consideration, and I advised that such a practice should be permitted by the State authorities, subject to these special provisions:—

- (1) That any license issued should be temporary, and in this period the mixing and distributing plants should be regularly inspected and the personnel medically examined for evidence of lead poisoning.
- (2) That the recommendations of the Final Report, Departmental Committee of the Ministry of Health, on ethyl petrol be followed.

I have seen at the Commonwealth Oil Refinery Works, Sydney, the conditions under which the mixing is carried out. The mixing plant is of the same design as that used at Brisbane, Melbourne, and elsewhere, and I am satisfied that the equipment provided and the periodical medical examination of the personnel will prevent severe cases of lead poisoning under normal conditions, but as tetra-ethyl lead is absorbed through the skin, cases may arise from accident.

At each medical inspection by Dr. Fairley of the Sydney men engaged in mixing the lead petrol, I have examined the blood slides taken for the presence of punctate basophilia. There is definite evidence of a lead intake, only one slide out of nine failing to show basophilia, the highest reading being 1,000 per million red cells.

I have had several of the canisters used in the masks analysed for the presence of lead, but until a normal control has been done the small values obtained cannot be appreciated.

ARSENIC POISONING.

Following on complaints of the lack of hygienic conditions at the Mole River arsenic works, I visited the mine and refinery on 5th November, 1931. At the time of my inspection one man was seriously ill in the Tenterfield Hospital, and others have been treated by the local doctors for dermatitis and other complaints found in arsenic workers.

The works are situated about 25 miles from Tenterfield, and the plant, which has been installed for over twelve months, had been producing 30 tons of arsenic per week, but had closed a few days before I saw it.

Most of the arsenic is used for prickly-pear spraying, and is supplied in the form of arsenic pentoxide, but arsenic trioxide is also produced.

The ore is obtained from a mine close to the refinery. After being crushed and graded, the largest pieces are roasted in lump ore furnaces (pyrites kilns), and the arsenic trioxide driven off and collected in a flue. The smaller pieces of ore are treated in a special furnace, the heat being supplied by producer gas. The fumes from this furnace are also collected in the flue.

The trioxide is scraped from the bottoms of the flues into trucks with a long wooden shovel, and either delivered into large earthenware retorts for preparation of arsenic pentoxide or into vertical containers for packing. The arsenic formed in the far end of the flues (about 25 per cent. of the total) is too light for use, and has to be passed through the producer gas furnace. This part of the work appears to be distinctly dangerous, as it is shovelled into the furnace from a heap placed nearby. The pentoxide is formed by treating the trioxide with nitric acid. This product is granular, and no dust is formed in handling or packing.

The men employed packing the trioxide are exposed to the most dangerous part of the work, and several, including the man admitted to Tenterfield Hospital, have had to seek treatment. Under the present methods, it would be impossible for the packers to escape the effects of the dust.

In "pulling" the trioxide from the flues, the men are also exposed to the dust, but the work is intermittent, and openings are in such a position that the prevailing winds help to minimise the exposure.

There is little danger from arsenic in the mining or crushing operations.

The following table gives the details of an examination of 7 men who had been employed at the refinery:—

No.	Work.	Arsenic in Hair. Mgms. per 100 grms.	Remarks.
1	Furnaceman, 2 years. Very little work on flues.	19.5	Has had slight face rash; not present now. No complaints.
2	Stills, 1½ years	41.0	No complaints. Odd pimple. Nails, two "patches."
3	Stills, two years	16.5	No complaints. Nails, one "patch."
4	Furnaces, 2 years	6.2	No complaints.
5	Pentoxide plant, 1½ years	37.0	Redness of eyes. Nails, two "patches."
6	Furnace, 8-12; pulling, 4-12	40.0	Sore in nose and under arms.
7	Furnace, 9-12.....	28.0	Some boils.

"Patches" refer to small white marks found on the nails.

I saw the worker who had been in hospital for one month. He had been employed at arsenic stills for some years, and for two years at the Mole River pulling and packing arsenic (all night work).

On the 1st September, 1931, he was taken to hospital. He then complained of headache, and was retching and coughing blood, and had had soreness of the chest and diarrhoea for one month. He stated that he had ten or twelve motions a day, depending on the gas coming from the baffles, which, in turn, depended on the direction of the wind. He had had a very sore throat and cough for two months, and could not speak so that his wife could understand him. He had lost two stone in weight and had attacks of nausea daily with epigastric pain and colic. He had a running nose and sore eyes for some time.

He gave a history of headaches, pains down legs, soreness of calves, and numbness of hands and feet. There were scars on forehead coming from ulcers eighteen months ago, and much pigmented scars of ulcers of arms, legs and feet. There was an ulcer of the penis. Motor paresis of hands was noted, and pigmentation of the flexures of the elbows. He has an ulcerated septum. A wound from an operation for empyema was healing.

His haemoglobin was 65 per cent., and the blood slides showed 700 basophilic red cells per million. The Wassermann reaction was negative.

His hair and nails analysed about thirty days after leaving work showed:—

Hair: 300 mgms. of arsenic per 100 grms. of hair.

Nails: 600 mgms. of arsenic per 100 grms. of nails.

About fifty-five days after leaving work his hair was analysed again. It contained 105 mgms. per 100 grms. of hair.

His hair and nails were analysed 546 days after leaving work.

Hair: 140 mgms. of arsenic per 100 grms. of hair.

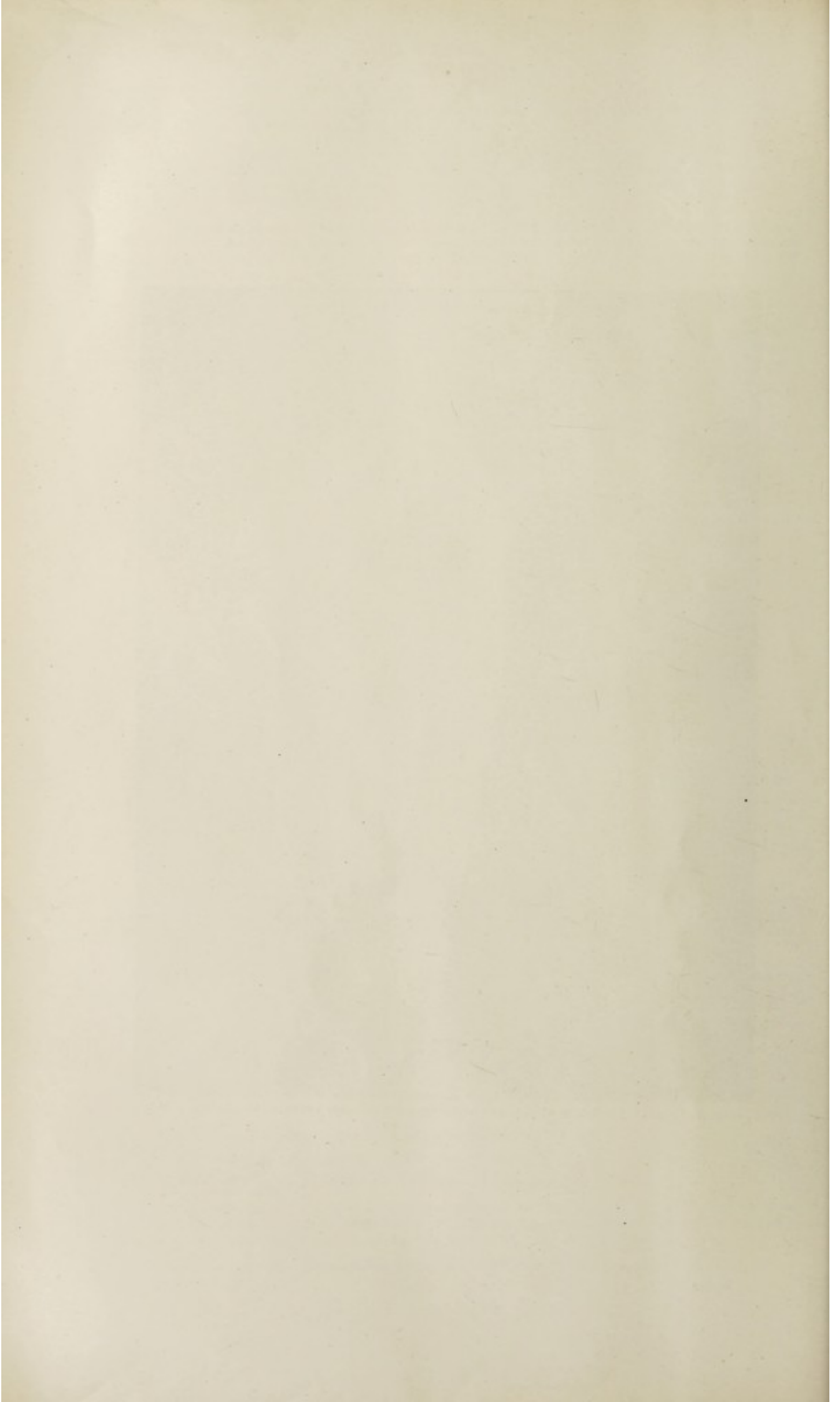
Nails: 37 mgms. of arsenic per 100 grms. of nails.

At this time he had a number of pigmented ulcers of the right leg and back, and a rash on chest and forehead. He states that the ulcers heal up and break out (see photograph). His speech was hoarse and he complained of cough, nausea and vomiting after meals. He has gained weight.

Blood examination: Haemoglobin, 100 per cent.; red cells, 6,000,000.; white cells, 8,000.



Pigmented ulcers of the right leg of an arsenic worker taken 546 days after leaving work. (See text p. 64.)



Local medical men had examined a number of other employees, several of whom had been treated for perforated septum. These men had left the mine a few days before my inspection.

Baths are supplied and the men are required to have a shower and change their clothes before leaving work.

The refinery is about 100 yards above the Mole River, from which the water supply for the employees is pumped. The ground slopes fairly steeply towards the river, and contamination of the supply is probable. The mine will probably reopen in a few months, and consideration might then be given to prevention of contamination of the water supply.

I recommend that if the refinery be restarted :—

1. The men engaged in "pulling" and packing arsenic trioxide require protection, the nature of which is a matter for further consideration.
2. That the packers and "pullers" be changed to less hazardous work after two months, and not be put back to this work under two months.
3. A more efficient method of packing be employed, such as under-exhaust ventilation, or by totally enclosing the containers during filling.

DIAGNOSTIC VALUE OF ARSENIC IN HAIR.

Arsenic in the hair in workers exposed to arsenic powder or vapour or solutions may arise from two sources. It may be arsenic deposited by excretory process, or from contact. For this reason arsenic in the hair of workers in arsenic may only be of value for determining exposure of individuals to arsenic.

BAKERS' DERMATITIS.

Apart from one or two cases seen in the early part of 1931, the dermatitis due to persulphate, which affected a number of men in 1929 and 1930, has disappeared.

The use of accelerators in bread-making was discussed at a conference arranged between officers of the Department of Health and interested parties.

VENTILATION AND ILLUMINATION.

The routine examination of the ventilation of cinemas and theatres has continued. The ventilation is gradually improving, and the use of mechanical ventilation is extending to the suburban picture theatres. In one of these a plenum plant has been installed capable of changing the air from nine to fourteen times per hour. On the night of inspection the theatre temperature was within 1 deg. F. of outside temperature, and the average air movement 128 feet per minute. This plant should give satisfactory air conditions, even in our most trying weather.

Basement shops and basement restaurants, office buildings, etc., have received our attention.

Following on complaints of bad ventilation, bad illumination, dirtiness, and three deaths from tuberculosis in the past two years among the clerical workers employed on the ground floor of a Government office, I was asked to make an inspection of the building.

I found that the staff had good grounds for complaint, that the shelves, walls and large accumulations of files were dusty and insufficiently cleaned. The absence of dressing rooms and luncheon rooms adds to the general unsavouriness of the floor, and would not be tolerated in a good-class factory.

Illumination.—Average light on cash desk, 3.0 foot candles.

„ „ tables, 2.0 foot candles.
 „ „ typistes' tables, 2.1 candles.
 „ „ cabinets, 1.3 foot candles.

Ventilation.—Average air movement, 16.5 feet per minute.

Average carbon-dioxide reading, 18 parts per 10,000.

Volume of room, 55,000 cubic feet.

Air change, one change per hour.

The recommendations were :—

1. That the general cleanliness of the floor be much improved, and that means for vacuum cleaning of shelves, etc., be installed.
2. That the ventilation of the floor be improved so that about eight changes of air per hour are obtained.
3. That the illumination at every working spot should be 6 foot candles.
4. That a complete medical examination be made of the personnel of this floor, including radiographic examination.
5. That proper luncheon and dressing rooms be provided for the staff.
6. That as this floor is unfitted for the purpose of housing a large clerical staff under healthy conditions, the provision of hygienic accommodation elsewhere is recommended.

I was also asked to investigate a complaint regarding the illumination at another Government office. I found the complaint of glare well-founded, due to the use of direct lighting and high-candle-power globes. I recommended that the system be changed from direct lighting to semi-indirect.

VENTILATION OF LEGISLATIVE COUNCIL CHAMBER.

This Division investigated the ventilation of the Legislative Council Chamber on 8th March, 1932. A series of temperature, humidity, Kata thermometer, and carbon-dioxide readings were made and are shown in the attached table.

The Chamber is ventilated by natural means, and during my tests practically all available windows and doors were open. Including the public, approximately eighty people were present in the Chamber.

The construction of the Legislative Council Chamber is such that it will readily transmit heat and cold, and will be hot in the summer and cold in winter. An iron roof and unventilated attic are factors that are adverse to comfort.

With all available windows and doors open, the air change in the building is fair; with a crowded house and little external air movement, oppressive conditions arise. The chief factors in these oppressive conditions are the lack of air movement and the increase of temperature.

To obtain excellent conditions of ventilation and comfort, in the circumstances it would be necessary to instal a modern plenum and cooling plant. Such a plant would cost several thousand pounds, and it would be difficult to justify its installation in such a structure as the Legislative Council Chamber. But the lack of air movement, which is the chief factor in the complaint of ill-ventilation, could be removed by the installation, at small cost, of suitable noiseless fans.

Throughout the Chamber, the rate of air movement was found to be 20 feet per minute or less under circumstances in which I would demand 70 feet or more for comfort.

I made a report on the ventilation of the Legislative Assembly Chamber on 22nd February, 1927, and suggest that this earlier report might also be considered along with the present.

I recommend the immediate installation of three floor column type gyrating fans, similar to the Westinghouse pattern, along each side of the Legislative Council Chamber between the two rows of seats, and two such fans along the back seats and in the newspaper and Hansard gallery.

If this is done, and every means taken to keep open available doors and windows in humid weather, a great improvement would result in the comfort of those present.

TEMPERATURE AND HUMIDITY.

TABLE showing the temperature, humidity, air movement, and carbon-dioxide readings in the Legislative Council Chamber on 8th March, 1932. During the tests 11 windows on southern wall and 4 doors were open.

Position.	Time.	Dry Bulb. ° F.	Wet Bulb. ° F.	Relative Humidity. per cent.	Absolute Humidity Grains per cub. ft.	Dry Kata.	Air Movement. Feet per min.	Air Movement Required for Comfort. Feet per min.	Carbon- dioxide Reading. Parts per 10,000.	Remarks.
Outside	p.m. 4 30	73	68	78	6.8	...	...	...	...	Close day, little wind. Prior to commencement of session. About 20 people in Chamber, including public.
Centre of Chamber	4 30	76	70	74	6.8	...	...	...	...
Behind President's Chair, south side.	4 35	76.5	70.5	74	7.2	3.51	19	70	...	Open window 6 feet away.
" " " " " "	4 50	...	...	...	...	...	...	...	5	Open door behind this posi- tion.
Behind President's Chair, north side.	5 0	77	70	71	7.1	3.37	18	70	5	
Public portion, ground floor.	5 20	76	70	74	6.8	3.48	16	62	9.5 7	55 people on ground floor. 25 people in gallery.
Outside	5 30	74.5	68	71.5	6.6	...	...	...	...
Public Gallery	5 45	78	70	67	6.9	3.30	20	85	6	25 people in gallery.
Outside	5 50	74	68	74	6.8	...	...	...	...
Reporters' Gallery	6 5	77	71	74	7.4	3.35	17	75	7	
Hansard Gallery	6 20	77	70	71	7.1	3.24	15	70	7.5	
Outside	6 30	72	67	77	6.5	...	...	...	...

PRINTING INDUSTRY.

At the request of the Commonwealth Department of Public Health, my Division made an investigation into the illumination in the printing industry. An inspection was made of a number of typical factories, and the illumination used for the most important processes was measured with a Macbeth illuminometer. Special attention was paid to hand composing, linotype machines, reading rooms, and letterpress and lithographic printing. The amount of illumination for these processes varied markedly in different factories, and in many cases was much below the minimum recommended by the Medical Research Council for use in fine work. Objectionable fixtures, such as glare, shadows, unsuitable shades, care and cleanliness of fittings, walls, etc., were noted.

Generally the buildings may be divided into two classes, one class erected specifically for printing works, and the other for general factory and warehouse work. The former were mostly built on selected sites, with window illumination on at least three sides, and the latter had restricted illumination. The natural illumination in one type was in most cases good, and in the other type poor, making it necessary to use artificial illumination at all times, except at places adjacent to windows.

With regard to artificial illumination, there is a lack of knowledge of empirical illumination laws, and much useful light is wasted owing to faulty placing of type-frames, cases, tables, etc. Much light was lost owing to uncleaned windows and dirty shades and walls.

SPRAY-PAINTING REGULATIONS.

I was asked by the Chief Inspector of Factories to comment on the draft of proposed spray-painting regulations, and I strongly objected to benzol and wood alcohol being permitted under these suggested regulations, and stressed the fact that our freedom from industrial disease, due to spray-painting, has been due to the fact that benzol, wood alcohol, and acetone have not been used by the manufacturers of thinners, and, apart from the small percentage of benzol which exists as an impurity in toluol, workers have not been exposed to these specially harmful solvents.

I recommended that the use of certain scheduled solvents, including benzol, alcohol, and acetone, should be prohibited, except under special permission of the Chief Inspector of Factories, and that power to add to this schedule should be included in regulations.

If the use of specially harmful solvents is restricted, there would be little objection to the proposed regulations as regards nitro-cellulose painting, but two types of spray-painting must receive special attention, *i.e.*, lead and paints containing free silica. The regulations should provide that spray-painting of lead and silica paints should only be done in the open or in very well-ventilated work-sheds, by individuals wearing masks approved by the Chief Inspector of Factories, or in enclosed spaces by workers wearing preferably positive pressure masks, and that in neither case should other workmen be exposed to vapours unless similarly protected.

FERRO-MANGANESE.

At the request of the Chairman of the Board of Reference, this Division reported on the hazards from handling a cargo of ferro-manganese. The men complained of headaches and dryness of the tongue. I had an analysis of the metal made. Acetylene was given off under moist conditions, but no phosphoretted hydrogen was detected. No arsenic was found. I stressed the need for thorough ventilation of the ship's hold whilst handling the cargo.

REFRIGERATION.

Mr. Broose and I attended a number of meetings of the committee appointed by the Standards Association of Australia to draft a safety code for the control of refrigeration.

Preliminary experiments were carried out to determine the dangers arising from the use of methyl-chloride in the single unit or household refrigerator. Over a period of twenty-four hours 3 lbs. of methyl-chloride were fed at a constant rate into a room of 2,400 cubic feet, containing 16 guinea pigs, and ventilated by a partly-open window (60 square inches), plus crevice ventilation. On opening the door at the end of twenty-four hours, the animals appeared doped, but ate all the feed that was given to them. On the following morning—that is, seventeen hours later—four of the animals in one cage placed at the floor level were dead. The remainder were apparently normal, and showed no delayed reaction during the following month.

OTHER INDUSTRIAL ACTIVITIES.

Minor inquiries have been made into many industrial activities, including dermatitis from mites, stinkwort, and a number of cases of industrial dermatitis. The routine work of the examination of factory children was continued.

SECTION II.

1.—Metropolitan Combined Sanitary Districts of Sydney.

Report of the Medical Officer of Health for the Years 1931 and 1932.

J. S. PURDY, D.S.O., M.D., C.M. (Aberd.), D.P.H. (Camb.), F.R.S. (Edin.), F.R.San.I.

To the Director-General of Public Health.

Sir,

I have the honor to report on the health conditions of the Combined Sanitary Districts of the Metropolitan Area of Sydney for the years 1931 and 1932. The death and infantile mortality rates for both years showed a decrease.

The Metropolitan Combined Sanitary Districts for the purposes of health administration consist of the metropolis, together with nine outside metropolitan districts.

The metropolis or Sydney proper and suburbs includes the City of Sydney and forty-six municipalities.

The outside metropolitan districts, which are separately dealt with statistically, include seven municipalities, together with Warringah and Hornsby shires.

From the beginning of 1927 deaths have been distributed by the Government Statistician to the locality, where known, in which the deceased permanently resided, and births to the place of permanent residence of the mother.

The Government Statistician's estimate of the population of the Metropolitan Combined District and the City of Sydney for the years 1931 and 1932 is as follows:—

Population :

Year Ended—	Metropolitan Combined District.	Increase.	Per Cent. Increase.	Mean Population.	City of Sydney.	Increase or Decrease.
31 December, 1930	1,333,840	17,220	1·3	1,324,600	109,500	+ 500
31 .. 1931	1,337,410	3,570	·27	1,335,200	109,400	— 100
31 .. 1932	1,344,680	7,270	·54	1,334,390	109,000	— 400

Births registered in the Metropolitan Combined Area :—

Year Ended—	Total.			Rate.*	Proportion of Males to Females.	Ex- ceptual Births.	Per cent. of Total Births.	Per cent. per 1,000 Population.
	Males.	Females.	Total.					
31 December, 1930	11,925	11,463	23,388	17·65	104 to 100	1,232	5·27	·93
31 .. 1931	10,608	9,853	20,461	15·32	108 .. 100	1,135	5·55	·85
31 .. 1932	9,661	9,221	18,882	14·08	105 .. 100	1,054	5·58	·79

* The birth rates are the lowest hitherto recorded for the Metropolis.

Deaths registered in the Metropolitan Combined Area :—

Year Ended—	Total.	Rate per 1,000.	Infants Under One Year.	Rate per 1,000 Births.
31 December, 1930	11,551	8·72	1,157	49·47
31 .. 1931	11,625	8·71	908	44·38
31 .. 1932	11,660	8·69	736	38·98

TABLE I.

SHOWING Population, Density of Population, and certain Death-rates in the Municipalities of the Metropolitan Combined Sanitary Districts for the years 1931 and 1932. Deaths occurring in hospitals and institutions have been distributed to their proper districts before calculating these rates.

Municipality.	Estimated Mean Population 1931-32.	Mean Density of Population to the acre.	All Causes.		Diarrhoeal Diseases, including Enteritis.		Epidemic Diseases.		Tuberculosis of Respiratory System.		All Tubercular Diseases.	
			1931.	1932.	1931.	1932.	1931.	1932.	1931.	1932.	1931.	1932.
City of Sydney	109,470	33.7	1,095	1,089	13	8	23	17	84	83	94	88
Alexandria	10,380	9.9	95	65	5	1	4	1	2	4	3	4
Annandale	13,140	38.0	124	130	1	5	7	6	5	8	5	9
Ashfield	39,790	19.5	369	369	9	7	14	4	19	14	20	14
Auburn	19,910	7.7	169	168	9	3	7	3	10	8	14	9
Balmain	33,250	34.0	302	283	7	3	14	5	16	12	17	13
Bankstown	22,370	1.2	166	197	5	5	11	8	9	10	9	12
Bexley	20,380	10.7	147	159	3	2	2	6	8	6	8	8
Botany	8,000	3.7	61	85	1	1	4	7	1	7	1	7
Burwood	19,570	17.7	188	198	4	2	6	2	7	11	9	13
Canterbury	73,940	9.0	533	574	12	7	32	12	37	35	40	41
Concord	22,440	8.3	134	146	5	...	8	8	8	5	9	8
Darlington	3,669	67.8	21	36	...	...	1	...	3	3	3	3
Drummoyne	29,100	14.9	196	204	...	1	8	9	18	7	18	9
Eastwood	2,960	1.0	47	39	3	...	...	1	5	6	5	6
Enfield	14,020	8.4	105	105	1	2	6	1	2	5	3	6
Erskineville	7,620	41.0	61	58	1	...	2	2	3	4	5	4
Glebe	23,170	44.7	187	175	3	2	6	3	12	9	14	9
Granville	19,250	4.8	180	159	3	5	12	4	11	12	12	12
Homebush	3,190	5.4	49	59	1	...	5	3	6	7	6	7
Hunter's Hill .....	...	...	...	73	...	...	...	2	...	3	...	4
Hurstville	21,740	3.6	209	192	8	1	9	8	13	11	13	11
Kogarah	29,740	6.2	246	205	12	3	4	7	10	10	10	10
Ku-ring gai	28,560	1.4	200	212	2	1	7	3	13	13	15	14
Lane Cove	14,920	5.8	102	107	1	...	5	1	2	5	2	5
Leichhardt	31,480	27.3	275	286	6	5	16	2	11	14	14	17
Lidcombe	15,750	3.0	355	332	5	2	5	1	11	11	12	13
Manly	26,250	9.4	198	222	5	1	5	6	3	5	3	6
Marrickville	46,620	24.7	374	399	4	3	12	5	21	24	22	24
Mascot	13,920	6.3	127	106	2	2	9	3	10	3	10	3
Mosman	25,160	11.8	214	205	1	1	7	3	11	5	12	5
Newtown	28,670	59.7	251	278	5	3	8	3	9	18	10	18
North Sydney	55,150	21.8	491	471	4	1	11	8	26	15	27	18
Paddington	27,080	64.3	290	224	3	1	7	4	25	10	27	12
Parramatta	17,730	8.0	200	261	3	4	9	4	10	4	11	6
Petersham	28,350	33.4	264	280	2	2	12	7	14	12	16	12
Randwick	74,160	8.7	621	640	6	7	19	9	39	52	45	59
Redfern	24,160	59.8	236	211	9	7	11	2	22	14	23	16
Rockdale	37,700	7.4	279	274	5	7	13	9	13	9	15	9
Ryde	26,080	3.7	184	168	2	1	9	5	11	14	14	15
St. Peters	13,890	15.4	117	109	2	2	5	2	5	8	7	8
Strathfield	12,290	6.7	80	97	1	1	4	...	4	4	5	4
Vaucluse	7,420	9.3	64	41	...	3	2	...	4	...	5	...
Waterloo	12,920	15.6	104	118	3	7	5	5	8	12	8	12
Waverley	62,400	24.0	408	452	6	5	14	8	21	31	25	34
Willoughby	42,450	7.8	371	296	4	6	12	6	17	13	18	14
Woollahra	34,510	18.3	339	333	1	2	11	6	20	16	22	17
Total Metropolis	1,254,480	8.4	10,901	10,890	189	132	405	221	621	592	688	648
Cabramatta and Canley Vale	4,870	...	29	58	...	2	1	2	...	4	...	4
Dundas	5,610	...	30	18	...	...	3	3	2	1	2	1
Ermington and Rydalmere	2,240	...	22	25	1	...	3	1	1	1	1	1
Fairfield	7,880	...	53	73	...	...	3	1	2	9	2	9
Holroyd	14,920	...	126	90	6	1	6	3	7	3	8	3
Hornsby	21,540	...	219	244	4	5	6	7	31	29	33	31
Ingleburn	1,580	...	11	12	...	...	...	...	1	...	1	...
Liverpool	6,300	...	94	124	...	2	3	1	2	...	2	...
Warringah	15,780	...	140	126	1	...	3	3	4	6	4	6
Total	80,720	...	724	770	12	10	28	21	50	53	53	55
Total Combined Metropolitan Sanitary Districts	1,335,200	...	11,625	11,660	201	142	433	242	671	645	741	703

CAUSES OF DEATHS IN THE METROPOLIS.

Diseases of the Heart.—The group, Diseases of the Heart, again occupies the premier position as the chief cause of death, accounting for 2,312, or a rate of 184 per 100,000 in 1931 and 2,495 or a rate of 198 per 100,000 for 1932.

In 1903 diseases of the heart formed 8 per cent.; in 1923-1926, 15 per cent; and in 1931-1932 as much as 21 per cent. of the total deaths.

As to sex, in 1931 there were 1,101 deaths from heart diseases among females to 1,211 among males; 23 males and 29 females were under 25 years of age; 38 males and 49 females from 25 to 40 years; and

621 males and 426 females from 41 to 70 years. In 1932 there were 1,175 deaths from heart diseases among females to 1,320 among males; 20 males and 28 females were under 25 years of age; 35 males and 36 females from 25 to 40 years; and 642 males and 462 females from 41 to 70 years.

Occupation is probably the main factor in the difference in the higher rates in men than in women after 40 years of age.

With regard to rheumatic affections, the great congener of heart disease, acute and chronic rheumatism, chronic arthritis, etc., accounted for 65 deaths in 1931 and 48 deaths in 1932. Sixteen of the 65 deaths and 14 of the 48 deaths were of persons under 20 years, 9 and 8 respectively were 21-40 years; 18 and 20, 41-70 years, and 22 and 6 over 70 years of age.

Seventy-two men and 38 women in 1931, 84 men and 35 women in 1932 died from angina pectoris, which again illustrates the greater frequency in later life or degenerative changes in the arteries of the male.

In 1931, 23 males and 9 females, in 1932, 26 males and 17 females were reported as having died from syphilis, of whom 5 and 4 males and 3 and 5 females were under one year of age.

Four men in 1931, 8 in 1932 and 5 women in 1931 and 1 in 1932, died from alcoholism (acute and chronic), the ages of the women were 35-65.

Cancer, with its heavy toll of 1,318 deaths (620 males and 698 females) in 1931; 1,397 in 1932 (710 males and 687 females), still baffles intensive and extensive research, and was again second on the list of killing diseases. The continued increase in the number of deaths from cancer emphasises the importance to the public of the oft repeated warning that there should be no delay in seeking skilled advice on appearance of any suspicious symptom.

Bright's Disease (Acute and Chronic), is third on the list of "Causes of Death," and in 1931 claimed 719 victims, 374 males and 345 females; in 1932, there were 749 deaths, 403 males and 346 females.

Pneumonia holds fourth place, with 702 deaths (males, 404; females, 298); 286 deaths in 1931 were due to broncho-pneumonia, 277 to lobar pneumonia, and 139 to pneumonia (unspecified). In 1932 there were 606 deaths from pneumonia (336 males, 270 females), 217 due to broncho-pneumonia, 273 to lobar pneumonia, and 116 to pneumonia (unspecified).

Tuberculosis.—The number of deaths from all forms of tuberculosis in the metropolis proper during 1931 was 688; in 1932, 648 of which 592 were due to tuberculosis of the lungs, (a decrease of 29); 25 to tubercular meningitis; and 31 to other tubercular diseases. These figures include deaths of former metropolitan residents which occurred at Sanatoria and other institutions. During the past forty years there has been a reduction of the death rate of pulmonary tuberculosis by more than half. A better standard of living and, above all, more appreciation of living and sleeping in the open air, have all contributed to the ever-improving record.

Deaths from Accidents.—It is surely an indictment against modern conditions of living that the next most common cause of death is that due to accidents. In 1931, 475 persons (339 males and 136 females); in 1932, 469 persons (338 males and 131 females), were fatally injured, a reduction of 6 on the figures for 1931.

Accidents from railways and tramways caused 36 deaths in 1931, of which 7 were women; in 1932, 53 deaths, of which 5 were women; in 1932, vehicles and horses, 10 (5 males and 5 females); motor vehicles, 179 (131 males and 48 females); or 18 less than in 1931 and 56 less than in 1930.

DEATHS FROM EPIDEMIC DISEASES.

Measles showed a marked decrease from 81 in 1930 to 11 in 1931 and 4 in 1932.

Whooping Cough caused 116 deaths in 1931, or 64 more than in 1930. All the deaths were of children under five years, and 70 (or 60 per cent.) were under one year. In 1932 there were 19 deaths, a reduction of 97 compared with the deaths in 1931; 17 of the children were under five years, and 11 under one year of age.

Scarlet Fever deaths numbered 23 in 1931, a decrease of 9 on the previous year. The rate was 1.8 per 100,000 of the population. Ten of the deaths were of children under five years of age. In 1932 there were 26 deaths, an increase of 3; the rate was 2.06 per 100,000.

Diphtheria.—There were 65 deaths from diphtheria in 1931, 15 less than in 1930; 47 deaths were of children under five years of age. In 1932 there were 73 deaths, 52 of which were under five years.

Influenza.—In 1931 there were 117 deaths from influenza. In 1932, 46 deaths.

Infantile Paralysis caused 6 deaths in 1931, and 11 in 1932.

Epidemic Cerebro-Spinal Meningitis accounted for 5 deaths in 1931; 5 in 1932.

Encephalitis Lethargica accounted for 11 deaths in 1931; in 1932 there were 8.

Typhoid Fever caused 9 deaths in 1931; 8 in 1932.

The infectious diseases to show decreases in both 1931 and 1932 were typhoid fever and measles, whilst infantile paralysis showed an increase. Whooping cough increased in 1931, decreased in 1932. Influenza increased in 1931, decreased in 1932. Diphtheria showed a decrease in 1931, and an increase in 1932.

Diabetes accounted for 193 deaths in 1931, an increase of 54 on the number (139) in 1930. The death rate for 1931 was 15 per 100,000, contrasted with a rate of 9.9 per 100,000 in 1911. This increase corresponds to that observed in almost all other civilized countries. In New York City the figures for 1931 were 50 per cent. higher than in 1911. The increased per capita consumption of sugar is suggested as a factor in the increased incidence. In 1932 there were 204 deaths, an increase of 11, the rate was 16.19 per 100,000.

In 1931 there were 143 deaths of females to 50 males; and in 1932, 136 females to 68 males. The notable increase of deaths in females is most marked in the later age periods.

Diabetes is a disease of adult life, and occurs at that period when people are most productive in an economic sense. It is unfortunate that it is not more frequently discovered in its incipiency; routine examinations of urine for sugar are advisable in overweight individuals of forty years or over.

The introduction of insulin treatment, with scientific control of the diet and intelligent co-operation of the patient, should considerably prolong the lives of those affected.

Diarrhoea and Enteritis in 1931 caused the deaths of 135 children under 2 years of age; and 54 of persons 2 years and over. In 1930, 268 children under 2 years died. In 1932 there were 76 deaths under 2, and 56 over 2 years of age.

Maternal Mortality.—In the metropolis in 1931 there were 39 deaths from puerperal septicæmia (including 23 abortions with septic conditions), and 88 deaths from other puerperal diseases. In 1932 there were 30 deaths from puerperal septicæmia, 17 of which were cases of abortion and miscarriage, and 107 from other puerperal diseases.

Infantile Mortality.—There were 846 deaths of infants under 1 year of age in the metropolis during 1931, whilst the births numbered 19,080, giving an infantile mortality rate of 44.34 per 1,000 births—the lowest recorded in Sydney until 1932, when there were 686 deaths, the births being 17,583, and the infantile mortality 39.01.

Of the deaths in the first year of life, no less than 381 in 1931; and 396 in 1932 occurred in the first week of life, and a total of 482 and 468 respectively (or 57 and 68 per cent.) in the first month.

Looking at the rates of infantile mortality in Sydney for the past fifty years we see a reduction from 192 per 1,000 in 1880 to 50 in 1930, to 44.34 in 1931, and 39.01 in 1932.

The dropping of the infantile mortality rate for the past three years below 50 per 1,000 is encouraging, following the intensive campaign for its reduction by the Baby Welfare Centres and the Royal Society for the Welfare of Mothers and Babies.

TABLE 2.—(a) Showing Deaths of Children under 1 year per 1,000 births from 1880 to 1932, and (b) Deaths of Infants in the Metropolis from various causes, 1920-1932.

(a)—Infantile Mortality per 1,000 Births, 1880-1932 at 10 year intervals.

1880	...	...	...	192	} Dairies Supervision Act passed 1886.
1890	...	...	...	135	
1900	...	...	...	109	} Public Health Act passed 1896.
1910	...	...	...	82	} Visiting nurses first appointed 1904.
1920	...	...	...	74	
1930	...	...	...	50	} Maternal and Infant Welfare Division established 1923.
1931	...	...	...	44	
1932	...	...	...	39	

(b)—Deaths of Infants in the Metropolis from various causes 1920-1932.

(The accompanying graph shows the infantile mortality rate during the period 1909-1932.)

Cause of Death.	1920.	1921.	1922.	1923.	1924.	1925.	1926.	1927.	1928.	1929.	1930.	1931.	1932.
Measles	20	3	1	6	2	1	8	1	23	12	15	2	1
Scarlet Fever	...	...	...	...	...	2	2	5	3	2	2	2	1
Whooping cough	121	27	24	24	16	74	38	70	16	79	34	70	11
Diphtheria	11	11	10	12	5	12	11	8	8	14	7	10	7
Influenza	6	7	1	9	4	8	5	5	3	3	2	4	4
Cerebro-spinal meningitis	2	1	3	2	3	2	6	2	2	...	2	1	1
Tuberculosis meningitis	1	9	8	2	6	3	5	4	2	10	5	3	...
Other tuberculous diseases	3	5	2	2	1	5	5	3	5	4	4	1	2
Meningitis	7	14	10	19	20	15	18	17	12	14	11	4	8
Convulsions	22	18	15	11	13	12	25	19	5	4	4	7	1
Other nervous diseases	8	4	1	2	2	2	9	4	2	5	...	2	4
Bronchitis	26	20	21	29	16	18	10	13	13	19	14	11	5
Pneumonia	126	101	132	129	139	141	105	146	168	164	82	92	54
Other respiratory diseases	12	6	2	2	4	3	1	5	7	3	1	2	3
Diseases of the stomach	11	12	6	6	5	5	6	8	3	1	2	1	1
Diarrhoea and enteritis	443	355	257	467	224	211	281	163	181	144	219	105	59
Intestinal obstruction and hernia	10	17	7	8	9	9	17	5	6	12	5	6	6
Bright's Disease	...	2	2	...	1	...	1	1	...	2	1	2	1
Prematurity	440	379	362	379	382	355	388	313	320	379	353	244	234
Other developmental diseases	319	332	351	299	337	298	301	288	268	313	259	219	237
Accident	12	9	7	10	13	11	7	13	8	20	13	10	10
All other causes	57	52	57	47	60	68	66	67	45	58	60	48	36
Total	1,658	1,414	1,279	1,405	1,262	1,255	1,315	1,161	1,042	1,263	1,095	846	686

In 1931 the most important causes were whooping cough, 70; pneumonia, 92; diarrhoea and enteritis, 105; congenital malformations, 64; congenital debility, etc., 38; premature birth, 244; injury at birth, 73; atelectasis, 20. In 1932, pneumonia, 54; diarrhoea and enteritis, 59; congenital malformations, 76; premature birth, 234; injury at birth, 65.

INCIDENCE OF INFECTIOUS DISEASE.

Scarlet Fever.—3,108 cases and 24 deaths were notified in the metropolitan area in 1931, 3,031 cases and 26 deaths in 1932.

Fifteen cases of scarlet fever in the Mosman district in 1931 had one common source of milk supply. Hæmolytic streptococci were found in three out of fifteen swabbings from twelve persons engaged at or in association with the dairy premises, and the infected persons were warned not to take any part in the handling or delivery of milk until free from infection. The outbreak ceased when these persons ceased to handle the milk.

Diphtheria.—1,838 cases and 65 deaths were notified in the metropolitan area in 1931; and 2,049 cases and 73 deaths in 1932.

Infantile Paralysis.—In the Metropolitan area in 1932 there were 143 cases with 11 deaths in contrast to 73 cases with 6 deaths in 1931.

In 1931 there were no cases in the first four months of the year, 2 in May, 2 in June, 1 in July, 1 in August, 2 in September, 1 in October, 12 in November, and 52 in December.

In 1932 there were 77 cases in January, 44 in February, 13 in March, 4 in April, 2 in May, none in June, July, August and September, 1 in October, 2 in November, none in December.

The epidemic in the Metropolitan area commenced in November, 1931, reached its maximum in January, then declined and ended in April.

In the rest of New South Wales it began in the middle of December, was at its maximum in February, and ended in June.

Age Incidence.—Of the 214 cases in the Metropolitan area from November, 1931, to April, 1932, 51 per cent. were under 4 years. The youngest patient was five months old, the oldest 33 years.

There were five instances of infection of two persons in the same house, four of the instances being members of the same family.

Sex Incidence.—Males, 132, or 61 per cent.; females, 82, or 38.3 per cent.

Dr. A. H. Tebbutt, Hon. Director, Infantile Paralysis Committee, records that in 182, or 85 per cent., there was an initial period of illness of from one to several days, even as long as fourteen days, but rarely longer than five days. In 10 or 4.7 per cent. of the cases paresis or paralysis appeared to be the first sign of the infection.

Of the 214 patients, 139 were treated with convalescent serum, 48 in the preparalytic stage and 91 in the febrile period, but after paralysis appeared. Although no definite conclusion can be made regarding the value of serum, it is generally agreed that serum is of benefit when given early in the infection.

To the late Sir Charles Clubbe, the Chairman, Dr. A. H. Tebbutt, the Hon. Director, and Dr. Karen Helms the Medical Officer, of the Infantile Paralysis Committee, consisting of Drs. R. Dick, the Director-General of Health, E. W. Fairfax, Edgar Stephen, and A. Walker, are due the organisation which dealt with the early diagnosis and treatment of the cases.

Typhoid Fever.—There were 86 cases with 10 deaths in the metropolitan area in 1931; in 1932 there were 102 cases with 8 deaths.

The attack rate of .06 per 1,000 is the lowest recorded in the metropolitan area.

Twelve cases notified from Homebush during December, 1931, and January, 1932, had one common source of milk supply. On examination of the milk vendor, typhoid bacilli were isolated from his excretions. This man was apparently quite healthy, but had had typhoid fever forty-two years previously whilst a resident in the City of Sydney. Following on action by the Department the milk vendor decided to retire from business, and there were no further cases after transfer of the registration to another trader.

The marked reduction of the morbidity and mortality from typhoid fever in Sydney is an index of progress in communal sanitation. The typhoid death rate fell from 51.3 per 100,000 for 1888-1890 to 13.2 for 1901-1910; to 6 per 100,000 for 1916-1920; and for the past five years to 1 per 100,000.

Nearly a quarter of the metropolitan population is still without the advantages of sewerage for their dwellings. Thus the population in sewered areas at 30th June, 1931, was 1,034,345, and in unsewered areas, 300,855.

There were 2 cases of *typhus* in 1932, one in Randwick, the other in Warringah.

Epidemic Cerebro-Spinal Meningitis.—There were 17 cases and 6 deaths notified in 1931; in 1932 there were 23 cases and 5 deaths.

PARKS AND PLAYGROUNDS.

In the Annual Reports for 1919, 1923, 1925, and 1927, I have emphasised the importance of parks, playing fields and open spaces as factors that materially affect public health.

The ideal advocated was a park area of one-tenth of the total area, or not less than one acre, for every 200 of the population, exclusive of national or State parks beyond the suburbs.

A survey of Sydney's requirements is being made by the Surveyor-General in co-operation with a committee representative of various public bodies; and it is being urged that areas of 20 acres be set aside as recreation spaces for all schools to be built on the outskirts of Sydney, and that there should be a local playing area for every 12,000 of population.

INSPECTION OF RESTAURANTS, TEA-ROOMS, BUTCHERS' SHOPS, COMMON LODGING-HOUSES, BARBERS' SHOPS, ETC., IN CONNECTION WITH THE GENERAL ADMINISTRATION OF THE CITY HEALTH OFFICER'S DEPARTMENT.

Number of premises, City of Sydney, 22,291; restaurants, 367; tea-rooms, 259; grill-rooms, 64; fruit shops, 259; street fruit stands, 143; fish shops, 73; butchers' shops, 97; barbers' shops, 505.

Summary of routine work during 1931 and 1932:—

	1931.	1932.
Complaints received and dealt with; inspections, etc.	472	693
2. Inspections, house-to-house, re-inspections, restaurants, streets, lanes, etc.	43,569	43,497
3. Inspections of butcheries, meat depots, poulterers, etc.	14,494	18,726
4. Inspections under Pure Food Act Regulations	24,658	26,004
5. Inspections of common lodging-houses	19	25
*6. Inspections under Dairies Supervision Act	134	.....
7. Investigations of smoke nuisance	418	493
8. Investigations of infectious diseases	256	294
9. Notices served	1,878	1,843
10. Number of premises referred to the City Building Surveyor	250	129
11. Plans reported on	559	559
12. Number of premises visited by rat-catching staff	10,235	9,208
13. Number of complaints investigated by rat-catchers	323	377
14. Number of traps set and poison baits laid	66,859	65,624
15. Number of rats caught	6,441	5,463
16. Number of milk samples taken for analysis	1,019	1,003
17. Disinfection of premises	247	275
18. Prosecutions against offenders (Health Department only)	55	61
19. Total amount of fines inflicted	£207 12 0	£157 18 0

Legal Proceedings Undertaken.—In 1931 and 1932 were respectively, Sydney Corporation Act and By-laws, 7 and 1; Public Health Act, 4 and 10; Pure Food Act, 45 and 46; Total, 56 and 57.

Milk Samples.—Of 1,019 and 1,003 samples of milk taken in the City in 1931 and 1932, 9 and 6 were found not in conformity with the standard. There were 3 convictions in 1931 and 1 in 1932 for selling milk deficient in milk fat.

Septic Tank Installations.—Number of septic tanks inspected in 1931 and approved by the Board of Health, 79; sites inspected as to suitability for installing septic tanks, 205. In 1932 the number approved was 90; sites inspected 220.

* Now administered by the Department of Agriculture.

2.—Hunter River Combined Sanitary District.

REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE YEARS ENDED 31st DECEMBER, 1931 AND 1932.

Staff.—Dr. H. G. Wallace, Medical Officer of Health; 1 Sanitary Inspector; 1 Nurse Inspector; 1 Clerk.

In June, 1932, Senior Sanitary Inspector G. H. Godfrey, retired after nearly twenty-three years' service on the staff of the Medical Officer of Health. His place was taken by Inspector G. A. Garrow, transferred from Head Office.

Description.—The Hunter River Combined Sanitary District includes eighteen municipalities and five shires, together with the harbour of Port Hunter. The area of the district is approximately 2,000 square miles. Each of the municipal and shire councils is a Local Authority under the Public Health Act, and employs one or more Health Inspectors. It is not obligatory that Health Inspectors of councils should hold certificates of competency, although rather more than half are at present so qualified. Moreover, in many cases the health duties of Inspectors tend to be overshadowed by other duties such as those of town clerk, engineer or working foreman where they occupy a dual position. In consequence, many important aspects of public health work, such as housing inspection and duties under the Pure Food Act, do not receive the attention they merit from councils. It becomes necessary for the Health Department's Officers to supplement the health work of councils in these respects in addition to exercising a general supervision.

The importance of the Health Inspector's work would appear to merit consideration of some alternative scheme by which the total number of Inspectors could be reduced and their time fully employed in health work, preferably under the direct supervision of the Medical Officer of Health. The formation of District Health Councils under the model scheme outlined by the Federal Royal Commission on Health in 1925 might provide a more efficient and economical method of local control than is at present possible under the existing system.

Vital Statistics.—Tables showing details of population, births and deaths in each area are shown elsewhere.

The estimated mean population of the whole district in 1931 was 261,050, a decrease of 140 compared with the previous year, due to migration following on widespread unemployment.

In 1932 it rose to 262,460, an increase of 1,410, showing that the drift had been checked.

The birth-rate for the district in 1931 was 19·74 per thousand mean population, compared with 21·30 for the previous year.

In 1932 it fell still further to 18·34, this being the lowest ever recorded for the district.

In 1931 the number of ex-nuptial births was 191, or 4·7 per cent. of the total births, and in 1932 it was 199, or 5·4 per cent. of total births.

The death-rate for the district in 1931 was 8·25 compared with 8·11 for the previous year and 8·21 for 1932.

The chief cause of death was diseases of the heart, causing 346 deaths in 1931 and 345 in 1932. Of these 300 were at ages over 50 in 1931 and 296 in 1932.

In 1931, following heart diseases, in order of frequency came—cancer 182, pneumonia 101, and accident 89.

In 1932 the order was—cancer 168, Bright's disease 115, pneumonia 98.

Diarrhoea and enteritis in 1931 caused 46 deaths, of which 33 were at ages under 5 years.

In 1932 it was also responsible for 46 deaths, 24 of which were at ages under 5 years.

Infectious Diseases.—Details of cases of notifiable infectious diseases recorded are given below.

DIPHTHERIA.

308 cases of diphtheria were notified in 1931, and 486 in 1932, compared with 411 in 1930. Serious overcrowding occurred at both the Newcastle and the Wallsend Hospitals, where isolation accommodation is quite inadequate to cope with an epidemic. Increased accommodation for cases of infectious disease in Newcastle and suburbs is an urgent need.

Sixteen deaths from diphtheria were recorded in 1931, showing a fatality rate of 4·1 per cent., and the same number of deaths occurred in 1932, giving a fatality rate of 3·2 per cent. The rate of incidence per thousand of population in 1931 was 1·8 and in 1932, 2·4. The death-rate per thousand of population was 0·08 in both years.

No further use was made of the Schick Test and mass immunization as a means of prevention, but it is hoped that some method of assisting local authorities to carry out immunization will be developed on the lines at present being followed in other States. For the present, the chief method of combating the disease appears to lie in increased laboratory facilities for early diagnosis, and in prompt effective isolation in suitable hospitals.

Owing to the general financial depression it was not found possible to proceed with the establishment of the proposed District Laboratory in Newcastle, but there are indications that it will be commenced early in 1933.

SCARLET FEVER.

244 cases of scarlet fever were notified in 1931, compared with 235 in 1930 and an annual average of 247 during the previous five years. The rate of incidence was 1.2 per thousand of population.

In 1932 the notifications rose to 517. Although this is the largest number recorded for any year since 1910, the rate of incidence (2.6 per thousand) was exceeded in the epidemics of 1898 (6.7 per thousand), 1903 (7.2 per thousand), 1906 (5.2 per thousand), 1907 (6 per thousand), 1908 (5.6 per thousand), 1909 (3.3 per thousand), and 1910 (5.5 per thousand). Two deaths were recorded in 1931 and nine in 1932, giving fatality rates of 0.8 per cent. and 1.7 per cent. respectively.

Owing to the lack of accommodation for infectious diseases, especially in Newcastle, it is not customary to admit uncomplicated cases of scarlet fever to hospital, and as isolation and control in the home are difficult, little more can be done to effect a permanent reduction in the incidence of the disease until adequate isolation facilities are provided.

TYPHOID FEVER.

The rate of incidence of typhoid fever continued to be very low; 27 cases were reported in 1931, compared with 26 during 1930, and an annual average of 61 cases during the previous five years. In 1932 a new low record for the district was set, only 22 cases being reported.

Two deaths from typhoid fever were notified in 1931, giving a fatality rate of 7.4 per cent. In 1932 there were 5 deaths, giving the high fatality rate of 22.7 per cent.

Prophylactic inoculation of contacts was carried out in numerous cases by the medical attendant, the vaccine being supplied by this department. No doubt this, and the improvement in steaming of sanitary pans and disposal of night-soil in rural areas, contributed to the diminution in the number of cases.

PULMONARY TUBERCULOSIS.

Sixty-six cases of pulmonary tuberculosis were notified in 1931, compared with 98 in 1930, and an annual average of 63 during the previous five years. In 1932, 77 cases were notified. Sixty-one deaths from pulmonary tuberculosis were notified in 1931, and 58 in 1932.

The work of the Newcastle Throat and Chest Dispensary was carried on by Dr. Ethel Byrne during 1931 and 1932, Nurse-inspector MacKay continuing to assist at each session, in addition to visiting patients reported to this office.

The dispensary serves a useful purpose as a clearing-house for patients suitable for admission to sanatoria, and gives valuable assistance in the diagnosis of suspected cases and contacts. Its usefulness would probably be greater if it were made a special department of the Newcastle Hospital, and there appears to be some likelihood of this being done when the out-patient department at the hospital is being re-organised. The work of the dispensary was for many years co-ordinated with that of the Newcastle Hospital and the Benevolent Society by the Secretary, the Hon. J. L. Fegan, who was also Secretary of the Benevolent Society and a member of the Newcastle Hospital Board. Mr. Fegan's death in December, 1932, terminated an association of nearly seventeen years with the dispensary, of which he had been Secretary since its foundation in 1915.

INFANTILE PARALYSIS.

One case of infantile paralysis was reported in December, 1931, but during the first six months of 1932 there followed an epidemic affecting all areas with the exception of Greta, Morpeth, Raymond Terrace and Stockton. Fifty-nine cases were reported, with 7 deaths. Supplies of serum were provided by the Poliomyelitis Committee, Sydney, and the services of Dr. Ethel Byrne were made available to assist in making an early diagnosis in suspected cases.

With the exception of the seven patients who died, all made a complete recovery except six, in whom more or less permanent paralysis resulted. No cases occurred during the latter half of the year.

OTHER NOTIFIABLE INFECTIOUS DISEASES.

Cerebro-spinal Meningitis.—5 cases, with 2 deaths, were reported in 1931, and 4 cases, with 2 deaths, in 1932.

Encephalitis Lethargica.—2 cases with 1 death were reported in 1931, and one case, which proved fatal, in 1932.

Puerperal Infection.—26 cases, with 8 deaths, were reported in 1931, and 9 cases, with 7 deaths in 1932. The apparently high mortality was probably due to failure to notify non-fatal cases. A closer supervision of the records of registered midwifery nurses would help to enable defaulters in this respect to be identified. At present this work is carried out by a nurse-inspector from Head Office staff, who visits the district at intervals, but it seems desirable that the nurse-inspector on the staff of the Medical Officer of Health should make the necessary inspections in this district, and so enable a closer supervision to be maintained.

Of the 26 cases reported in 1931, 23 were admitted to hospital and 3 were treated in their own homes.

In 1932, 8 were treated in hospital, and 1 at home. There was no connection traced between any of the reported cases through the medium of nurse or doctor.

Leprosy.—1 case of leprosy, a female aged 19, was located in one of the suburbs in 1931. Investigations showed that her father had died from the disease seventeen years previously, so she had apparently become infected as an infant. The patient had lived all her life in the Newcastle district. All the relatives examined were found to be free from the disease, but are being kept under surveillance.

Plague.—No case of plague has occurred in this district since 1905. A rat catcher is temporarily employed by this department to collect rats from wharves and premises adjoining the water-front, most of which are regularly examined for signs of plague throughout the year. The Newcastle City Council continues to pay a bonus of 6d. per head for all rats brought in to the Council's depot, but none of the councils at present employ rat-catchers. Produce stores along the water-front are as far as possible rat-proof, and are inspected periodically. There are still several miles of rubble-backed wharves around the harbour at Newcastle which afford breeding-places for rats, but these are gradually being replaced by new wharves with rat-proof concrete backings.

The Department of Navigation and the Railway Department continue to lay poison-baits on premises in their charge, but increased attention is required on the Northern side of the harbour in order to keep the rat-population down to a minimum.

Trapping and fumigation on vessels in the harbour are regularly carried out by the Quarantine Department, and rats so obtained are examined by the Quarantine Officer stationed at Newcastle.

NON-NOTIFIABLE INFECTIOUS DISEASES.

Dengue Fever.—2 cases came under notice during 1931, both recent arrivals from the North; one doubtful case occurred in 1932. *Aedes argenteus* has been more noticeable in certain suburbs of Newcastle during the last two years, probably owing to some relaxation of anti-mosquito work by the councils since the financial depression. In some country towns, such as Singleton and West Maitland, where councils have persistently refused to adopt or enforce Ordinance 41, this mosquito is prevalent. Both these towns suffered severely from dengue fever in 1926 and 1927.

HOUSING.

There is no shortage of housing in the district at present, although owing to widespread unemployment many families are living in temporary shelter, under poor conditions, and in other cases there has been some tendency to overcrowding.

In a few municipalities house-to-house inspections are being satisfactorily carried out, but in others this necessary work has fallen into abeyance; where qualified health inspectors are not employed by councils this work tends to be overlooked, and officers of this department carry out inspections when called upon.

INFANTILE MORTALITY.

The total number of births in 1931 was 3,968 and deaths under one year of age 178, giving an infantile mortality rate of 44.86 for the district, compared with 53.2 in 1930 and an average rate of 61.70 for the previous five years.

In 1932 births numbered 3,713 and deaths under one year 155, giving the lowest infantile mortality rate recorded, 41.75 per thousand live births.

An interesting feature is the distinct lowering of the rate during the past three years, when unemployment has been at its height. Apparently more time is available for parents to give attention to their children at such times than during normal years.

Although hundreds of families have been living on the unemployment "dole," no obvious cases of malnutrition of children have come under notice. Possibly the parents have gone without to keep their children nourished, but no doubt the work of the Child Welfare Department has assisted in relieving the most necessitous cases.

The excellent work of the Baby Health Centres has been satisfactorily carried on during the two years under review.

Eight established centres, of which seven conduct one or more subsidiary depots in addition, render assistance to between five and six thousand mothers. They are not under the control of this office and a report of their activities appears elsewhere.

MATERNAL MORTALITY.

There were 35 deaths from causes connected with childbirth during 1931, and 27 in 1932. Including 8 deaths from puerperal septicaemia and 4 from toxæmias of pregnancy in 1931, the corresponding figures for 1932 being 7 and 5.

Sepsis following abortion or miscarriage appears to be on the increase, especially among married women. During the year ended 30th June, 1932, out of a total of 2,033 female patients of all ages admitted to the Newcastle Hospital, no less than 253 or 12.4 per cent. were admitted for treatment of abortion. This represents a tremendous wastage of infant life and is a very serious matter in a country so sparsely populated as Australia. It is evidently much greater than the total mortality of live-born children during the first year of life.

VENEREAL DISEASE.

The establishment of an adequately-equipped clinic for the treatment of venereal diseases in Newcastle is one of the outstanding health needs of the district. During 1932 a night clinic for treatment of syphilis only was established under difficulties at the Newcastle Hospital, but there is still no adequate treatment for gonorrhoea, owing to lack of accommodation in the existing building. Towards the end of 1932 it was decided that the new out-patient building at the Newcastle Hospital would be proceeded with during 1933. The new building will include a venereal diseases department of modern design.

PRIVATE HOSPITALS.

At present inspections of licensed private hospitals are carried out at intervals by inspectors from Head Office staff, along with inspections of registered nurses for the Nurses Registration Board.

At the end of 1931 there were 55 licensed private hospitals in the district, containing 308 beds. 12 of these hospitals were licensed for medical, surgical and lying-in cases, with 150 beds, and 43 for lying-in cases only, with 158 beds.

The small midwifery hospital appears to be serving a public need, owing to the lack of beds for such cases in the public hospitals. A number of these smaller hospitals are poorly equipped, very little material being provided beyond what is contained in the nurse's midwifery bag. In emergency, patients are frequently removed, while seriously ill, from the smaller hospitals to those which are better equipped. The proposed new regulations under the Private Hospitals Act, at present under consideration, should do much to improve present conditions in small hospitals by prescribing the minimum equipment.

At present the keeping of records under the Private Hospitals Act for the Board of Health and under the Nurses Registration Act for the Nurses' Registration Board, involves a good deal of duplication. One simpler record should be sufficient for both.

Probably a closer supervision of registered nurses and private hospitals could be kept if the Nurse Inspector on the staff of the Medical Officer of Health were to carry out the inspections at present made by visiting nurses from Head Office staff.

PURE FOOD ACT.

Inspections of shops and warehouses under the Pure Food Act were carried out as usual by members of the staff of this office, in addition to the work done by authorised inspectors of councils in the district. Condemnations of foodstuffs by the staff of this office included 1½ cwt. of deteriorated foodstuffs and 1,675 packages of assorted foods found unfit for human consumption in 1931, and 5 cwt. and 4,224 packages in 1932, which were seized and destroyed under supervision.

In addition, the services of an inspector from the Pure Food Branch of Head Office were made available at intervals. The result of his work is included in the report of the Chief Inspector under the Pure Food Act appearing elsewhere (p. 22).

The officers of the local councils were more active during the year in the collecting of samples for analysis, especially milk samples. On the whole, the quality of the milk supplied in this district is good, although the consumption of milk probably averages less than half a pint per head per day.

In September, 1932, the Milk Act, 1931, was applied to the Newcastle district, the Milk Board now having control of milk supply in Newcastle and suburbs and portions of the adjoining shires. It is hoped that more attention will be given to introducing better methods of pasteurization and bottling of milk, as the methods hitherto in use leave a good deal to be desired.

Regarding inspection of meat in the Maitland-Cessnock district, an improvement was made towards the end of 1931 by the Tarro and Kearsley Shire Councils, which each appointed a qualified meat inspector and made arrangements with the local butchers regarding slaughtering, so as to permit of inspection being carried out. Inspections at groups of slaughter-houses in the vicinity of East and West Maitland were made regularly during 1932. The necessity for this work being carried on and extended to other portions of the district is shown from the fact that during the year ended 31st December, 1932, about 200 carcasses and 3,500 parts were condemned in the two groups of slaughter-houses. As a large population in Kurri Kurri, Pelaw Main, Weston, Abermain, Cessnock, Branxton and Greta are as yet unprovided for, the appointment of additional inspectors in the near future is very desirable.

An endeavour is being made to fix a uniform charge for inspection of meat in the Tarro and Kearsley Shires, but up to the end of 1932 no agreement had been reached.

Miscellaneous.—Medical examinations of applicants for entrance to the Public Service, pilots stationed at Newcastle, applicants for admission to State and other hospitals, workers claiming compensation under the Workers' Compensation Act, applicants for Widows' Pensions, young persons seeking employment in factories, applicants for assistance in the purchase of spectacles, trusses, artificial limbs, etc., and other persons, were continued during 1931 and 1932, totalling about 500 examinations.

Examinations of pathological specimens, sputum, etc., were carried out in the laboratory attached to this office, in conjunction with the Newcastle Hospital Laboratory and the Bureau of Microbiology in Sydney, but owing to the limited time available for such work here, the number of specimens examined was small.

The establishment of the proposed District Laboratory in Newcastle would be a boon to the country hospitals in the district, in providing aids to rapid diagnosis. Its establishment appears to be closely bound up with the erection of the proposed new out-patient department and venereal diseases clinic at the Newcastle Hospital.

In 1931 a health exhibit was made at the Newcastle Show, which was awarded a certificate of merit by the Show Committee. During Health Week lectures were given to various assemblies in Newcastle.

Under instructions from Head Office, visits were made outside the district to Scone and Gundy *re* a diphtheria outbreak, to Kyogle and Lismore *re* leprosy investigations, to Quirindi *re* private hospitals, to Kempsey *re* health of aborigines, to Broken Hill in connection with a typhoid outbreak, to Tea Gardens *re* Nurses' Registration Board inquiries, to Dungog *re* private hospitals, to Kempsey *re* pure food investigation, to Lismore and Kyogle *re* Childrens' Homes.

H. G. WALLACE,
Medical Officer of Health.

3.—Broken Hill and District.

REPORT OF THE MEDICAL OFFICER OF HEALTH, W. E. GEORGE, M.B., Ch M., FOR
THE YEARS ENDED 31st DECEMBER, 1931 AND 1932.

In 1931, the average population of the city for the year was estimated at 27,259 compared with 26,961 for the preceding year. There were 630 births for the twelve months, comprising 328 males and 302 females. The deaths numbered 254 (males 159 and females 95).

Infectious Diseases.—The incidence of the notifiable infectious diseases during the past five years is shown in the following table:—

	1928.	1929.	1930.	1931.	1932.
Typhoid and Paratyphoid Fever	49	64	95	109	20
Scarlet Fever	4	120	19	38	16
Diphtheria	17	96	37	52	32
Infantile Paralysis	1	1	4	4	6
Cerebro-spinal Meningitis ... ..	...	...	...	...	...
Encephalitis Lethargica	1	...	...	...	...

In addition there was 1 non-indigenous case of infantile paralysis and 1 non-indigenous case of puerperal infection in 1931; and in 1932, 1 non-indigenous case of scarlet fever, 3 of diphtheria, and 1 of infantile paralysis.

In 1931 cases of typhoid fever occurred in every month of the year, the greatest incidence being in October (31 cases) and November (42 cases). During these early summer months the prevalence of flies was most marked. When the heat of summer fully developed these insects became fewer in number and the incidence of typhoid became notably less. During the height of the outbreak depots were established for carrying out inoculation with anti-typhoid vaccine. The response by the public exceeded expectations. Numerous families were also inoculated by their private medical attendants. Vaccine prepared and supplied by the State Department of Health was employed. With the onset of very hot weather there was an immediate decline in the number of cases.

In 1932, cases of typhoid fever were very much reduced in numbers, and there was a very small incidence of all infectious diseases. Six cases of infantile paralysis occurred, and serum supplied by the Infantile Paralysis Committee in Sydney was available for their treatment.

There has been no improvement in the care of privies and garbage receptacles in the municipality. A house to house inspection with insistence on proper construction of closets is urgently required.

Apart from the typhoid outbreak the health of the district has remained very satisfactory. A complaint that unemployed men and their families on the dole were suffering from "Barcoo Rot," owing to a lack of fresh vegetables and milk in the rations supplied, was investigated and found to be without foundation. Enquiries amongst medical practitioners supplied no evidence that malnutrition resulted among dole recipients.

The State laboratory had a very busy year in 1931. The large number of typhoid cases and suspects, with the serum tests necessary for diagnosis, and the bacteriological tests carried out before release of patients from hospital made work at the laboratory exceptionally heavy.

The total number of examinations carried out in the laboratory during 1931 was 5,600, including 216 biochemical, 5,005 bacteriological and 170 pathological tissue investigations. In 1932, there were 3,863 examinations, including 223 biochemical, 3,181 bacteriological and 224 pathological tissue investigations. All necessary culture media, swabs, etc., were prepared in the laboratory; 209 specimens in 1931, and 235 in 1932 for serological examination were forwarded to the central health department laboratory for examination.

WILLIAM E. GEORGE,
Medical Officer of Health.

REVIEW OF THE INCIDENCE OF PNEUMONIA AT BROKEN HILL FROM
1908 TO 1931 INCLUSIVE (Registered Papers 32-30472).

(Dr. W. E. GEORGE.)

In December, 1912, Dr. Armstrong, of the New South Wales Department of Public Health, paid a visit to Broken Hill to enquire into an epidemic of pneumonia which was said to exist in that town. He subsequently furnished a report to the Director-General of Public Health, and this report has recently (after nineteen years) been published by "Health" the journal of the Commonwealth Department of Health.

Briefly Dr. Armstrong's conclusions were as follows:—

- (1) For the five years 1908-1912 inclusive, the mortality from pneumonia in Broken Hill was heaviest in the months of September, October and November, and lightest in the month of December.
- (2) There had been a fairly regular increase year by year since 1909 in the total annual number of deaths from pneumonia in Broken Hill, culminating in the year 1912.
- (3) The whole of this increase in recorded deaths from pneumonia was made up of males, chiefly males whose occupations were given as trucker or miner, though not solely confined to this class.
- (4) For the three years 1910-1912 while the death rate from pneumonia among females at Broken Hill was but slightly above that of New South Wales, the death rate from pneumonia at Broken Hill among males was nearly four times as great as that of the average among males throughout New South Wales.
- (5) The death rate from pneumonia among the underground miners at Broken Hill during 1910-1912 was 6.5 per 1,000—an exceedingly high one.
- (6) The case fatality of pneumonia as treated at the Broken Hill Hospital was very high, and following on this the opinion was expressed that the type of pneumonia found in Broken Hill was rather exceptionally severe.
- (7) The prevalence of pneumonia among miners was contributed to by—
 - (a) Their dusty and laborious occupations.
 - (b) Defective ventilation of work places.
 - (c) Absence of sunlight.
 - (d) Exposure to great and rapid changes of temperature when heated by labour.
 - (e) Temptation to over indulgence in alcohol.
 - (f) Carelessness of the men themselves in exposing themselves to chills.
 - (g) Poor general sanitary arrangements in the city itself.
 - (h) Defective ventilation of miners' houses.

Many of these conditions would not be directly responsible for spreading pneumonia, but by lowering the general condition of bodily health they weakened resistance to the disease.

Figures corresponding to Dr. Armstrong's have now been obtained for the following nineteen years, and are given in the following tables. For the figures relating to the yearly population of the municipality, I am indebted to the police, and for details of the numbers of men employed underground yearly, I am indebted to the Department of Mines at Broken Hill.

Table I shows the number of deaths from pneumonia during each month of the years 1908-1931 inclusive. The first five years of this table were given in Table I of Dr. Armstrong's report together with a monthly average of deaths for the years 1908-1912. (See Table I attached herewith.)

In Table II this monthly average has been carried on for the succeeding years. In working out the average it has been deemed advisable to exclude the year 1919, which was quite abnormal owing to the epidemic of pneumonic influenza of that year.

TABLE I.—Table showing the number of Deaths from Pneumonia during each month of the years 1908-1931.

	1908.	1909.	1910.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.	1921.	1922.	1927.	1924.	1925.	1926.	1927.	1928.	1929.	1930.	1931.
January	2	2	1	4	2	4	4	6	3	4	2	7	...	...	2	1	2	...	3	2	2	7	6	...
February	2	...	1	2	6	2	6	...	5	1	1	3	2	1	4	...	3	1	...	3	3	...	5	2
March	2	4	3	1	4	2	3	2	3	4	4	1	2	3	...	...	2	2	2	4	1	3	6	3
April	3	6	1	...	2	7	6	4	3	1	6	9	3	4	5	3	2	...	7	6	2	3	3	...
May	1	2	4	1	9	4	5	1	1	3	4	8	4	7	2	1	3	3	3	11	5	4	4	2
June	5	1	2	4	6	10	5	2	7	1	5	30	6	2	4	3	5	8	7	3	4	8	6	3
July	6	3	5	6	3	11	6	3	5	6	8	47	1	2	4	14	11	3	6	4	8	9	1	1
August	3	1	2	6	6	12	8	3	11	4	6	34	8	5	7	4	11	3	3	2	13	7	2	4
September	2	4	5	11	3	13	3	3	3	4	17	13	1	5	...	1	14	5	1	2	8	7	4	3
October	3	5	11	5	7	14	3	3	2	3	10	12	4	3	1	2	9	3	4	5	7	13	3	...
November	3	5	9	11	9	14	2	4	5	1	1	7	...	1	2	6	6	1	3	5	10	3	5	7
December	2	1	1	1	3	10	1	5	...	2	5	5	2	2	3	2	4	6	1	3	5	8	4	7
Totals	34	34	45	52	60*	103	52	36	48	34	69	176	33	35	34	37	72	35	40	50	68	72	49	32

* Given as 61 in Dr. Armstrong report.

TABLE II.—Average Monthly Incidence of Deaths from Pneumonia.

	Dr. Armstrong's Average for Years 1908-1912 Inclusive.	Average for Succeeding Years 1913-1931 Inclusive (excluding Year 1919).	Average Monthly Incidence for 1908-1931 Inclusive (excluding Year 1919).
January	2.4	2.7	2.6
February	2.2	2.2	2.2
March	2.8	2.6	2.7
April	2.4	3.6	3.0
May	3.4	3.7	3.6
June	3.6	5.0	4.3
July	4.6	5.7	5.2
August	3.6	6.3	5.0
September	5.0	5.2	5.1
October	6.2	5.0	5.6
November	7.4	4.2	5.8
December	1.6	3.9	2.8

From these tables it is apparent that the months July to November inclusive show the heaviest mortality from pneumonia in Broken Hill.

Dr. Armstrong's Table II shows the number of deaths from pneumonia which occurred at Broken Hill in each of the five years 1908-1912 among (a) all males; (b) miners only; (c) all females. This table has been extended for the subsequent years.

TABLE III.—(= Dr. Armstrong's Table II).

Year.	All Males.	Silver Miner Only.	All Females.	Year.	All Males.	Silver Miner Only.	All Females.
1908	25	13	9	1920	22	7	11
1909	22	10	12	1921	22	2	13
1910	58	12	7	1922	23	10	11
1911	41	18	11	1923	22	7	15
1912	54	30	7	1924	44	6	28
1913	78	43	25	1925	23	7	12
1914	46	22	6	1926	30	9	10
1915	22	7	14	1927	33	9	17
1916	33	12	15	1928	41	4	27
1917	26	12	8	1929	55	6	17
1918	53	24	16	1930	34	9	15
1919	110*	38	66	1931	19	3	13

* Pneumonic influenza epidemic year.

Table IV shows the death rate from pneumonia per 1,000 of the whole population, and the death rate from pneumonia of underground employees for the years 1913-1931 inclusive. According to Dr. Armstrong's report, the average death rate during 1910-1912 of the underground "miners" (presumably from his figures he means "all underground employees") at Broken Hill was 6.5 per 1,000, which as he points out is an exceedingly high one. If the death rate per annum is averaged for the years 1913-1931 (excluding 1919 as previously) this rate becomes 3.8 per 1,000, which indicates a very marked improvement, and if the last ten years—1922-1931—are averaged the rate become 3.1 per 1,000.

Following the strike of mine workers of 1919-1920, altered conditions were introduced underground, night shift was abolished for miners, new firing and anti-dust regulations were introduced, and these alterations may account in part for the improvement in the figures shown, though, of course, a lessening in the virulence of the type of pneumonia occurring may also be a factor.

TABLE IV.—Showing the Death Rate from Pneumonia per 1,000 of the whole population, and the Death Rate from Pneumonia of underground employees for the years 1913-1931 inclusive.

Year.	Population of Municipality.	Average Number of Underground Employees.	Total Deaths from Pneumonia.	Rate per 1,000 of Population.	Deaths from Pneumonia of Underground Miners, Etc.	Death Rate from Pneumonia per 1,000 Underground Workers.
1913	33,615	4,606	103	3.1	43	9.3
1914	34,624	4,053	52	1.5	22	5.4
1915	34,757	2,818	36	1.3	7	2.4
1916	31,400	3,168	48	1.5	12	3.7
1917	31,250	3,426	34	1.8	12	3.5
1918	31,600	3,229	69	2.2	24	7.4
1919*	31,759	2,591	176	5.5	38	14.7
1920	30,260	1,465	33	1.8	7	4.7
1921	28,200	871†	35	1.3	2	2.3
1922	26,250	1,534	34	1.3	10	6.5
1923	26,100	1,895	37	1.4	7	3.7
1924	26,400	2,363	72	2.7	6	2.5
1925	27,300	2,811	35	1.3	7	2.4
1926	28,200	2,864	40	1.4	9	3.1
1927	28,680	2,768	50	1.8	9	3.2
1928	27,915	2,233	68	2.4	4	1.8
1929	27,538	2,470	72	2.6	6	2.4
1930	26,961	2,454	49	1.8	9	3.7
1931	26,958	1,480	32	1.2	3	2.0

* Pneumonic influenza epidemic year.

† From 10th November, only.

Sanitary arrangements in the town, as well as in the mines, are also greatly improved when compared with the conditions present in 1912.

TABLE V.—(=Extension of Dr. Armstrong's Table IV)—Cases of Pneumonia treated in Broken Hill and District Hospital.

Year.	Number of Cases of Pneumonia Treated.	Number of Deaths from Pneumonia.	Percentage Proportion Deaths to Cases.
1913	117	46	39.3
1914	77	26	33.6
1915	49	7	14.3
1916	51	11	21.5
1917	71	13	18.3
1918	145	40	27.6
1919		Pneumonic Influenza Year.	
1920	78	12	15.4
1921	72	13	18.1
1922	96	16	16.7
1923	106	13	12.2
1924	127	26	20.5
1925	77	13	16.9
1926	115	18	15.6
1927	107	18	16.8
1928	81	22	27.1
1929	185	37	20.0
1930	75	7	9.3
1931	90	19	21.1

For the ten years 1903-1912 the percentage proportion of deaths to cases treated for pneumonia at the Broken Hill and District Hospital averaged 39.7 (*vide* Dr. Armstrong's report) while for the ensuing nineteen years (excluding 1919) this same average is 20.2 per cent. The case fatality from pneumonia in the London hospitals is quoted by Dr. Armstrong as being 21.8 per cent.

This marked difference in the death rate per cent. indicates either (a) a diminution in the virulence of the type of pneumonia present, or (b) a greater proportion of milder cases being admitted to hospital.

This last is probably the more correct supposition, judging by the numbers of cases treated at the hospital.

A reference to Tables IV and V appears to suggest that every five or six years in Broken Hill the pneumonia present is of an increased virulence.

SUMMARY.

- (1) The tables commenced by Dr. Armstrong in a report of 1912 have been carried on for the next nineteen years.
- (2) It has been shown that the death rate from pneumonia at Broken Hill is highest in the winter and spring months (July to November inclusive). It is always considerably higher than the average for the State.
- (3) There has been a very definite improvement in the death rate from pneumonia of underground workers.
- (4) There has been a very definite improvement in the case fatality rate of pneumonia as treated at the Broken Hill and District Hospital.
- (5) It is suggested that greatly improved working conditions account for the improvement in the death rate from pneumonia of underground workers. Improved sanitation in the town has probably led to a healthier population.
- (6) There are indications of an increase in the virulence of the type of pneumonia present at Broken Hill at approximately five or six year intervals.

SECTION III.

REPORT upon the State Hospitals under the Control of the
Director-General of Public Health.

1.—THE COAST HOSPITAL, SYDNEY: REPORT FOR THE YEARS 1931 AND 1932.

The Medical Superintendent to The Director-General of Public Health.

Sir,

I have the honor to submit the following Report on the working of the Coast Hospital for the two years 1931 and 1932.

Unavoidable delay occurred in issuing the Report of the Director-General of Public Health for 1931, and it has been decided to combine the Reports for the two years.

The Staff on 31st December, 1932, was as follows:—

Honorary Medical Staff.

Honorary Physicians.—Alfred W. Campbell, M.B., M.S. (Edin.), M.D.; James McD. Gill, M.D. (Lond.), L.R.C.P. (Lond.), M.R.C.S. (Eng.); Hazlett H. Marshall, L.R.C.P.S. (Edin.), L.F.P.S. (Glas.), M.B., M.S. (Edin.); Alan W. Holmes à Court, M.D. (Syd.), M.R.C.P. (Lond.), Medaille d'Epidemies; Richmond Jeremy, M.B., Ch.M. (Syd.), M.R.C.P., (Lond.); Sidney S. Rosebery, M.D., M.R.C.P. (Edin.); Edward W. Fairfax, M.B. (Syd.).

Honorary Surgeons.—Sir Charles Clubbe, L.R.C.P. (Lond.), M.R.C.S. (Eng.); George H. Abbott, M.B., Ch.M. (Syd.), F.R.A.C.S.; Sir Alexander MacCormick, M.B., M.S., M.D. (Edin.), M.H.F.R.C.S. (Eng.), H.F.R.C.S. (Edin.), F.R.A.C.S.; John C. Storey, M.B., Ch.M. (Syd.), F.R.C.S. (Eng.), F.R.A.C.S.; Edward H. T. Thring, F.R.C.S. (Eng.), L.R.C.P. (Lond.); Harry C. Rutherford Darling, M.D. (Lond.), F.R.C.S. (Eng.); Earle C. G. Page, M.B. (Syd.); Thomas M. Furber, M.B. (Syd.), F.R.A.C.S.; James H. W. Leadley, M.B., M.S. (Syd.); Frank W. Doak, L.R.C.P., L.R.C.S. (Edin.), L.F.P.S. (Glas.); John C. Shand, M.B., M.S. (Syd.); James M. Hair, M.B., M.S. (Syd.).

Honorary Gynaecologists.—Joseph Foreman, L.S.A. (Lond.), L.M.R.C.P. (Edin.), M.R.C.S. (Eng); Ralph Worrall, M.D., M.S. (Ire.).

Honorary Ophthalmic Surgeons.—Charles G. McLeod, M.B., M.S. (Edin.); Albert T. Dunlop, M.B., M.S. (Syd.).

Honorary Ear, Nose, and Throat Surgeon.—Herbert H. Johnston, M.B. (Syd.).

Honorary Dermatologists.—Wahab McMurray, M.D., M.S. (Ire.); Ewan Murray-Will, M.B., Ch.M. (Syd.).

Honorary Director (Radium Department).—Herbert M. Moran, M.B., Ch.M., F.R.C.S. (Eng.), F.R.A.C.S.

Honorary Orthopaedic Surgeon.—Wilfred Vickers, M.B. (Syd.), F.R.A.C.S.

Honorary Urologist.—Robert J. Silvertown, M.B., M.S. (Syd.), F.R.A.C.S.

Honorary Radiographer.—Paul Tillett, M.B., M.S. (Syd.). Appointed 10th July, 1931.

Honorary Assistant Radiographer.—Kerrod B. Voss, M.B. (Syd.). Appointed 10th July, 1931.

Resident Medical Staff.

Medical Superintendent.—Reginald J. Millard, M.B., Ch.M. (Syd.), D.P.H. (Camb.), C.M.G., C.B.E.

Deputy Medical Superintendent.—Robert M. McMaster, M.B., Ch.M. (Syd.), D.S.O.

Senior Medical Officers.—Cecil J. M. Walters, M.B., Ch.M. (Syd.), F.R.A.C.S.; Kenneth G. Lawrence, M.B. (Syd.), appointed 18th March, 1932; Norman J. Symington, M.B., Ch.M. (Syd.), appointed 28th May, 1932.

Junior Medical Officers—7.

Dispenser, Miss K. M. Legg.

Manager.—William M. Megarvey, J.P.

Matron, Miss C. M. Burne.

First Clerk, William J. Gordon, M.C., J.P.

Sub-Matron, Miss C. M. Dickson, R.R.C.

Sisters, 15; Nurses, 251; other Female Staff, 69.

Asst. Sub-Matron, Miss V. K. Angus.

Attendants (Ward), 26; other Male Staff, 55.

STATISTICS.

Detailed tables of statistics will be found in the Appendix, but I may summarise here the more important of these.

I.—The following table is a comparative general statement for 1931 and 1932:—

	1931.	1932.
Remaining in Hospital on 31st December	780	780
Admitted during the year	11,050	10,467
Total cases under treatment during the year	11,817	11,247
Discharges, including deaths	11,037	10,467
Deaths	740	723
Death-rate per cent. of total discharges	6.7	6.9
Average daily number of occupied beds	773	773
Average stay of patients (in days).....	23.8	26.9

In 1931 the admissions were 68 more than in 1930, and 602 more than in 1932. The average daily number of occupied beds (773) were the same in both years. The average stay of patients in hospital was 23.8 days in 1931, and 26.9 days in 1932.

II. *Infectious Diseases*.—The following table summarises the work of the two years. In this table the "cases" are cases treated until discharge or death, and the fatality is reckoned on the total cases treated. Cases remaining in hospital on 31st December, 1931 and 1932, are not included in the figures for the year :—

	1930.			1931.			1932.		
	Cases.	Deaths.	Fatality.	Cases.	Deaths.	Fatality.	Cases.	Deaths.	Fatality.
Typhoid Fever	27	3	11.11	27	2	7.41	23	1	4.3
Measles	566	58	10.24	118	9	7.6	81	3	3.7
Scarlet Fever	1,516	26	1.71	1,616	12	.74	1,513	17	1.1
Whooping-cough	30	2	6.66	58	5	8.47	3	...	...
Diphtheria	1,180	15	1.27	1,023	11	1.06	1,170	20	1.7
Influenza	62	...	...	155	4	2.5	83	7	8.4
Erysipelas	132	10	7.57	127	13	10.2	108	3	12.7
Other Epidemic Diseases	55	4	7.27	35	...	...	53	...	...

Typhoid Fever.—The number of cases under treatment was 27 in 1931 and 23 in 1932; the fatality was lower than in 1930.

Scarlet Fever was less prevalent in 1932 than in 1931, when 3,180 cases were notified in the whole metropolitan area, as against 2,980 in 1930 and 3,032 in 1932. There were 12 deaths at the Coast Hospital in 1931 (fatality rate, .74), and 17 (fatality rate, 1.1) in 1932.

Diphtheria.—In the metropolis the cases notified amounted to 1,873 in 1931 and 2,049 in 1932, and the cases treated at the Coast Hospital were 1,033 in 1931 and 1,267 in 1932, as against 1,180 in 1930. The percentage of notified cases which came to this hospital for treatment was—in 1932, 55.1 per cent.; and in 1931, 60.07 per cent. There were 11 fatal cases in 1931, and 20 in 1932. Of the 31 fatal cases in the two years, 21 died within seven days of admission. Intubation was performed on 38 patients during the two years, and tracheotomy on 10.

Antitoxin was administered in the hospital to 1,046 cases in 1931 and 1,267 in 1932, in the doses shown in the following table :—

1931.			1932.		
Antitoxin.	Cases.	Percentage of Total Cases.	Antitoxin.	Cases.	Percentage of Total Cases.
2,000 units	8	.76	2,000 units	15	1.1
4,000 "	21	2.0	4,000 "	82	6.4
6,000 "	38	3.6	6,000 "	88	6.9
8,000 "	261	24.9	8,000 "	345	27.4
10,000 "	162	15.4	10,000 "	304	23.9
12,000 "	179	17.1	12,000 "	126	10.1
14,000 "	87	8.3	14,000 "	25	1.9
16,000 "	98	9.3	16,000 "	119	9.3
18,000 "	13	1.2	18,000 "	3	.23
20,000 "	92	8.8	20,000 "	110	8.6
22,000 "	2	.19	22,000 " .....	...	...
24,000 "	8	.76	24,000 "	1	.07
26,000 "	4	.38	26,000 " .....	...	...
28,000 "	4	.38	28,000 " .....	...	...
30,000 "	35	3.3	30,000 "	44	3.5
32,000 "	6	.57	32,000 " .....	...	...
34,000 "	1	.09	34,000 " .....	...	...
36,000 " .....	...	...	36,000 " .....	...	...
38,000 "	1	.09	38,000 " .....	...	...
40,000 "	8	.76	40,000 "	3	.23
42,000 "	1	.09	42,000 " .....	...	...
44,000 "	2	.19	44,000 " .....	...	...
46,000 "	1	.09	46,000 " .....	...	...
48,000 " .....	...	...	48,000 " .....	...	...
50,000 "	6	.57	50,000 " .....	...	...
52,000 " .....	...	...	52,000 " .....	...	...
54,000 " .....	...	...	54,000 " .....	...	...
56,000 " .....	...	...	56,000 " .....	...	...
58,000 " .....	...	...	58,000 " .....	...	...
60,000 "	6	.57	60,000 "	2	.15
62,000 " .....	...	...	62,000 " .....	...	...
64,000 "	1	.09	64,000 " .....	...	...
66,000 " .....	...	...	66,000 " .....	...	...
70,000 "	1	.09	70,000 " .....	...	...
80,000 " .....	...	...	80,000 " .....	...	...
100,000 " .....	...	...	100,000 " .....	...	...
110,000 " .....	...	...	110,000 " .....	...	...

Altogether 6,284 cases of typhoid fever, measles, scarlet fever, diphtheria, influenza, meningitis, and whooping cough were treated in the two years under review, viz., 2,998 in 1931 and 3,286 in 1932. In the Appendix will be found some further details of these cases, viz. :—

Table III.—Age and sex distribution of cases discharged or died during each year.

Table IV.—Number of cases of diphtheria, scarlet fever, and typhoid notified within the metropolis, and the percentage of these cases treated at the Coast Hospital in each of the years 1918–1932, inclusive.

Table V.—Duration of stay in hospital of cases of typhoid fever, measles, scarlet fever, whooping cough, and diphtheria.

Table VI.—Fortnightly admissions of all patients during 1931 and 1932.

Table VII.—Classification of diseases treated during 1931 and 1932.

Table VIII.—Operations performed during 1931 and 1932.

Table XI.—Summary table showing the work of the Coast Hospital and its cost each year from 1887 to 1932.

Abortion.—In 1931, 904 patients, and in 1932, 823, were treated for abortion. The admissions for this condition have increased of late years at a startling rate, as indicated by the following figures, which show the ratio of abortion cases to all female cases treated in successive years 1919–1932, inclusive :—

Summary of Cases of Abortion treated at Coast Hospital, 1919–1932.

Year.	Total Females discharged or died.	Number abortion cases discharged or died.	Percentage of abortion cases to total females.	Abortion Cases. How Discharged.				Fatality percentage of cases of abortion discharged or died.	These Figures are not elsewhere included in the Return.	
				Cured.	Relieved.	Un-Relieved.	Died.		No. of cases of abortion remaining in hospital at end of year.	Total cases treated (including those in hospital at end of year.)
1919	2,566	49	1.9	46	3	.....	.....	Nil.	5	54
1920	2,635	187	7.09	172	12	1	2	1.07	6	193
1921	3,267	230	7.04	217	5	1	7	3.04	7	237
1922	3,387	345	10.18	329	11	1	4	1.16	9	354
1923	4,247	373	8.78	346	5	2	20	5.36	8	381
1924	4,343	436	10.03	420	9	3	4	.91	12	448
1925	4,556	470	10.31	455	8	.....	7	1.49	27	497
1926	5,586	620	11.09	590	24	2	4	.64	10	630
1927	5,770	581	10.07	554	12	2	13	2.24	15	596
1928	5,267	572	10.86	543	15	4	10	1.75	.....	572
1929	5,575	755	13.54	717	24	4	10	1.32	9	764
1930	6,090	887	14.56	824	43	4	16	1.8	18	905
1931	6,176	883	14.29	854	21	.....	8	.91	21	904
1932	6,081	799	13.1	760	18	3	18	2.3	24	823

3. *Expenditure.*—Table IX gives a detailed statement of the working expenses for 1931 and 1932. The total expenditure decreased from £123,056 19s. 7d. in 1930 to £119,373 5s. 1d. in 1931, and from that amount to £106,842 14s. 4d. in 1932. The average cost per occupied bed was £162 6s. 10½d. in 1930, £154 8s. 6½d. in 1931, and £138 4s. 5d. in 1932.

Instruction by lectures and demonstrations was, as usual, given to the Nurses by the Medical Staff and Matron; and in invalid cookery by a specially engaged teacher (Miss Shepherd), as in former years. Examinations were held in accordance with regulations, and nurses passed as follows :—

	1931.	1932.
First-year examination	52	61
Second-year „	35	42
Third-year „	36	36
Fourth-year „	53	38

In both 1931 and 1932, 42 certificated nurses left the hospital to take up private nursing, or to take positions in other hospitals, whilst 45 nurses in 1931 and 46 in 1932 passed the Nurses Registration Board Examination in General Nursing.

In 1931 sick leave was granted to 117 nurses, and to 226 in 1932, amounting in the aggregate to 2,459 days in 1931 and 3,336 days in 1932. Of these nurses, some were ill on more than one occasion, there being 121 cases of illness altogether in 1931 and 226 in 1932. Of the sick nurses 17 had diphtheria (5—186 days in 1931; and 12—339 days in 1932); 43 had scarlet fever (17—884 days in 1931; and 26—1,088 days in 1932). All the nurses recovered satisfactorily.

5. *Laboratory.*—The following tables summarise the work done month by month in the hospital for the years 1931 and 1932. In 1931, 11,622, and in 1932, 12,162 cultures were examined for diphtheria. The practice was continued of accepting no diphtheria culture as negative unless found so after 48 hours' incubation.

1931.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.
Cultures examined for diphtheria—													
1. After 12-24 hours' incubation.	963	804	1,074	1,075	1,331	1,149	870	1,152	906	718	702	878	11,622
2. Negative after 12-24 hours' incubation, and re-examined after 48 hours ...	810	704	901	891	985	962	750	886	741	606	601	739	9,579
3. Positive for diphtheria at second examination	38	15	8	35	27	37	8	35	33	16	11	13	276
4. Percentage of positives in second examination	4.69	2.13	0.88	3.92	2.74	3.84	1.06	2.95	4.43	2.64	1.83	1.75	2.88
Blood—Full counts	35	34	38	39	52	24	27	22	26	26	23	27	373
Leucocyte counts ...	63	65	75	61	55	68	38	56	54	35	44	57	671
Parasites, etc.	1	...	2	2	1	1	...	1	3	2	1	1	15
Cultures	16	14	15	16	9	9	17	13	7	17	12	9	153
Widals	20	17	22	15	9	7	8	6	8	12	20	16	160
Fluids—Cerebro-spinal ...	20	5	9	11	4	6	6	9	9	15	26	13	133
Body fluids	4	10	6	7	7	5	7	10	9	8	4	5	82
Faeces	12	9	7	5	3	13	5	6	1	5	7	8	81
Pus—For organisms, etc. ...	7	21	10	10	11	6	11	10	12	17	12	10	137
Smears—Gonococci	70	95	87	83	66	51	75	70	61	73	79	73	883
Leprosy .....	...	3	1	4	...	...	1	1	1	...	...	...	11
Diphtheria and Vincent's Angina ...	5	5	1	4	5	5	3	2	3	5	7	1	46
Sp. pallida	4	2	4	6	2	...	3	1	2	15	4	10	53
Hairs and Scales for fungi ...	1	...	2	...	...	...	...	2	1	2	...	...	8
Sputum for T.B.	167	50	59	145	147	135	213	163	239	132	145	162	1,757
Urine—Bacteriological and pus, etc.	23	22	25	14	14	23	16	24	51	33	58	28	331
Deposits only	80	100	94	67	76	48	61	59	27	44	36	65	757
Chemical	1	...	...	...	2	3	4	8	...	11	4	5	38
Vaccines prepared	7	3	5	...	1	1	1	1	3	2	2	1	27
Blood—Sugar	201	121	195	179	135	134	188	179	225	165	162	209	2,093
Typing for trans-fusion	2	12	16	5	29	8	24	40	23	9	14	12	194
Swabbings for Haemolytic Streptococci	157	55	53	171	152	116	102	103	182	140	143	136	1,510
Totals	2,669	2,151	2,701	2,810	3,096	2,774	2,430	2,824	2,597	2,092	2,106	2,464	30,714

1932.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.
Cultures examined for diphtheria—													
1. After 12-24 hours' incubation	913	704	909	1,306	1,462	1,008	1,100	1,028	856	933	808	1,045	12,162
2. Negative after 12-24 hours' incubation and re-examined after 48 hours ...	735	548	740	1,055	1,237	813	943	879	727	743	790	838	10,048
3. Positive for diphtheria at second examination	25	21	24	57	79	33	32	31	28	32	9	28	...
4. Percentage of positives in second examination	3.4	3.8	3.2	5.4	6.3	4.0	3.3	3.5	3.8	4.3	1.1	3.3	3.7
Blood—Full counts	23	30	42	44	24	22	26	21	35	33	31	37	368
Leucocyte counts ...	61	54	46	37	39	51	38	48	47	55	55	50	581
Parasites, etc.	3	...	1	5	1	2	3	3	6	5	1	4	34
Cultures	14	8	12	15	7	10	8	5	11	7	17	13	127
Widals	30	21	16	11	2	4	4	9	7	6	9	8	127
Sugar	190	189	184	178	180	159	187	199	197	145	235	153	2,196
Typing for trans-fusion	14	37	9	17	13	9	27	8	...	6	...	35	175
Fluids—Cerebro-spinal ...	21	17	15	1	6	4	3	5	11	12	8	12	115
Body and joint	7	5	6	5	11	8	5	13	5	12	9	4	90
Faeces	12	12	6	8	6	7	7	18	7	5	8	...	96
Pus—For organisms, etc. ...	11	12	14	15	10	17	13	10	22	16	11	13	164
Smears—Gonococci	109	70	66	54	49	48	40	40	49	39	63	62	689
Leprosy	2	2	1	1	...	3	...	...	1	...	1	1	12
Vincent's Angina ...	4	3	3	7	4	4	5	22	6	10	15	15	98
Dark field examination for Sp. Pallidum	12	2	5	6	8	2	3	4	5	2	3	14	66
Hairs and Scales for fungi ...	1	...	...	...	1	1	...	...	1	...	...	...	4
Sputum for T.B.	147	164	123	189	153	132	302	257	211	213	215	139	2,245
Urine—Organisms, pus, etc.	16	19	20	21	29	23	18	17	10	9	31	37	368
Deposits only	58	67	57	53	58	74	35	69	80	101	94	115	861
Chemical	3	6	6	9	33	9	3	22	8	4	4	9	116
Vaccines prepared	1	3	1	1	5	3	4	13	10	1	7	4	53
Swabbings for Haemolytic Streptococci	112	23	45	29	75	63	101	90	93	78	77	132	918
Totals	2,499	1,996	2,327	3,067	3,413	2,476	2,875	2,780	2,405	2,435	2,582	2,737	31,592

PRINCIPAL WORKS CARRIED OUT DURING 1931 AND 1932.

Work performed by the Public Works Department, 1931.

At the Coast Hospital.—

- Completion of Medical Officers' New Quarters.
- Additions to the Laundry Building.
- General repairs, renovations and painting of buildings and mechanical maintenance.
- Installation of new refrigerating plant and alteration of building.
- Installation of feed water heater at the Laundry Boilers.
- Installation of septic tank and drainage system at the Night Nurses' Quarters, La Perouse.

At the Coast Hospital Auxiliary, Randwick.—

- Laying of magnesite flooring in Side-rooms.
- Renovations of steam services—Wards 23, 25, 27 and 29.

Work performed by Hospital Staff.

In addition to carrying out minor repairs and alterations of plant, furniture, buildings, etc., the hospital staff performed the undermentioned works:—

At the Coast Hospital, 1931.—

- Provision of new concrete foundation and renovation of interior walls of Clock Tower.
- Transferring Centre Ward Stoves from Coast Hospital Auxiliary and installing them at the Coast Hospital.
- Alteration of covered way, Ward 17.
- Remodelling Main Avenue in vicinity of Ward 17.
- Renovation of House at La Perouse occupied by Staff.
- Erecting partitions and alterations of General Office.
- Renovation and repair of furniture in Wards and Nurses' Quarters.
- Erection of concrete bridge and construction of road and watercourse.
- Laying out grounds in vicinity of Medical Officers' New Quarters.
- Renovation and painting of buildings.
- Installation of burglar alarms in General Store.
- Installation and extension of electric services generally.
- General repair of steam services.

At the Coast Hospital Auxiliary, Randwick, 1931.—

- Erecting fencing and enclosing ends of verandahs.
- Converting office into dark room for viewing X-ray films.
- Renovation and repairs of buildings generally.

At the Coast Hospital, 1932.—

- Medical Officers' Quarters—Construction of roadway, kerbing, etc., grading and levelling grounds and forming lawns, erecting park rail fence. Erection of 120 feet of lattice screen, 9 feet high.
- Coal Bunkers—Re-erection of fence and provision of gates.
- Wards IX and X—Renewal of cold water service.
- Wards III and IV—Replacement of G.I. ceiling with fibro-cement sheets and renovating interior walls.
- Overseer's Quarters—Internal renovation and painting.
- Demonstration Room—Conversion of old billiard-room into nursing demonstration room.
- Female Lazaret—Construction of concrete steps and pathways.
- Male Lazaret—Construction of concrete bridge and providing wood decking.
- Radium Bureau—Provision of radium storage equipment, lead trays, etc.

Coast Hospital Auxiliary, Randwick, 1932.—

- Erecting cubicles in Wards 23 and 26.
- Preparing room for dental surgery, installing gas, sterilizer, etc.
- Removing and re-erecting laundry machinery.
- Providing new copper steam service, La Perouse Nurses' Quarters.
- Fitting new filter and oil pipe Laundry Boiler.
- Installing steam service to sink at Infectious Division.
- Installing steam cylinder and hot-water service at Dispensary.
- Providing copper service for water Feed Tank at Boilers in Wards XVIII and XIX.
- Renewing Hot Water Service, Female Lazaret, etc.
- Re-wiring electric lighting services in Nurses' Quarters, "Coast" Division, Working Patients' Quarters.
- Installing electric light, Cottage No. 4.
- Re-wiring electric power services in sundry wards.
- Provision of hot-air baths, Wards 8 and 15.
- Re-wiring electric light service in various buildings.
- Installing electric steam kettle, Ward XI.
- General repair and renovation of buildings, furniture fittings, etc.

W. MEGARVEY,
Manager.

R. J. MILLARD,
Medical Superintendent.

TABLE I.—General Statement of the working of the Hospital for the two years from 1st January, 1931, to 31st December, 1932.

		No. of Beds. 1931 and 1932.	
Number of beds available in the General Division on 31st December, 1931 and 1932		475	
" " Infectious Division		281	
" " Nurses' Sick Room		4	
Coast Hospital Auxiliary, Randwick		700	
Total accommodation.....		120	
		880	

	1931.			1932.		
	Males.	Females.	Total.	Males.	Females.	Total.
Number of inmates remaining in hospital on 31st December	303	385	748	403	377	780
" admitted during the year	4,991	6,168	11,069	4,415	6,052	10,467
Total treated	5,294	6,553	11,817	4,818	6,429	11,247
Discharged—Cured	2,540	4,371	6,911	2,423	4,281	6,704
" Relieved	1,695	1,274	2,969	1,363	1,242	2,605
" Unrelieved	180	186	366	155	230	385
" No Disease	27	324	51	28	22	50
Died	419	21	740	417	306	723
Total number discharged, or who died	4,861	6,176	11,037	4,386	6,081	10,467
Remaining in hospital on 31st December	403	377	780	432	348	780

	1931.	1932.
Average daily number resident	773	773
Average residence of discharged patients in days	23.8	26.9
Rate of mortality on total number who were discharged or who died	6.7	6.9
Total cost of maintenance and treatment of indoor patients	£119,373 5s. 1d.	£106,842 14s. 4d.
Average cost of patients per annum	£154 8s. 6½d.	£138 4s. 5d.

	1931.				1932.			
	Males.	Females.	Total.	Total Visits.	Males.	Females.	Total.	Total Visits.
Out-patients—								
Total number of individuals who received treatment	1,659	1,471	3,130	5,688	2,095	1,731	3,821	8,128
Venereal Disease				6,861				6,861
Night Clinic at Health Department's Office				10,663				10,663
Total cost of Out-patient treatment				£548 14s. 1d.				£650 0s. 0d.

Hospital Staff on 31st December, 1931 and 1932.

Medical and Administrative.	Number.		Nursing.	Number.		General.	Number.	
	1931.	1932.		1931.	1932.		1931.	1932.
Medical Superintendent ..	1	1	Sub-Matron	1	1	Gardeners	3	3
Deputy Medical Superintendent ..	1	1	Asst. Sub-Matron	1	1	Herdsman	1	1
Assistant Medical Officers ..	10	10	Sisters—			Overscer	1	1
Manager	1	1	Senior	8	9	Artisans	12	12
Matron	1	1	Junior	6	6	Attendants, Outdoor	20	22
Dispensers	3	3	Nurses—			Telephone Attendants	4	4
Clerks	9	9	Staff	24	25	Male Cooks	4	4
Laboratory Assistants	2	2	Pupil	210	226	Female Cooks	8	8
Storekeeper	1	1	Ward Attendants	26	26	" Servants	38	38
			Housekeeper	1	1	" Servants	14	13
			Masseno	1	1	Laundresses	3	3
Total	29	29		278	296		108	109
						Total Staff	415	434

TABLE II.—Return showing the number of Wards, together with the cubic space and number of beds in each Ward, in the General and Infectious Divisions of the Coast Hospital and the Coast Hospital Auxiliary at Randwick for the years 1931 and 1932.

Coast Hospital, Little Bay.

Ward.	Cubic Space.	No. of Beds.	Cubic space per Bed in Ward.	Ward.	Cubic Space.	No. of Beds.	Cubic Space per Bed in Ward.
1	77,788	91	855	16	11,520	13	886
3	12,000	10	1,200	17	16,915	30	564
4	12,900	11	1,173	18 and verandah	53,062	50	1,263
5 and gallery	31,368	25	1,254	19 and verandah	53,062	50	1,263
6	10,800	8	1,350	20 and verandah	53,062	50	1,263
7	10,800	8	1,350	21 and verandah	53,062	50	1,263
8 and gallery	32,268	24	1,344	23 and verandah	53,062	50	1,263
9	12,000	8	1,500	24	19,023	25	761
10 and N. Sick Room ...	16,356	14	1,168	25	19,023	25	761
11	22,320	26	858	26	19,023	25	761
12	23,880	28	853	27	19,023	25	761
13	28,236	41	688	Total	732,369	760	
14	43,520	43	1,012				
15	28,296	30	943				

Coast Hospital Auxiliary, Randwick.

Ward.	Cubic Space.	No. of Beds.*	Cubic space per Bed.
23	23,415	24	975
24	23,415	24	975
26	23,415	24	975
28	23,415	24	975

*These figures do not include 6 beds on the verandah of each ward.

TABLE III.—Discharges and Deaths for the year 1932, distributed under sex and age—continued.

Age.	0-5		6-10		11-15		16-20		21-30		31-40		41-50		51-60		61-70		71-80		81-90		Total cases treated.	Total deaths.	Mortality per cent.	
	Sex.		Sex.		Sex.		Sex.		Sex.		Sex.		Sex.		Sex.		Sex.		Sex.		Male.	Female.				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.						
1932.																										
1. Infectious Diseases—																										
Typhoid Fever—																										
Discharges																										
Deaths																										
Measles—																										
Discharges																										
Deaths																										
Scarlet Fever—																										
Discharges																										
Deaths																										
Whooping Cough—																										
Discharges																										
Deaths																										
Diphtheria—																										
Discharges																										
Deaths																										
Influenza—																										
Discharges																										
Deaths																										
Plague—																										
Discharges																										
Deaths																										
Cerebro-spinal Meningitis—																										
Discharges																										
Deaths																										
2. Other Diseases—																										
Discharges																										
Deaths																										
Totals																										

TABLE IV.—Showing Number of Cases of Diphtheria, Scarlet Fever, and Typhoid Fever notified within the Metropolis, and the percentage of these cases treated at the Coast Hospital, in each of the years 1917-1932 inclusive.

	1917.	1918.	1919.	1920.	1921.	1922.	1923.	1924.	1925.	1926.	1927.	1928.	1929.	1930.	1931.	1932.
<i>Diphtheria.</i>																
Cases notified in Metro- polis	2,576	2,399	988	1,825	2,916	1,807	1,722	2,115	1,626	2,048	2,112	2,028	2,124	1,938	1,873	2,049
Cases treated at Coast Hospital	1,259	1,241	501	834	1,360	905	854	1,115	787	1,018	997	1,123	1,111	1,180	1,033	1,231
Percentage	48.8	51.7	50.72	45.6	46.6	50	49.5	52.7	48.4	49.7	47.2	53.8	52.3	60.8	55.1	60.07
<i>Scarlet Fever.</i>																
Cases notified in Metro- polis	1,217	765	424	468	511	653	1,541	2,241	1,916	3,424	5,840	3,729	3,418	2,980	3,180	3,032
Cases treated at Coast Hospital	564	333	174	167	174	229	622	1,045	842	1,668	2,183	1,723	1,572	1,516	1,626	1,513
Percentage	46.3	43.5	41.04	35.6	34	35	40.4	46.6	43.9	48.7	37.4	46.2	46.0	52.5	51.1	57.38
<i>Typhoid Fever.</i>																
Cases notified in Metro- polis	403	327	335	366	342	246	265	242	230	245	184	133	185	118	88	104
Cases treated at Coast Hospital	21	41	20	56	49	33	51	8	50	60	33	22	53	27	27	26
Percentage	5.2	12.5	5.97	15.3	14.3	13.4	19.2	23.9	21.7	24.4	18	16.6	28.6	22.9	32.9	25

TABLE V.—Duration of Stay in Hospital of cases of Typhoid Fever, Measles, Scarlet Fever, Whooping Cough, and Diphtheria for the year 1931.

Duration of Stay.	Typhoid Fever.			Measles.			Scarlet Fever.			Whooping Cough.			Diphtheria.		
	Cured.	Died.	Total.	Cured.	Died.	Total.	Cured.	Died.	Total.	Cured.	Died.	Total.	Cured.	Died.	Total.
1 week or less	...	2	2	2	5	7	12	8	20	7	1	8	57	7	64
1—2 weeks..	2	...	2	43	1	44	1	...	1	16	...	16	249	1	250
2—3 " ..	...	...	...	25	...	25	15	1	16	15	2	17	422	...	422
3—4 " ..	1	...	1	4	1	5	285	...	285	2	2	4	165	...	165
4—5 " ..	6	...	6	11	...	11	577	...	577	5	...	5	48	...	48
5—6 " ..	4	...	4	8	1	9	413	2	415	7	...	7	22	2	24
6—7 " ..	4	...	4	3	...	3	92	1	93	...	...	...	19	...	19
7—8 " ..	5	...	5	4	...	4	50	...	50	1	...	1	11	...	11
8—9 " ..	...	...	...	...	...	...	41	...	41	...	...	...	3	...	3
9—10 " ..	...	...	...	...	1	1	23	...	23	...	...	...	6	...	6
10—11 " ..	...	...	...	1	...	1	20	...	20	...	...	...	...	...	...
11—12 " ..	1	...	1	1	...	1	18	...	18	...	...	...	2	...	2
12—13 " ..	1	...	1	1	...	1	12	...	12	...	...	...	2	...	2
13—14 " ..	...	...	...	1	...	1	9	...	9	...	...	...	1	...	1
14—15 " ..	...	...	...	...	...	...	10	...	10	...	...	...	...	...	...
15—16 " ..	...	...	...	...	...	...	5	...	5	...	...	...	4	...	4
16—17 " ..	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...
17—18 " ..	...	...	...	...	...	...	2	...	2	...	...	...	...	...	...
18—19 " ..	...	...	...	1	...	1	3	...	3	...	...	...	...	...	...
19—20 " ..	1	...	1	...	...	...	3	...	3	...	...	...	...	...	...
20—21 " ..	...	...	...	...	...	...	4	...	4	...	...	...	...	...	...
21—22 " ..	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
22—23 " ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23—24 " ..	...	...	...	...	...	...	3	...	3	...	...	...	...	...	...
24—25 " ..	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...
25—26 " ..	...	...	...	3	...	3	5	...	5	...	...	...	1	...	1
And over	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total ..	25	2	27	109	9	118	1,691	12	1,616	53	5	58	1,012	11	1,023

TABLE V.—Duration of Stay in Hospital of cases of Typhoid Fever, Measles, Scarlet Fever, Whooping Cough, and Diphtheria, for the year 1932—*continued*.

Duration of Stay.	Typhoid Fever.			Measles.			Scarlet Fever.			Whooping Cough.			Diphtheria.		
	Cured.	Died.	Total.	Cured.	Died.	Total.	Cured.	Died.	Total.	Cured.	Died.	Total.	Cured.	Died.	Total.
1932.															
1 week or less	2	...	2	8	1	9	37	9	46	...	...	...	41	14	55
1—2 weeks..	...	...	...	44	2	46	21	4	25	...	...	...	227	4	231
2—3 „ ..	...	...	...	12	...	12	14	1	15	1	...	1	586	...	586
3—4 „ ..	...	...	...	...	...	...	403	...	403	...	...	...	141	...	141
4—5 „ ..	4	...	4	3	...	3	564	...	564	...	...	...	70	1	71
5—6 „ ..	3	...	3	6	...	6	216	2	218	...	...	...	29	1	30
6—7 „ ..	3	...	3	2	...	2	83	...	83	1	...	1	25	...	25
7—8 „ ..	2	...	2	...	...	...	46	...	46	1	...	1	13	...	13
8—9 „ ..	5	1	6	2	...	2	31	...	31	...	...	...	5	...	5
9—10 „ ..	...	...	...	...	...	...	18	...	18	...	...	...	2	...	2
10—11 „ ..	1	...	1	...	...	...	19	1	20	...	...	...	4	...	4
11—12 „ ..	...	...	...	1	...	1	6	...	6	...	...	...	1	...	1
12—13 „ ..	1	...	1	...	...	...	8	...	8	...	...	...	3	...	3
13—14 „ ..	...	...	...	...	...	...	4	...	4	...	...	...	1	...	1
14—15 „ ..	...	...	...	...	...	...	5	...	5	...	...	...	1	...	1
15—16 „ ..	...	...	...	...	...	...	4	...	4	...	...	...	...	...	...
16—17 „ ..	...	...	...	...	...	...	3	...	3	...	...	...	...	...	...
17—18 „ ..	...	...	...	...	...	...	2	...	2	...	...	...	1	...	1
18—19 „ ..	1	...	1	...	...	...	3	...	3	...	...	...	...	...	...
19—20 „ ..	...	...	...	...	...	...	3	...	3	...	...	...	...	...	...
20—21 „ ..	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...
21—22 „ ..	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
22—23 „ ..	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...
23—24 „ ..	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...
24—25 „ ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25—26 „ ..	...	...	...	...	...	...	3	...	3	...	...	...	...	...	...
And over	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	22	1	23	78	3	81	1,496	17	1,513	3	...	3	1,150	20	1,170

TABLE VI.—Fortnightly Admission of Cases during 1931 and 1932.

	Fortnight ending—													Total.													
	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.															
	14 28	11 25	10 24	7 21	5 19	2 16 30	14 28	11 25	8 22	6 20	3 17	1 15 31															
1931.																											
Typhoid Fever	...	1	...	3	2	...	3	...	1	...	1	1	3	...	2	...	1	...	3	...	1	...	1	1	1	25	
Measles	18	14	1	9	3	1	2	5	7	1	1	2	1	1	4	1	2	2	5	1	2	2	3	2	1	2	93
Scarlet Fever	49	66	45	87	63	62	67	49	62	62	65	66	78	84	57	46	62	68	51	61	72	72	58	48	69	57	1,626
Whooping Cough	...	...	2	...	...	1	2	...	1	1	...	1	1	2	...	2	3	10	13	2	5	5	19	1	...	62	
Diphtheria	39	41	38	44	37	51	50	51	67	86	86	39	51	29	39	30	45	37	23	15	10	18	30	32	24	21	1,033
Influenza	2	2	2	4	2	4	4	6	1	5	7	2	6	11	...	13	24	22	21	5	7	3	2	...	...	153	
Other Diseases	326	212	341	327	369	370	375	333	323	351	356	361	320	374	384	288	283	309	308	280	279	256	286	208	164	292	8,075
Total	434	336	429	474	476	489	500	447	461	507	515	472	458	504	484	382	419	449	421	367	375	357	389	292	259	373	11,069
1932.																											
Typhoid Fever	2	4	1	3	3	...	3	1	...	...	...	...	2	...	1	...	...	...	1	...	1	...	...	1	...	...	23
Measles	...	...	1	...	...	...	2	...	...	3	3	3	...	1	5	2	...	4	3	10	7	11	16	8	7	86	
Scarlet Fever	56	64	40	40	53	56	58	72	54	50	50	51	50	82	84	74	96	44	98	27	101	72	84	37	32	35	1,560
Whooping Cough	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Diphtheria	36	52	32	48	42	83	36	114	37	60	60	61	60	54	53	40	53	15	43	7	54	10	56	25	21	25	1,177
Influenza	3	1	1	1	1	...	3	...	3	3	3	3	11	5	2	6	5	8	1	8	2	4	2	5	1	82	
Other Diseases	304	273	312	308	372	244	318	239	307	302	322	282	302	253	244	283	211	292	293	293	182	323	240	344	373	412	7,538
Total	401	395	387	400	471	383	417	429	398	418	438	400	415	402	387	405	368	356	356	332	355	415	395	424	440	480	10,467

TABLE VII.—Return of the Number of Persons under Treatment, the Order of Disease for which they were treated, and the Number of Deaths in each Order during the years 1931 and 1932. (Includes cases remaining in Hospital on 31st December, in each year.

1931.	Discharged during the year.				Remaining in on 31st December, 1931.	Total.	Average number of days in Hospital.
	Cured.	Relieved.	Un-relieved.	Died.			
CLASS 1.—GENERAL DISEASES.							
Typhoid Fever	25	...	...	2	3	30	43.0
Malaria .....	...	2	...	...	...	2	9.5
Measles	109	...	...	9	3	121	26.3
Scarlet Fever	1,589	14	1	12	180	1,796	38.2
Whooping-cough	27	26	...	5	4	62	18.7
Diphtheria	1,060	11	1	11	54	1,077	19.4
Influenza	143	7	1	4	1	156	11.02
Mumps.....	3	...	...	...	1	4	10.6
Dysentery	2	...	...	...	...	2	22.0
Erysipelas	112	2	...	13	...	127	16.4
Other Epidemic Diseases	33	2	...	...	2	37	10.7
Purulent Infection and Septicæmia	2	1	...	4	1	8	6.0
Anthrax .....	...	...	...	...	...	...	...
Tetanus	3	...	...	3	...	6	21.0
Rickets .....	...	...	...	...	...	...	...
Encephalitis Lethargica .....	...	...	...	...	...	...	...
Tuberculosis of the Lungs	2	154	30	206	87	479	81.5
" Acute Miliary.....	...	...	...	1	...	1	26.0
" Meningitis .....	...	...	...	1	...	1	6.0
" Pott's Disease .....	...	...	...	...	...	...	...
" Hips.....	1	11	...	...	8	20	196.0
" Other	2	11	1	5	11	30	104.0
Poliomyelitis.....	1	5	2	...	5	13	66.0
Syphilis	3	108	9	3	22	145	37.7
Soft Chancre	1	9	...	...	...	10	23.0
Gonorrhœal Disease	8	552	8	...	57	625	35.0
Cancer, &c., of the Mouth	4	2	3	1	...	10	23.2
" of the Stomach and Liver	1	11	16	16	2	46	29.0
" of the Peritonæum, Intestines, and Rectum	4	10	10	9	1	34	36.4
" of the Female Genital Organs	3	6	20	6	1	36	16.7
" of the Breast	3	1	3	2	1	10	26.5
" of the Skin .....	...	4	2	...	...	6	26.0
" of other Organs	2	12	14	14	2	44	48.0
Tumours	9	13	9	2	4	37	17.5
Acute Rheumatism.....	20	71	5	1	9	106	34.5
Chronic Rheumatism and Gout .....	...	1	...	...	...	1	5.0
Diabetes	1	164	5	35	30	235	34.0
Exophthalmic Goitre	2	8	1	3	...	14	34.0
Hodgkin's Disease .....	...	1	1	1	...	3	16.3
Anæmia, Chlorosis	2	21	...	6	2	31	35.0
Leprosy .....	...	...	1	...	...	1	12.0
Alcoholism, Acute and Chronic	2	9	...	2	...	13	11.0
Other Chronic Poisoning and Lead.....	2	2	...	...	...	4	24.6
Other General Diseases	18	6	2	5	25	56	27.0
Diseases of Spleen.....	...	...	...	...	...	...	...
Addison's Disease .....	...	...	1	...	1	2	54.0
Diseases of Pituitary Glands .....	...	...	...	...	...	...	...
Total, Class 1	3,139	1,267	146	382	517	5,441	...
CLASS 2.—DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SPECIAL SENSE.							
Meningitis	1	...	...	...	...	1	15.0
Cerebro-spinal Meningitis	1	...	...	1	...	2	77.0
Other Diseases of the Spinal Cord .....	...	1	4	3	2	10	48.7
Cerebral Hæmorrhage	5	19	3	24	2	53	8.02
General Paralysis of Insane.....	...	...	3	...	...	3	8.6
Other forms of Mental Alienation .....	...	2	7	...	...	9	5.2
Epilepsy .....	...	17	3	1	3	24	17.0
Chorea.....	1	4	...	...	2	7	34.4
Locomotor Ataxia.....	...	6	1	...	1	8	58.2
Neuralgia and Neuritis.....	9	35	...	1	1	46	21.5
Other Diseases of the Nervous System	4	43	9	...	1	57	31.6
Diseases of the Eye and Adnexa.....	2	1	2	...	1	6	8.4
Diseases of the Ear	52	36	3	5	3	99	17.6
Encephalitis	1	...	1	...	...	2	46.5
Cerebral Embolism and Thrombosis	1	10	1	5	2	19	18.0
Infantile Convulsions under 5.....	...	...	...	1	...	1	1.0
Total, Class 2	77	174	37	41	18	347	...
CLASS 3.—DISEASES OF THE CIRCULATORY SYSTEM.							
Angina Pectoris .....	...	2	...	...	1	3	18.5
Acute Endocarditis	1	26	5	14	...	46	55.0
Organic Diseases of the Heart	1	77	3	1	7	89	32.2
Diseases of the Arteries, Atheroma, &c. ....	...	21	1	35	...	57	24.8
Embolism and Thrombosis	3	4	...	3	2	12	17.0
Diseases of the Veins (Varices, Ulcer, and Hæmorrhoids)...	36	20	2	...	4	62	20.2
Diseases of the Lymphatic System	8	1	...	1	...	10	16.6
Hæmorrhage .....	...	...	...	...	...	...	...
Pericarditis.....	1	2	...	1	...	4	23.4
Aneurism .....	...	4	...	3	1	8	20.6
Arteriosclerosis .....	...	17	...	2	...	19	18.5
Other Diseases—Circulatory System.....	2	13	...	5	3	23	19.0
Total, Class 3	52	187	11	65	18	333	...

TABLE VII.—Return of the Number of Persons under Treatment, &c.—continued.

1931.	Discharged during the year.				Remaining in on 31st December, 1931.	Total.	Average number of days in Hospital.
	Cured.	Relieved.	Un- relieved.	Died.			
CLASS 4.—DISEASES OF THE RESPIRATORY SYSTEM.							
Diseases of the Nasal Fossæ	54	59	21	1	7	142	8.15
Diseases of the Larynx	8	2	1	1	4	16	9.0
Capillary Bronchitis.....	2	...	...	1	...	3	6.0
Acute Bronchitis	42	14	...	2	3	61	13.0
Chronic Bronchitis	3	48	...	2	1	54	29.0
Broncho-Pneumonia	29	1	...	31	5	66	12.7
Pneumonia	124	2	1	34	11	172	18.9
Pleurisy	56	15	...	...	4	75	22.6
Asthma	3	56	...	2	2	63	20.0
Other Diseases of the Respiratory System	2	11	...	2	14	29	45.5
Congestion and Gangrene of Lung .....	...	...	...	...	...	...	...
Pneumonitis, Unspecified	4	3	...	...	...	7	...
Total, Class 4	327	211	23	76	51	688	...
CLASS 5.—DISEASES OF THE DIGESTIVE SYSTEM.							
Gastritis.....	7	9	...	...	1	17	8.2
Diseases of the Teeth and Gums .....	...	...	...	...	...	...	...
Diseases of the Mouth and its Associated Organs	13	4	2	...	...	19	13.6
Diseases of the Pharynx	454	21	4	4	9	492	5.3
Ulcer of the Stomach	9	36	4	6	1	56	22.0
Other Diseases of the Stomach (Cancer excluded)	4	8	2	...	7	21	19.0
Diarrhoea and Enteritis (children under two years only)	9	...	...	6	1	16	21.2
Diarrhoea and Enteritis (children over two years and adults).....	44	7	...	3	4	58	14.6
Appendicitis	528	25	3	12	16	584	15.7
Hernia, Intestinal Obstruction	89	5	12	2	...	108	26.5
Other Diseases of the Intestines	60	57	11	16	10	154	21.7
Diseases of the Anus and Rectal Fistula .....	...	...	...	...	...	...	...
Cirrhosis of the Liver .....	...	10	1	3	...	14	10.0
Biliary Calculi	71	46	2	7	...	126	29.0
Other Diseases of the Liver.....	33	37	2	4	...	76	21.8
Simple Peritonitis (non puerperal)	4	3	3	...	2	12	20.2
Hydatid undefined .....	...	...	...	...	...	...	...
Other Diseases of Digestive System	6	3	...	6	4	19	8.7
Oesophagus, Stricture of.....	1	...	...	...	...	1	89.0
Ulcer of Duodenum	9	23	...	3	4	39	23.0
Total, Class 5	1,341	288	46	72	59	1,806	...
CLASS 6.—DISEASES OF THE GENITO-URINARY SYSTEM AND ADNEXA (NON-VENEREAL).							
Acute Nephritis.....	23	16	...	5	4	48	26.7
Chronic Nephritis.....	2	29	2	20	...	53	24.2
Uterine Haemorrhage	16	15	6	...	4	41	15.0
Other Diseases of the Kidneys and their Adnexa	49	67	2	3	5	126	15.0
Calculi of the Urinary Passages	31	30	17	2	4	84	23.5
Diseases of the Bladder	9	16	2	1	3	31	15.2
Other Diseases of the Urethra, Urinary Abscess, &c. ...	8	39	1	1	...	49	21.7
Diseases of the Prostate	13	32	4	8	5	62	36.0
Non-venereal Diseases of the Male Genital Organs.....	16	11	2	...	1	40	13.6
Salpingitis and Pelvic Abscess	116	93	2	1	14	226	19.3
Uterine Tumour (non-Cancerous) .....	...	...	...	...	...	...	...
Other Diseases of the Uterus	35	5	3	2	1	46	23.5
Cysts and other Ovarian Tumours.....	31	2	3	1	4	41	19.5
Other Diseases of the Female Genital Organs	118	33	12	2	...	165	20.4
Non-puerperal Diseases of the Breast (cancer excepted)...	9	2	...	...	...	11	21.8
Total, Class 6	486	350	56	46	45	1,023	...
CLASS 7.—PUERPERAL CONDITIONS.							
Abortion.....	854	21	...	8	21	904	8.5
Ectopic Gestation.....	35	2	...	...	3	41	22.1
Hyperemesis	17	14	...	...	2	33	9.8
Pyelitis .....	...	...	...	...	1	1	...
Haemorrhage	1	5	2	...	...	8	7.6
Retroversion	6	1	...	...	4	11	15.5
Albuminuria .....	...	1	...	...	...	1	16.0
Pregnancy .....	...	...	1	...	1	2	1.0
Other Accidents of Labour.....	10	3	...	2	...	15	13.2
Puerperal Diseases of the Breast	9	...	...	...	1	10	24.2
Puerperal Septicæmia	3	...	...	25	2	30	12.4
Total, Class 7	936	47	3	35	35	1,056	...
CLASS 8.—DISEASES OF THE SKIN AND OF THE CELLULAR TISSUE.							
Gangrene .....	...	...	...	1	...	1	39.0
Phlegmon, Acute Abscess	114	24	1	2	...	141	20.9
Other Diseases of the Skin and Adnexa	90	76	3	2	11	182	42.3
Scabies .....	...	...	...	...	...	...	...
Furuncle	32	1	...	...	...	33	17.5
Elephantiasis.....	...	...	...	...	...	...	...
Total, Class 8	236	101	4	5	11	357	...

TABLE VII.—Return of the Number of Persons under Treatment, &c.—continued.

1931.	Discharged during the year.				Remain- ing on 31st December, 1931.	Total.	Average number of days in Hospital.
	Cured.	Relieved.	Un- relieved.	Died.			
CLASS 9.—DISEASES OF THE ORGANS OF LOCOMOTION.							
Non-tuberculous Disease of the Bones	18	60	7	2	9	96	44.0
Arthritis and other Diseases of the Joints (Tuberculosis and Rheumatism excepted).....	8	16	2	...	2	28	38.6
Other Diseases of the Organs of Locomotion	12	10	...	...	2	24	47.0
Total, Class 9	38	86	9	2	13	148	...
CLASS 10.—MALFORMATIONS.							
Congenital Malformations	4	...	1	...	1	6	17.6
Total, Class 10	4	...	1	...	1	6	17.6
CLASS 11.—DISEASES OF EARLY INFANCY.							
Total, Class 11	1	1	...	1	...	3	13.0
CLASS 12.—OLD AGE.							
Senility .....	...	1	3	2	...	6	11.3
Total, Class 12 .....	...	1	3	2	...	6	...
CLASS 13.—VIOLENCE.							
Lysol Poisoning.....	1	...	...	...	...	1	.4
Scalds and Burns (other than fire).....	15	...	...	1	1	17	15.7
Poisoning by Food (not ptomaine)	4	...	...	...	...	4	12.7
Bite of Snake or Insect	2	1	...	...	...	3	2.0
Firearms Accidents	3	...	...	1	1	5	22.0
Cutting Instruments.....	15	4	2	...	...	21	12.5
Burning by Fire.....	1	...	...	1	...	2	71.5
Falls	71	48	3	8	...	130	22.9
Crushings	19	12	3	...	...	34	17.0
Railways and Tramways and Motor	9	4	...	1	...	14	33.7
Injuries by Vehicles and Horses.....	7	3	...	...	...	10	20.7
Shock	1	...	...	...	...	1	2.0
Other Injuries	21	9	1	1	...	32	21.7
Assault	2	1	...	...	...	2	45.16
Fractures (cause not obtainable) .....	...	3	2	...	...	5	71.0
Other Acute Poisonings (except gas).....	2	1	...	...	...	3	10.0
Total, Class 13	173	85	11	13	2	285	...
CLASS 14.—ILL-DEFINED DISEASES.							
Malnutrition .....	...	...	...	...	...	...	...
Debility	3	2	...	...	...	5	5.4
Marasmus .....	...	...	...	...	...	...	...
Observation	98	138	16	...	7	259	9.1
No disease .....	...	...	...	...	...	6	8.0
Nurslings with mothers, no disease .....	...	...	...	...	3	48	19.0
Mothers with nurslings, no disease.....	...	...	...	...	...	...	...
Total, Class 14	101	140	16	...	10	318	...
SUMMARY.							
Total, Class 1.—General Diseases	3,139	1,257	146	382	517	5,441	...
" 2.—Diseases of the Nervous System and of the Organs of Special Sense	77	174	37	41	18	347	...
" 3.—Diseases of the Circulatory System	52	187	11	65	18	333	...
" 4.—Diseases of the Respiratory System	327	211	23	76	51	688	...
" 5.—Diseases of the Digestive Organs	1,341	288	46	72	59	1,806	...
" 6.—Diseases of the Genito-Urinary System and Adnexa	486	390	55	46	45	1,023	...
" 7.—Diseases of the Puerperal Condition ...	936	47	3	35	35	1,056	...
" 8.—Diseases of the Skin and of the Cellular Tissue	236	101	4	5	11	357	...
" 9.—Diseases of the Organs of Locomotion...	38	86	9	2	13	148	...
" 10.—Malformation	4	...	1	...	1	6	...
" 11.—Infancy	1	1	...	1	...	3	...
" 12.—Old Age .....	...	1	3	2	...	6	...
" 13.—Violence.....	173	86	11	13	2	285	...
" 14.—Ill-defined Diseases	101	140	16	...	10	318*	...
Grand Total	6,911	2,969	366	740	780	11,817	...

* Includes 51 no disease.

TABLE VII.—Return of the Number of Persons under Treatment, &c.—*continued.*

1932.	Discharged during the year.				Remaining in on 31st December, 1932.	Total.	Average number of days in Hospital.
	Cured.	Relieved.	Un- relieved.	Died.			
CLASS 1.—GENERAL DISEASES.							
Typhoid Fever	21	1	...	1	3	26	50-6
Malaria .....	...	1	...	...	...	1	5
Measles	78	...	...	3	8	89	15-7
Scarlet Fever	1,474	21	1	17	227	1,740	35
Whooping-cough	2	1	...	...	...	3	41-6
Diphtheria	1,137	13	...	20	61	1,231	20-1
Influenza	74	2	...	7	...	83	13-3
Mumps	28	...	...	...	...	28	12-1
Dysentery .....	...	...	...	2	...	2	18
Erysipelas	105	...	...	3	6	114	12-4
Other Epidemic Diseases	48	4	1	...	...	53	10-3
Purulent Infection and Septicæmia	3	...	...	8	...	11	15-9
Anthrax	1	...	...	...	...	1	2
Tetanus .....	...	...	...	3	...	3	2-6
Croup	4	...	...	...	...	4	18-2
Lethargia .....	...	...	1	1	...	2	13-5
Tuberculosis of the Lungs .....	...	124	47	200	97	468	89
" Acute Miliary .....	...	...	...	...	...	...	...
" Meningitis .....	...	...	...	2	...	2	8-5
" Pott's Disease .....	...	1	...	3	...	4	168-7
" Hips	1	7	3	...	3	14	110-09
" Other	1	4	...	2	8	15	34-2
Poliomyelitis	14	18	1	...	4	37	78-7
Syphilis	2	114	6	7	13	142	66-1
Soft Chanere .....	...	...	...	...	...	...	...
Gonorrhœal Disease	4	371	8	1	55	439	40-1
Cancer, &c., of the Mouth	4	3	6	1	...	14	34-2
" of the Stomach and Liver .....	...	8	14	18	3	43	23-7
" of the Peritonæum, Intestines, and Rectum	4	11	7	10	4	36	46-9
" of the Female Genital Organs	2	6	18	5	...	31	24-4
" of the Breast	5	5	2	1	...	13	27-7
" of the Skin	3	2	...	...	1	6	16-6
" of other Organs	2	10	12	15	2	41	31-6
Tumours	16	5	5	3	1	30	18-6
Acute Rheumatism	25	33	1	1	1	61	27-75
Chronic Rheumatism and Gout	3	53	8	2	6	72	37
Diabetes	1	179	5	37	15	237	39-7
Exophthalmic Goitre	3	2	...	...	1	6	65-8
Hodgkin's Disease .....	...	1	...	...	1	2	19
Anæmia, Chlorosis	1	8	3	11	2	25	27-7
Leprosy .....	...	...	...	...	...	...	...
Alcoholism, Acute and Chronic	4	2	...	...	...	6	9
Other Chronic Poisoning and Lead	2	1	...	...	...	3	24
Other General Diseases	7	6	5	2	...	20	67-7
Diseases of Spleen .....	...	2	...	2	...	4	24-5
Addison's Disease .....	...	...	...	...	...	...	...
Diseases of Pituitary Glands .....	...	...	1	...	...	1	3
Total, Class 1	3,079	1,019	155	388	522	5,163	...
CLASS 2.—DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SPECIAL SENSE.							
Meningitis	2	...	...	4	1	7	30-4
Cerebro-spinal Meningitis .....	...	5	3	1	...	9	75-6
Other Diseases of the Spinal Cord .....	...	...	...	...	...	...	...
Cerebral Hæmorrhage	1	15	...	32	2	50	19-4
General Paralysis of Insane .....	...	...	...	...	...	...	...
Other forms of Mental Alienation .....	...	2	10	...	...	12	10-5
Epilepsy .....	...	10	...	...	...	10	16-4
Chorea	6	1	...	...	1	8	63-8
Locomotor Ataxia .....	...	7	1	...	...	8	44-2
Neuralgia and Neuritis	11	26	4	...	1	42	25-5
Other Diseases of the Nervous System	10	51	10	...	...	71	13
Diseases of the Eye and Adnexa	5	3	2	...	1	11	11-9
Diseases of the Ear	48	23	4	2	4	81	27-4
Encephalitis	1	1	1	5	...	8	22-8
Cerebral Embolism and Thrombosis	3	13	...	5	4	25	24-2
Infantile Convulsions under 5 .....	...	...	...	...	...	...	...
Total, Class 2	87	157	35	49	14	342	...
CLASS 3.—DISEASES OF THE CIRCULATORY SYSTEM.							
Angina Pectoris .....	...	5	...	...	...	5	11
Acute Endocarditis .....	...	2	2	8	10	22	39-3
Organic Diseases of the Heart	3	126	12	44	6	191	31-5
Diseases of the Arteries, Atheroma, &c. ....	...	4	...	...	1	5	50-5
Embolism and Thrombosis	3	3	...	2	2	10	31-3
Diseases of the Veins (Varicos, Ulcers, and Hæmorrhoids)	34	9	...	...	2	45	20-02
Diseases of the Lymphatic System	6	6	...	...	...	12	14-9
Hæmorrhage .....	...	...	...	...	...	...	...
Pericarditis	1	2	...	1	...	4	16-3
Aneurism .....	...	7	...	3	...	10	23
Arteriosclerosis	3	30	2	4	3	42	18-8
Other Diseases—Circulatory System .....	...	1	...	...	1	2	75
Total, Class 3	50	195	16	62	25	348	...

TABLE VII.—Return of the Number of Persons under Treatment, &c.—*continued*.

1932.	Discharged during the year.				Remaining in on 31st December, 1932.	Total.	Average number of days in Hospital.
	Cured.	Relieved.	Un- relieved.	Died.			
CLASS 4.—DISEASES OF THE RESPIRATORY SYSTEM.							
Diseases of the Nasal Fossae	74	47	17	1	1	140	9-9
Diseases of the Larynx	3	...	...	...	1	4	5
Capillary Bronchitis	1	...	...	...	...	1	10
Acute Bronchitis	32	9	...	4	6	58	15-06
Chronic Bronchitis	3	46	1	2	1	46	25-8
Broncho-Pneumonia	41	1	1	14	2	59	19-5
Pneumonia	123	7	1	34	8	173	21-1
Pleurisy	32	12	...	4	4	52	33-3
Asthma	2	39	1	2	3	47	20-5
Other Diseases of the Respiratory System	2	5	1	2	1	11	37-3
Congestion and Gangrene of Lung .....	...	...	...	...	...	...	...
Bronchitis, Unspecified	1	4	...	...	1	6	20-4
Total, Class 4	314	170	22	63	28	597	...
CLASS 5.—DISEASES OF THE DIGESTIVE SYSTEM.							
Gastritis	18	5	...	...	...	23	11-25
Diseases of the Teeth and Gums .....	...	...	...	...	...	...	...
Diseases of the Mouth and its Associated Organs	25	11	2	1	2	41	12-5
Diseases of the Pharynx	452	21	5	5	2	485	9-2
Ulcer of the Stomach	29	32	1	3	10	75	34-8
Other Diseases of the Stomach (Cancer excluded)	4	19	3	1	3	30	21-1
Diarrhoea and Enteritis (children under two years only)	10	2	...	1	1	14	14-6
Diarrhoea and Enteritis (children over two years & adults)	34	2	...	4	5	45	21-2
Appendicitis	528	34	4	9	17	592	14-8
Hernia, Intestinal Obstruction	125	10	14	14	8	171	16-8
Other Diseases of the Intestines	63	63	12	...	...	138	13-1
Diseases of the Anus and Fæcal Fistula .....	...	...	...	...	...	...	...
Cirrhosis of the Liver .....	...	5	1	9	...	15	26
Biliary Calculi	82	23	2	4	4	115	27-8
Other Diseases of the Liver .....	...	6	...	3	6	15	22-5
Simple Peritonitis (non-puerperal)	2	3	1	3	...	9	18-2
Hydatid undefined .....	...	4	1	1	2	8	35-2
Other Diseases of Digestive System	30	41	2	1	...	74	20-8
Oesophagus, Stricture of	1	...	...	...	...	1	3
Ulcer of Duodenum	7	64	...	...	2	73	28-8
Total, Class 5	1,410	345	48	59	62	1,924	...
CLASS 6.—DISEASES OF THE GENITO-URINARY SYSTEM AND ADNEXA (NON-VENEREAL).							
Acute Nephritis	9	2	...	3	5	19	25-4
Chronic Nephritis	2	15	2	36	2	57	22-1
Uterine Hæmorrhage	35	18	2	...	...	55	17-7
Other Diseases of the Kidneys and their Adnexa	49	81	3	2	5	140	19-1
Calculi of the Urinary Passages	10	19	7	...	2	38	19
Diseases of the Bladder	12	17	1	1	3	34	25
Other Diseases of the Urethra, Urinary Abscess, &c. ...	8	29	4	...	6	47	19-9
Diseases of the Prostate	18	17	6	11	5	57	31-3
Non-veneral Diseases of the Male Genital Organs	40	8	1	...	3	52	19-4
Salpingitis and Pelvic Abscess	98	79	5	3	9	194	21
Uterine Tumour (Non-Cancerous) .....	...	...	...	...	4	4	...
Other Diseases of the Uterus	46	4	6	...	...	56	27-9
Cysts and other Ovarian Tumours	27	2	...	...	...	29	25-9
Other Diseases of the Female Genital Organs	96	49	13	1	1	160	15-6
Non-puerperal Diseases of the Breast (cancer excepted)...	8	3	1	...	...	12	14-8
Total, Class 6	458	343	51	57	45	954	...
CLASS 7.—PUERPERAL CONDITIONS.							
Abortion	758	18	3	9	22	810	9-5
Ectopic Gestation	30	...	...	1	3	34	23
Hyperemesis	7	9	2	...	...	18	11-7
Pyelitis .....	...	...	...	...	1	1	...
Hæmorrhage	9	12	...	...	...	21	7-9
Retroversion .....	...	...	...	...	...	...	...
Albuminuria	1	2	...	...	...	3	20-6
Pregnancy .....	...	...	...	...	...	...	...
Other Accidents of Labour	14	6	...	3	...	23	18
Puerperal Diseases of the Breast	9	3	...	...	...	12	18-4
Puerperal Septicæmia	2	...	...	9	2	13	13-3
Total, Class 7	830	50	5	22	28	935	...
CLASS 8.—DISEASES OF THE SKIN AND OF THE CELLULAR TISSUE.							
Gangrene .....	...	2	1	...	1	4	14
Phlegmon, Acute Abscess	114	32	1	4	12	163	20-2
Other Diseases of the Skin and Adnexa	76	47	4	3	9	139	30-6
Scabies .....	...	...	...	...	...	...	...
Furuncle	23	7	...	2	...	32	12
Elephantiasis .....	...	...	...	...	...	...	...
Total, Class 8	213	88	6	9	22	338	...

TABLE VII.—Return of the Number of Persons under Treatment, &c.—continued.

1932.	Discharged during the year.				Remaining in on 31st December, 1932.	Total.	Average number of days in Hospital.
	Cured.	Relieved.	Un-relieved.	Died.			
CLASS 9.—DISEASES OF THE ORGANS OF LOCOMOTION.							
Non-tuberculous Disease of the Bones	23	66	14	1	13	117	55.4
Arthritis and other Diseases of the Joints (Tuberculosis and Rheumatism excepted).....	...	...	...	...	5	5	...
Other Diseases of the Organs of Locomotion	11	4	1	...	...	16	18.7
Total, Class 9	34	70	15	1	18	138	...
CLASS 10.—MALFORMATIONS.							
Congenital Malformations	6	3	5	...	1	15	14.3
Total, Class 10	6	3	5	...	1	15	...
CLASS 11.—DISEASES OF EARLY INFANCY.							
Total, Class 11	7	2	...	2	...	11	14.1
CLASS 12.—OLD AGE.							
Senility .....	...	2	2	2	...	6	14.1
Total, Class 12 .....	...	2	2	2	...	6	...
CLASS 13.—VIOLENCE.							
Lysol Poisoning	1	...	...	...	...	1	11
Scalds and Burns (other than fire)	6	4	...	1	1	12	19.7
Poisoning by Food (not ptomaine)	6	...	...	...	...	6	11.4
Bite of Snake or Insect	1	...	...	...	...	1	2
Firearms Accidents	1	2	...	...	...	3	34
Cutting Instruments	14	4	...	...	1	19	19.8
Burning by Fire	2	3	...	...	...	5	19.4
Falls	55	36	3	2	3	99	29.4
Crushings	23	9	1	...	1	34	13.7
Railways and Tramways and Motor	18	7	...	4	4	33	20.3
Injuries by Vehicles and Horses	5	1	1	1	1	9	24.1
Shock	1	...	...	...	...	1	1
Other Injuries	4	2	...	...	...	6	17.4
Assault .....	...	1	...	...	1	2	6
Fractures (not obtainable)	3	4	...	...	...	7	13.2
Other Acute Poisonings (except gas)	3	...	...	1	...	4	10.6
Total, Class 13	143	73	5	9	12	242	...
CLASS 14.—ILL-DEFINED DISEASES.							
Malnutrition .....	...	...	...	...	...	...	...
Debility	1	2	1	...	...	4	7.7
Marasmus .....	...	...	...	...	...	...	...
Observation	72	86	19	...	2	179	10.4
No disease .....	...	...	...	...	...	5	10.2
Nurselings with mothers, no disease .....	...	...	...	...	1	46	10.7
Mothers with nurselings, no disease.....	...	...	...	...	...	...	...
Total, Class 14	73	88	20	...	3	234	...
SUMMARY.							
Total, Class 1.—General Diseases	3,079	1,019	155	388	522	5,163	...
" 2.—Diseases of the Nervous System and of the Organs of Special Sense	87	157	35	49	14	342	...
" 3.—Diseases of the Circulatory System	50	195	16	62	25	348	...
" 4.—Diseases of the Respiratory System	314	179	22	63	28	597	...
" 5.—Diseases of the Digestive Organs	1,410	345	48	59	62	1,924	...
" 6.—Diseases of the Genito-Urinary System and Adnexa	458	343	51	57	45	954	...
" 7.—Diseases of the Puerperal Condition	830	50	5	22	28	935	...
" 8.—Diseases of the Skin and of the Cellular Tissue	213	88	6	9	22	338	...
" 9.—Diseases of the Organs of Locomotion	34	70	15	1	18	138	...
" 10.—Malformation	6	3	5	...	1	15	...
" 11.—Infancy	7	2	...	2	...	11	...
" 12.—Old Age .....	...	2	2	2	...	6	...
" 13.—Violence	143	73	5	9	12	242	...
" 14.—Ill-defined Diseases	73	88	20	...	3	234*	...
Grand Total	6,704	2,605	385	723	780	11,247	...

* This includes fifty cases No disease.

TABLE VIII.—Operations performed during 1931.
NOTE.—“Recovered” means lived at least ten days after operation.

1931.	Recovered.		Died.		Total.	1931.	Recovered.		Died.		Total.
	Male.	Female.	Male.	Female.			Male.	Female.	Male.	Female.	
1. Alimentary System.						4. Cellular and Cutaneous System.					
Oesophagoscopy	2	2	...	...	4	Incision	76	115	...	...	191
Gastrostomy	1	1	...	...	2	Avulsion of nail	4	4	...	...	8
Gastro-enterostomy	6	1	1	...	8	Excision of cyst	11	6	...	...	17
Oversewing gastric ulcer	3	...	...	...	3	Curettage of sinus	9	5	...	...	14
Oversewing duodenal ulcer	2	...	1	...	3	Skin graft	2	...	...	...	2
Oversewing typhoid ulcer .....	...	...	1	...	1	Suture of wound	4	3	1	...	8
Enterostomy	1	2	2	1	6	Evacuation of cyst of groin .....	...	2	...	...	2
Entero-enterostomy	1	...	...	1	2	Excision of soars .....	...	1	...	...	1
Caeceostomy	1	...	...	1	2	Excision of rodent ulcer.....	1	...	...	...	1
Colostomy	5	5	...	3	13						
Bowel resection .....	...	1	...	...	1		107	136	1	...	244
Appendicectomy	258	281	3	...	542	5. Osseous and Arthritic System.					
Cholecystectomy	13	61	1	...	75	Moving joint under anaesthetic	3	3	...	...	6
Cholecystostomy	3	19	1	...	23	Reduction of fracture	18	13	...	...	31
Choledochotomy	1	3	...	...	4	Plating or wiring of fracture	2	1	...	...	3
Cholecyst-gastrostomy	1	...	...	...	1	Osteotomy	12	6	...	...	18
Draining abscess of peritoneal cavity ...	8	14	3	1	26	Sequestrectomy	10	3	...	...	13
Draining abdominal hydatid	5	2	...	...	7	Amputation of leg	9	6	1	1	17
Freeing of adhesions	13	14	1	1	29	Amputation of finger	1	1	...	...	2
Laparotomy	14	22	1	6	43	Amputation of toe	6	3	...	...	9
Fistula in ano	7	3	...	...	10	Amputation of arm.....	1	...	...	...	1
Fissure in ano .....	...	4	...	...	4	Tenotomy	3	2	...	...	5
Herniae—						Arthrotomy	4	...	...	...	4
Inguinal	60	3	2	...	65						
Femoral	1	12	...	1	14		69	38	1	1	109
Umbilical	1	4	...	...	5	6. Respiratory System.					
Incisional	4	8	...	...	12	Resection of turbinate bones	5	...	...	...	5
Reduction of intussusception	1	...	...	1	2	Removal of nasal polypi	5	2	...	...	7
Sigmoidoscopy	1	1	...	...	2	Resection of nasal septum	30	8	...	...	38
	413	463	17	16	909	Tracheotomy .....	...	1	...	...	1
2. Genito-urinary System.						Thoracotomy	18	5	1	...	24
Circumcision	33	...	...	...	33	Pareocentesis thoracis .....	...	1	...	...	1
Dilatation of urethral stricture	1	...	...	...	1	Bronchoscopy .....	...	7	...	...	7
Drainage of extravasation of urine	2	...	...	...	2	Laryngotomy .....	...	1	...	...	1
Cure of varicocele	8	...	...	...	8						
Cure of hydrocoele	11	...	...	...	11		58	25	1	...	84
Orchidectomy	1	...	...	...	1	7. Circulatory System.					
Reduction of dislocation of testis	1	...	...	...	1	Haemorrhoidectomy	24	6	...	...	30
Prostatectomy	20	...	...	...	20	Decortication of artery	1	...	...	...	1
Cystoscopy	64	47	...	...	111						
Diathermy to bladder	10	6	...	...	16		25	6	...	...	31
Supra public cystostomy	6	...	...	...	6	8. Lymphatic and Glandular System.					
Uretero-lithotomy	8	...	...	...	8	Tonsils and adenoids	158	167	...	...	325
Nephrotomy	6	4	...	...	10	Excision of gland	3	3	...	...	6
Nephrectomy	3	2	...	...	5	Adenoidectomy	6	5	...	...	11
Drainage of perinephric abscess	3	...	...	...	3	Thyroidectomy .....	...	4	...	1	5
Plastic on penis	2	...	...	...	2						
Excision of urethral caruncle .....	...	2	...	...	2		167	179	...	1	347
Litholopaxy	1	2	...	...	3	9. New Growths.					
	180	63	...	...	243	Excision of lip and glands	1	...	...	...	1
3. Gynaecological System.						Partial gastrectomy	2	2	...	1	5
Colpo-perineorrhaphy .....	...	27	...	...	27	Excision of carcinoma of bowel	7	3	...	...	10
Colpotomy .....	...	49	...	2	42	Excision of breast and glands .....	...	9	...	...	9
Trachelorrhaphy .....	...	3	...	...	3	Excision of benign tumour	8	9	...	...	17
Curettage uteri .....	...	967	...	3	970	Laryngectomy with excision of glands of neck .....	...	...	1	...	1
Induction of abortion .....	...	2	...	...	2	Excision of epithelioma	6	1	...	...	7
Salpingectomy .....	...	138	...	...	138						
Salpingo-oophorectomy .....	...	10	...	...	10		24	24	1	1	50
Oophorectomy .....	...	17	...	...	17						
Internal shortening .....	...	15	...	...	15						
External shortening .....	...	8	...	...	8						
Hysterectomy .....	...	78	...	1	79						
Radium to cervix .....	...	1	...	...	1						
Excision of cervical polyp .....	...	5	...	...	5						
	...	1,311	...	6	1,317						

TABLE VIII.—Operations performed during 1931—*continued*.

NOTE.—“Recovered” means lived at least ten days after operation.

1931.	Recovered.		Died.		Total.	1931.	Recovered.		Died.		Total.
	Male.	Female.	Male.	Female.			Male.	Female.	Male.	Female.	
<i>10. Miscellaneous.</i>						<i>Anaesthetics.</i>					
Paracentesis tympani	96	136	...	...	232	Kelene and open ether .....	...	...	...	...	2,682
Draining maxillary antrum	32	33	...	...	65	Open ether .....	...	...	...	...	528
Draining frontal sinus	6	1	...	...	7	Kelene and intrapharyngeal ether .....	...	...	...	...	328
Draining mastoid antrum	36	27	...	...	63	Intrapharyngeal ether .....	...	...	...	...	37
Cerebral decompression and craniotomy	6	...	...	1	7	Intratracheal ether .....	...	...	...	...	8
Lumbar puncture	21	6	...	...	27	Kelene .....	...	...	...	...	206
Teeth extraction	2	1	...	...	3	Chloroform .....	...	...	...	...	31
Removal of foreign body	2	3	...	...	5	Chloroform and ether .....	...	...	...	...	6
Plaster fixation	7	15	...	...	22	Ethylene gas and oxygen .....	...	...	...	...	18
Examination under anaesthesia	18	60	...	2	80	Spinal .....	...	...	...	...	1
Surgical dressings	30	40	...	...	70	Local .....	...	...	...	...	93
Neurectomy	2	1	...	...	3	Total .....	...	...	...	...	3,938
Enucleation of eye	1	...	...	...	1	<i>Total Operations.</i>					
Plastic to foot	4	4	...	...	8	Alimentary .....	...	...	...	...	909
Plastic to hare lip	1	...	...	...	1	Genito-urinary .....	...	...	...	...	243
Plastic to hand	1	...	...	...	1	Gynaecological .....	...	...	...	...	1,317
Plastic to nose	2	1	...	...	3	Cellular and cutaneous .....	...	...	...	...	244
Biopsy	1	11	...	...	12	Osseous and arthritic .....	...	...	...	...	109
	268	339	...	3	610	Respiratory .....	...	...	...	...	84
						Circulatory .....	...	...	...	...	31
						Lymphatic and glandular .....	...	...	...	...	347
						New growths .....	...	...	...	...	50
						Miscellaneous .....	...	...	...	...	610
						Total .....	...	...	...	...	3,944

TABLE VIII.—Operations performed during 1932.

NOTE.—“Recovered” means lived at least ten days after operation.

1932.	Recovered.		Died.		Total.	1932.	Recovered.		Died.		Total.
	Male.	Female.	Male.	Female.			Male.	Female.	Male.	Female.	
<i>1. Alimentary System.</i>						<i>2. Genito-Urinary Organs.</i>					
Aesophagoscopy	3	1	...	...	4	Circumcision	3	...	...	...	3
Appendicectomy	258	265	3	1	527	Cystoscopy	39	36	...	...	75
Cholecystectomy	16	55	...	...	71	Cystostomy	3	...	...	...	3
Cholecystostomy	4	21	...	...	25	Denervation of renal pedicle .....	...	1	...	...	1
Choledochotomy .....	...	2	...	...	2	Diathermy to bladder	13	1	...	...	14
Colostomy	13	8	...	...	21	Hydrocoele	14	...	...	...	14
Closure of colostomy	3	3	...	...	6	Nephrectomy	5	3	...	...	8
Dilatation of aesophagus .....	...	1	...	...	1	Nephropexy .....	...	1	...	...	1
Draining hydatid of Liver	2	...	...	...	2	Nephrolithotomy	1	...	...	...	1
Draining abscess peritoneal cavity	7	8	...	1	16	Orchidectomy	4	...	...	...	4
Entero-enterostomy .....	...	1	...	1	2	Prostatectomy	6	...	1	...	7
Fistula in ano	9	11	...	...	20	Pyonephrosis, drainage of .....	...	1	...	...	1
Fissure in ano	1	5	...	...	6	Penis, amputation of	1	...	...	...	1
Gastro-enterostomy	4	...	...	...	4	Uretero lithotomy	1	1	...	...	2
Gastrostomy	1	...	1	...	2	Urothrotomy	2	...	...	...	2
Freeing peritoneal adhesions	5	20	...	4	29	Varicocele	6	...	...	...	6
Herniae—											
Inguinal	89	1	...	...	90		98	44	1	...	143
Femoral	4	7	...	1	12						
Incisional	5	8	...	...	13						
Umbilical	1	9	...	...	10						
Laparotomy	10	17	7	2	36	<i>3. Gynaecological System.</i>					
Oversewing pyloric ulcer	15	1	...	...	16	Anterior colporrhaphy .....	...	1	...	...	1
Partial gastrectomy	4	...	...	...	4	Colpotomy .....	...	29	...	1	30
Resection of bowel	1	2	1	...	4	Dilatation of cervix .....	...	1	...	...	1
	455	446	12	10	923	Diathermy to cervix .....	...	2	...	...	2
						External shortening .....	...	1	...	...	1
						Internal shortening .....	...	25	...	...	25
						Hysterectomy .....	...	74	...	1	75
						Ovarian cyst .....	...	16	...	...	16
						Perineorrhaphy .....	...	26	...	1	27
						Cervical polyp, removal .....	...	3	...	...	3
						Salpingectomy .....	...	46	...	...	46
						Salpingo-oophorectomy .....	...	84	...	1	85
						Trachelorrhaphy .....	...	8	...	...	8
						Curettagc uteri .....	...	827	...	4	831
						Total .....	...	1,143	...	8	1,151

STATEMENT OF WORKING EXPENSES OF THE COAST HOSPITAL FOR THE YEARS 1931-32.

TABLE IX.—Maintenance and Treatment of Patients and Staff.

	1931.	Average.	1932.	Average.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
A. Salaries and Wages—				
1. Administrative	2,015 14 6		1,819 14 2	
2. Medical	4,293 4 4		3,769 16 8	
3. Clerical	2,938 6 4		2,359 10 0	
4. Dispensary	1,035 0 9		1,002 17 11	
5. Nursing	32,252 12 4		29,169 11 6	
9. Laundry	3,446 15 8		3,102 16 6	
10. Tradesmen and Mechanics	3,676 7 7		3,396 7 6	
11. Cleaning and General	12,386 11 8		11,740 9 7	
12. Farm and Garden	630 0 5		450 4 4	
13. X-ray	340 14 4		.....
14. Workmen's Compensation Insurance Premium.....	654 0 10		596 12 11	
	63,669 8 9	82 7 4	57,408 1 1	74 5 4
B. Provisions—				
1. Meat	3,287 1 4		2,815 15 10	
2. Milk	1,412 5 4		1,557 16 6	
3. Butter	1,895 13 11		1,505 9 8	
4. Bread and Flour.....	1,353 6 5		1,329 13 5	
5. Eggs	1,222 8 5		1,281 3 0	
6. Fish, fresh	447 8 1		400 1 6	
7. Poultry	1,195 7 2		1,136 12 1	
8. Groceries	4,190 11 3		4,967 14 10	
9. Vegetables and Fruit	1,511 0 9		1,349 5 9	
10. Malt Liquors	27 10 3		26 7 2	
11. Ice	136 10 3		104 15 7	
12. Cream	317 3 4		298 3 0	
	16,996 6 6	21 19 9	15,872 18 4	20 10 8
C. Drugs and Surgical Appliances—				
1. Drugs, &c.	7,384 12 1		7,042 4 8	
2. Dressings and Bandages	154 1 7		157 6 8	
3. Surgical Appliances, Renewals.....	577 10 10		571 9 9	
4. Surgical Instruments, Renewals	89 18 8		154 11 5	
5. Stimulants	381 16 11		482 5 4	
	8,588 0 1	11 2 2½	8,407 17 10	10 17 6
D. Fuel, Light, and Power—				
1. Coal, Coke, and Oil Fuel	4,405 12 2		3,032 11 8	
2. Electricity	1,257 6 9		1,026 1 8	
3. Electrical Fittings, Renewals	108 6 5		160 2 4	
	5,771 5 4	7 9 4	4,218 15 8	5 9 0
E. Domestic—				
1. Bedding and Bed Linen	1,013 12 8		1,145 18 3	
2. Clothing	500 12 11		677 8 6	
3. Drapery	453 4 1		434 0 9	
4. Uniforms	89 14 5		25 0 5	
5. Renewals of Furniture	59 15 3		94 8 0	
6. Ironmongery and Cutlery, &c.	325 0 6		101 16 9	
7. Brushware, Earthenware, &c.	198 6 8		273 5 6	
8. Laundry Materials	595 14 2		165 3 0	
	3,236 0 8	4 3 9	2,917 1 2	3 15 6
F. Printing and Stationery—				
1. Printing and Stationery	511 19 1		438 12 9	
2. Postage	174 17 6		165 0 0	
	686 16 7	0 17 9	603 12 9	0 15 7
G. Maintenance of Buildings and Grounds—				
1. Ordinary Repairs and Alterations	426 11 9		896 3 8	
2. Roadways and Grounds	118 13 3		15 10 3	
	545 5 0	0 14 1½	881 13 11	1 2 10
J. Miscellaneous—				
1. Rates and Taxes	320 3 2		298 17 6	
2. Insurance.....	.....		.....
3. Burials and Coffins.....	159 14 2		.....
4. Telephones	784 6 7		151 5 0	
5. Petty Expenses	116 19 4		672 9 9	
6. Unclassified	1,236 4 1		531 16 10	
	2,608 7 4	3 7 6	506 6 4	
K. Extraordinary Expenditure—				
1. Surgical Instruments .....	.....		58 11 11	
2. Appliances	7 4 9		2 2 0	
3. Machinery	30 11 8		.....
4. New Furniture	237 11 10		.....
5. New Buildings and Additions	0 19 0		.....
6. Miscellaneous	3 7 9		10 14 2	
7. Drapery .....	.....		.....
8. Ironmongery .....	.....		.....
9. Brushware .....	.....		.....
10. Bedding and Bed Linen .....	.....		.....
11. Special Repairs .....	.....		.....
	279 15 0	0 7 2½	71 8 1	0 1 10

TABLE IX.—Maintenance and Treatment of Patients and Staff, 1931-32—*continued*

	1931.		Average.	1932.		Average.
	£	s. d.		£	s. d.	
L. Special Department—						
1. X-Ray	335	12 4		571	5 0	
	335	12 4	0 8 8	571	5 0	0 14 9
M. Farm and Garden, Live Stock, etc.—						
1. Purchase of Horses and Cows						
2. Purchase of Fodder	1,230	14 10		1,251	18 6	
3. Miscellaneous	33	16 11		77	15 2	
	1,264	11 9	1 12 9	1,329	13 8	1 14 9
N. Auxiliary Hospital—						
1. Salaries and Wages	6,340	18 5		4,741	19 10	
2. Maintenance	7,986	19 7		5,986	7 1	
3. Stores	1,004	6 4		929	10 9	
	15,332	4 4	19 16 8½	11,657	17 8	15 1 8
Total Expenditure	119,313	13 8	154 7 0½	106,101	0 7	137 5 2
Add value of goods received from other Institutions	36	8 6		14	12 6	
	119,350	2 2		106,115	13 1	
Deduct value of goods supplied to other Institutions						
	119,350	2 2		106,115	13 1	
Add value of Stock on hand, 31st Dec., 1931	5,595	4 9		5,023	7 9	
	124,945	6 11		111,139	0 10	
Deduct value of Stock on hand, 31st Dec., 1932	5,023	7 9		3,646	6 6	
	119,921	19 2		107,492	14 4	
Deduct Extraordinary Expenditure, Cost of Out-door Patients Equipment Auxiliary Hospital	548	14 1		650	0 0	
	119,373	5 1		106,842	14 4	
Average cost per occupied bed, General and Infectious Division, based on upkeep Expenditure			154 8 6½			138 4 5
Deduct Collections paid to Revenue	14,122	11 6		16,549	9 7	
	105,250	13 7		90,293	4 9	
Net cost per occupied bed, General and Infectious Division			136 3 2			116 16 2

TABLE X.—Amount expended from the Vote of the Public Works Department not included in the foregoing statistics.

	1931.		1932.	
	£	s. d.	£	s. d.
Steam and Hot Water Services—				
Repairs—Steam and Hot Water Services	254	8 4	317	12 9
Repairs and Renewals of Boilers			185	10 7
Hot Water Services				
Total	254	8 4	503	3 4
Mechanical Maintenance	212	0 2	160	18 2
Total	212	0 2	160	18 2
General—				
Repairs and Renovations of Buildings	3,111	17 5	798	15 10
Drainage			110	0 0
Repairs and Extensions Water Service			29	16 6
New Buildings and Additions	6,704	2 8	3,284	12 6
Renovations, Randwick Auxiliary Hospital	115	10 0	413	18 7
Refrigeration Plant—Installation	490	14 6	10	19 5
Total	10,422	4 7	4,648	2 10
Grand Total	£ 10,888	13 1	5,312	4 4

TABLE XI.—SUMMARY TABLE, showing the work of the Coast Hospital and its cost each year, from 1887 to 1932.

Year.	No. of Patients admitted.	Average residence of discharged patients in days.	Rate of Mortality on cases treated.	Infectious Diseases included in foregoing columns.												Average daily number.	Cost per occupied bed.	Wines, spirits, &c., cost per head (included in foregoing columns).				
				Typhoid Fever.		Scarlet Fever.		Whooping Cough.		Diphtheria.		Influenza.		Plague.					Erysipelas.		Other Epidemic Diseases.	
				Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.				Admissions.	Deaths.	Admissions.	Deaths.
1887	1,726	42-65	9-21	286	36	18	...	...	...	...	...	...	...	...	...	...	188-56	42 14 1	0 10 9 1
1888	1,694	42-23	5-55	241	15	33	...	...	...	...	...	...	...	...	...	...	107-12	41 13 2	0 8 8
1889	1,813	39-09	5-44	342	24	10	1	36	2	1	2	...	...	...	...	...	198-09	44 17 4 1	0 6 4 1
1890	1,529	42-00	7-03	140	21	5	...	...	...	...	...	...	...	...	...	...	178-06	55 7 5	0 5 11
1891	1,748	40-00	3-23	88	8	1	...	...	...	...	...	...	...	...	...	...	193-00	50 2 6	0 5 2 1
1892	1,644	44-06	4-04	61	10	2	...	...	...	...	...	...	...	...	...	...	200-03	44 17 1 1 1	0 7 6 1
1893	2,274	32-08	4-05	83	10	...	...	...	...	...	...	...	...	...	...	...	193-05	47 8 0	0 10 1
1894	2,158	27-06	4-03	143	12	7	...	...	...	...	...	...	...	...	...	...	176-03	55 7 4 1	1 3 6 1
1895	2,451	24-06	3-07	96	6	1	...	...	...	...	...	...	...	...	...	...	176-03	59 1 1 1	1 1 6 1
1896	2,213	31-03	5-04	128	11	2	...	...	...	...	...	...	...	...	...	...	204-00	51 6 1 2	1 4 4
1897	2,307	32-06	5-05	128	11	...	...	...	...	...	...	...	...	...	...	...	224-04	50 19 2 1	1 9 10
1898	2,604	31-04	5-38	163	18	319	15	...	...	...	...	...	...	...	...	...	231-00	64 14 10 1	1 14 3 1
1899	2,359	36-30	4-79	148	13	10	...	...	...	...	...	...	...	...	...	...	224-25	73 10 1 1 1	1 13 10
1900	2,513	30-10	5-20	247	25	29	...	...	...	...	...	...	...	...	...	...	214-40	72 18 8 1	1 8 2 1
1901	2,688	31-24	5-75	214	21	131	1	...	...	...	...	...	...	...	...	...	255-60	59 4 3 1	0 16 1 1
1902	2,672	30-94	6-29	144	5	62	...	...	...	...	...	...	...	...	...	...	256-85	66 9 4 4	0 13 10 1
1903	3,359	31-72	4-67	166	20	62	1	...	...	...	...	...	...	...	...	...	300-76	61 17 1 1 1	0 5 2 1
1904	3,439	30-94	5-17	178	24	81	1	...	...	...	...	...	...	...	...	...	305-16	63 2 1 1 1	0 7 8 1
1905	3,298	31-81	5-20	139	20	43	1	...	...	...	...	...	...	...	...	...	289-32	59 12 0 1	0 8 4
1906	2,965	37-03	3-56	84	7	157	5	...	...	...	...	...	...	...	...	...	308-67	56 13 1 1	0 4 0 1
1907	3,051	37-16	5-93	101	12	17	1	...	...	...	...	...	...	...	...	...	307-41	58 17 8 1	0 4 5 1
1908	3,147	32-89	5-44	114	13	...	...	...	...	...	...	...	...	...	...	...	306-83	61 11 5	0 4 0 1
1909	2,971	31-13	5-53	96	8	...	...	...	...	...	...	...	...	...	...	...	295-33	63 5 4 1	0 4 1 1
1910	3,538	30-52	5-39	85	7	180	12	...	...	...	...	...	...	...	...	...	312-66	62 2 0 1	0 2 5 1
1911	3,474	29-19	5-32	66	8	70	...	...	...	...	...	...	...	...	...	...	322-62	64 0 1 1	0 4 0 1
1912	4,170	29-54	5-76	67	8	475	46	...	...	...	...	...	...	...	...	...	335-45	77 15 1 1	0 4 1 1
1913	3,702	31-83	5-13	77	10	93	...	...	...	...	...	...	...	...	...	...	335-51	87 6 6 1	0 3 3 1
1914	4,032	32-35	3-81	73	12	82	1	...	...	...	...	...	...	...	...	...	373-11	74 7 5	0 1 0 1
1915	4,505	30-09	4-12	123	10	357	2	...	...	...	...	...	...	...	...	...	440-00	69 5 7	0 2 3 1
1916	4,618	32-29	3-07	59	8	206	1	...	...	...	...	...	...	...	...	...	447-00	77 4 1 1	0 4 1 1
1917	4,320	36-49	3-73	16	2	...	...	...	...	...	...	...	...	...	...	...	433-12	94 10 9	0 4 4
1918	4,556	39-60	4-20	31	6	333	13	...	...	...	...	...	...	...	...	...	513-41	98 12 2	0 4 8
1919	5,556	20-67	8-13	25	1	62	3	...	...	...	...	...	...	...	...	...	385-2	159 0 4	0 8 3
1920	5,945	29-72	7-37	61	5	581	62	...	...	...	...	...	...	...	...	...	477-62	159 0 0	0 5 7
1921	6,450	29-3	5-6	40	12	36	4	...	...	...	...	...	...	...	...	...	523-16	156 17 8	0 7 7
1922	6,894	27-54	5-6	33	15	163	5	...	...	...	...	...	...	...	...	...	620-16	149 12 4	0 5 8
1923	8,289	34-38	6-37	48	5	642	35	...	...	...	...	...	...	...	...	...	563-47	141 10 2	0 13 2
1924	8,171	24-35	5-31	51	4	86	...	...	...	...	...	...	...	...	...	...	675-29	153 1 1	0 13 0
1925	8,458	23-61	6-41	1975	50	252	11	...	...	...	...	...	...	...	...	...	578-06	143 9 2	0 11 3
1926	10,175	23-74	5-9	60	4	701	35	...	...	...	...	...	...	...	...	...	608-09	140 18 7	0 9 10
1927	10,163	27-8	5-6	33	4	76	1	...	...	...	...	...	...	...	...	...	709-06	151 10 1	0 9 1
1928	10,102	24-5	6-5	15	2	510	62	...	...	...	...	...	...	...	...	...	737-4	154 0 0	0 7 8
1929	10,454	24-1	6-8	97	3	199	18	...	...	...	...	...	...	...	...	...	740	172 11 40	0 5 3 1
1930	11,001	25-2	6-9	27	2	566	58	...	...	...	...	...	...	...	...	...	758	162 6 10 1	0 5 0 1
1931	11,089	23-8	6-7	25	2	93	9	...	...	...	...	...	...	...	...	...	773	154 8 6 1	0 9 9
1932	10,467	26-9	6-9	23	1	86	3	...	...	...	...	...	...	...	...	...	773	138 4 5	0 13 2

2.—LEPER LAZARET.

REPORT ON LEPROSY IN NEW SOUTH WALES FOR THE YEARS ENDED
31st DECEMBER, 1931 and 1932.

The Medical Superintendent of the Coast Hospital to the Director-General of Public Health.

The Coast Hospital, Sydney, N.S.W.

Sir,

On 1st January, 1931 and 1932, 20 persons remained under detention at the Lazaret. (See Appendix A.)

During 1931 3 persons, and in 1932, one person, were reported to the Board under the Public Health Act, 1902, Part III, as being suspected lepers, and after careful inquiry were duly certified as suffering from leprosy, and admitted to the Lazaret by warrant of the Board.

Two deaths occurred during 1931, viz.:—P.P., Case 149; J.B., Case 164. One case was repatriated to Queensland, viz.:—L.B., Case No. 182. No deaths occurred in 1932. Two cases were discharged, viz.:—D.E.O., Case No. 174, and E.W., Case No. 137.

The total number of persons admitted since 1883, when patients first began to be received (though the notification of leprosy was first made compulsory and the detention of lepers provided for by law only towards the end of 1890), is 187.* Distributed under nationalities, the account stands as follows at 31st December, 1932:—

	Admitted.	Readmitted.	Discharged.	Repatriated.	Died	Remaining in at 31 Dec., 1932.
Whites, of European descent—						
New South Wales	50	3	15	.....	28	10
Victoria	2	.....	.....	.....	2	.....
Queensland	4	.....	2	.....	2	0
Northern Territory	1	.....	1	.....	.....	.....
Western Australia	1	.....	.....	.....	.....	1
New Zealand	1	.....	.....	.....	1	.....
Fiji	2	.....	1	.....	1	.....
England	13	.....	3	.....	9	1
Ireland	8	.....	2	.....	6	.....
Scotland	1	.....	1	.....	.....	.....
Germany	4	.....	1 absconded.	1	2	.....
Belgium	1	.....	.....	.....	1	.....
U.S. America	1	.....	.....	.....	1	.....
Greece	2	.....	.....	1	1	.....
Malta	2	.....	1 absconded.	.....	1	.....
Sweden	1	.....	.....	.....	1	.....
France	1	.....	.....	.....	1	.....
Mauritius	1	.....	1	.....	.....	.....
Italy	1	.....	.....	1	.....	.....
Coloured patients—						
New South Wales	3	.....	1	.....	.....	2
West Indies	1	.....	1 (in 1885).	.....	.....	.....
India	4	.....	1 absconded.	1	2	.....
China	58	.....	2	33	19	4
Java	1	.....	.....	.....	1	.....
New Caledonia	1	.....	.....	.....	1	.....
Pacific Islands	18	.....	.....	5	11	1
Egypt	1	.....	.....	1	.....	.....
Zanzibar	1	.....	1 (Hong Kong at own request).	.....	.....	.....
Syria	2	.....	1	1	.....	.....
	187	3	36	44	91	19

* This is the number of persons admitted; it does not agree with the highest number given in Appendix B in numeral which indicates the number of cases observed, whether admitted or merely described and recorded.

Thus the number remaining in the lazaret on 31st December, 1932, was 19 persons; 16 males and 3 females.

Appendix A shows particulars of each case under detention since the year 1912*, and in Appendix B are given the usual notes of the new patients received during 1931 and 1932, of patients discharged or died during the years 1931 and 1932, and a survey of the condition of patients remaining in at the end of 1931 and 1932.

Every opportunity has been offered to members of the medical profession to visit the lazaret for the purpose of seeing such patients as were formerly under their care, or for study of the disease.

The following statements show the expenditure for the year, and the sources from which it has been defrayed:—

STATEMENT showing the Working Expenses of the Lazarets (for men and for women) at Little Bay for the years 1931 and 1932.

	1931.			1932.		
	£	s.	d.	£	s.	d.
Salaries	1,786	6	11	1,666	1	6
Provisions	688	15	9	685	15	0
Fruit and vegetables	83	0	9	84	13	10
Uniforms, clothing, &c.	76	9	11	102	16	2
Printing, stationery and postage	4	10	0	3	15	0
Fuel and light	128	6	9	106	2	2
Wines, ales, &c.	94	13	0	74	13	2
Ironmongery, brushware, &c.	11	9	4	12	12	5
Drugs, dressings, &c.	97	19	1	134	19	0
Sundries	217	9	6	206	1	2
	£3,189 1 0			£3,077 9 5		

Average number of patients resident, 20, being equal to an average of £162 14s. 2d. per inmate per annum in 1931 and £153 17s. 6d. in 1932.

STATEMENT showing the total Expenditure of the Lazarets (for men and for women) at Little Bay during the years 1931 and 1932, and from what sources the amounts were paid.

EXPENDITURE.	1931.			1932.			How PAID.	1931.			1932.		
	£	s.	d.	£	s.	d.		£	s.	d.	£	s.	d.
To working expenditure, as per statement.	3,189	1	0	3,077	9	5	From vote—Maintenance of lepers by Department of Public Health	2,626	8	6	2,401	2	6
							Transfers from Coast Hospital stock	562	12	6	676	6	11
Total	£ 3,189	1	0	£ 3,077	9	5	Total	£ 3,189	1	0	£ 3,077	9	5

The needs of the patients have been carefully supplied by experienced attendants and nurses, under direct supervision of the Medical Superintendent and the Matron of the Coast Hospital, and, as in the past, every means have been adopted to alleviate their sufferings and to mitigate the hardships of their detention.

I have, &c.,
R. J. MILLARD,
Medical Superintendent,

* For particulars of cases under detention from 1883 see Annual Reports 1913-1930.

APPENDIX A.

RETURN showing Particulars of Lepers admitted to Little Bay, New South Wales, since the year 1912.

Name.	Sex.	Native of—	Occupation.	Admission.		Where from.	No. of Case in Clinical Notes.	Died or Discharged.
				Age on	Date of.			
S.C.	Male	China	Cabinet-maker	40	21 May, 1912	Boolaroo, N.S.W.	128	
L.J.T.	"	N.S.W.	School	12	14 Aug., "	Lismore	129	Discharged, 21 July, 1916.
S.M.	"	Mallicolo	Labourer	50	27 "	Maclean	130	Died, 23 April, 1919.
J.F.	"	N.S.W.	Van-driver	28	19 Sept., "	Glebe	131	Discharged, 1 Jan., 1920 re-admitted, 7 Nov., 1927; died, 18 Mar., 1930.
W.D.	"	"	Fisherman	22	24 June, 1913	Ulladulla, South Coast	132	Discharged, 10 Feb., 1921.
J.M.	"	New Hebrides	Labourer	60	28 Nov., "	Tweed River	133	Died, 17 Mar., 1917.
J.C.M.	"	N.S.W.	Miner	26	28 Jan., 1914	Homeville, W. Maitland	134	Died, 17 June, 1915.
W.B.	"	England	Dealer	33	4 Mar., "	Sydney	135	Died, 14 Aug., 1915.
A.C.P.	"	N.S.W.	School	15	23 June, "	Lismore	136	Discharged, 12 Oct., 1922; re-admitted, 16 Jan., 1925.
E.W.	"	South Sea Is.	Labourer	50	17 Nov., "	Cudgen	137	Discharged, 19 Oct., 1932.
H.H.	"	England	"	36	19 May, 1915	Hornsby	138	Died, 7 Jan., 1924.
A.D.	Female	New Hebrides	Domestic	19	1 Sept., "	St. Kilda, Victoria	139	Died, 18 July, 1923.
C.F.	Male	China	Cabinet-maker	50	18 Dec., "	Waterloo, N.S.W.	140	Discharged, 10 Mar., 1917.
L.F.	"	England	Showman	45	9 Mar., 1916	Campbelltown	141	Discharged, 2 June, 1917.
F.H.	"	China	Gardener	45	25 May, "	Sydney	142	Died, 15 June, 1916.
D.M.	"	N.S.W.	Publican	46	25 "	Armidale	143	Discharged, 19 May, 1917.
W.J.P.	"	"	School	12	25 Nov., "	Lismore	144	Discharged, 5 Nov., 1924; re-admitted, 1 July, 1927.
E.L.P.	"	"	"	11	25 "	"	145	Died, 27 Dec., 1922.
E.M.	"	Germany	"	56	3 April, 1917	Liverpool, N.S.W.	146	Repatriated as Prisoner of War, 27 May, 1919.
C.W.	"	England	"	80	14 "	Sydney	147	Died, 18 Feb., 1923.
C.D.	Female	N.S.W.	Domestic	54	30 Oct., "	Casino, N.S.W.	148	Discharged, 12 June, 1920.
P.P.	Male	Greece	Cafe-proprietor	33	21 Feb., 1918	Melbourne, Victoria	149	Died, 24 Feb., 1931.
J.C.	"	Ireland	Miner	84	5 Feb., 1919	"	150	Died, 19 Nov., 1920.
M.T.	Female	Victoria	Housewife	63	25 "	Sydney	150A	Died, 1 May, 1919.
J.P.	Male	Malta	Labourer	29	18 June, "	"	151	Absconded, 14 Sept., 1919.
J.S.	"	"	"	30	22 Dec., "	Kempsey	152	Died, 29 July, 1921.
A.S.	"	China	Gardener	64	3 Aug., 1920	Kandos, N.S.W.	153	Died, 2 Aug., 1923.
C.T.P.	"	"	Labourer	30	19 Oct., "	Nauru Is., S. Pacific	154	Discharged, 25 April, 1921;
E.T.D.	"	N.S.W.	Teamster	32	10 Nov., "	Bellingen, N.S.W.	155	Discharged, 1 Dec., 1925. re-admitted, 28 Sept., 1931.
T.F.	"	Ireland	Civil servant	57	20 Dec., "	Hobart, Tasmania	156	Discharged, 18 June, 1921.
A.W.	Female	Sweden	Seamstress	62	18 Feb., 1921	Newcastle	157	Died, 24 Feb., 1930.
D.A.	Male	N.S.W.	Teamster	71	26 May, "	Newcastle	90	Died, 16 July, 1921.
J.C.	"	N.S.W.	Fisherman	22	18 Aug., "	Tilba Tilba	158	
A.S.	Female	Queensland	Domestic	20	29 Jan., 1922	Redfern	159	Returned to Peel Island, Queensland, 20 Mar., 1922.
Y.M.B.	Male	France	Labourer	67	7 June, 1922	Hunter's Hill	160	Died, 12 Aug., 1922.
E.	"	Ceylon	Sailor	24	13 Dec., "	Not fixed	161	Repatriated, 26 June, 1923.
R.B.	"	N.S.W.	Coach-painter	42	18 June, 1923	Taree, N.S.W.	95	Died, 5 Aug., 1923.
C.E.B.	"	Northern Terr.	Garage-proprietor	35	11 Aug., 1924	Darwin, N.T.	162	Discharged, 16 Sept., 1925.
H.L.S.	"	N.S.W.	Invalid pensioner	37	26 Oct., "	Liverpool Asylum	163	
J.B.	"	Ireland	Bush worker	61	28 Jan., 1925	Liverpool	164	Died, 24 June, 1931.
A.C.	"	Germany	Importer	45	6 Mar., "	Sydney	165	Absconded, 21 Aug., 1925.
K.	"	Hawaii	Musician	"	7 "	"	166	Repatriated, 11 Mar., 1925.
A.M.	"	China	School	12	12 "	"	167	Repatriated, 16 Dec., 1925.
A.D.	"	N.S.W.	"	7	21 April, "	"	168	Discharged, 1 Dec., 1925.
Wong Toe	"	China	Gardener	46	22 Nov., "	Clarence River	169	
H.P.	"	N.S.W.	Farmer	39	14 Dec., "	Queensland	170	Discharged, 9 Sept., 1926.
G.T.	"	Scotland	Chemist	56	8 May, 1926	Sydney	171	Discharged, 21 July, 1926.
E.S.G.	Female	Queensland	Domestic	33	27 April, 1927	Hunter's Hill	171	Died, 29 Jan., 1930.
A.R.B.	Male	N.S.W.	Farm labourer	41	6 July, "	Croydon	172	Died, 26 Nov., 1928.
W.C.	"	Mauritius	Sugar-worker	47	7 Feb., 1928	Queensland	173	Discharged, 4 July, 1928.
D.E.O.	Female	Queensland	Domestic	31	29 Mar., "	Northern Territory	174	Discharged, 15 Feb., 1932.
Ah Hoey	Male	China	Gardener	49	28 May, "	Liverpool	175	
P.T.I.	"	N.S.W.	Labourer	17	9 Dec., "	Tweed River	176	
J.L.	"	"	"	47	22 "	Macksville	177	
L.M.	Female	"	Domestic	59	14 Sept., 1929	Lismore	178	
E.W.	"	"	"	33	4 Feb., 1930	Sydney	179	Died, 6 Feb., 1930.
T.G.J.D.	Male	"	School	13	4 July, "	Lismore	180	
R.C.	"	W. Australia	"	12	6 Aug., "	Sydney	181	
L.B.	"	Italy	Labourer	39	13 Sept., "	Queensland	182	Repatriated to Queensland, 15 Jan., 1931.
A.M.	Female	N.S.W.	Home-duties	19	1 April, 1931	Adamstown, N.S.W.	183	
W.L.	Male	China	Gardener	60	12 Sept., 1931	Kogarah, N.S.W.	184	
J.T.	Male	England	Bootmaker	60	29 Jan., 1932	Queensland	185	

NOTES.—(a) The cases of a few other persons who, for one reason or other, were never admitted to the lazaret, have been mentioned in the course of the series of Reports, and are additional to those shown in this Table. (b) On comparison with the reports for early years, differences in ages or dates of admission of some coloured patients will be observed. Those now given are the correct ages and dates. Patients remaining under treatment have their initials shown in black-faced type.

RETURN showing admissions, discharges, &c., of Patients suffering from leprosy for the years 1918-1932.

	1918.	1919.	1920.	1921.	1922.	1923.	1924.	1925.	1926.	1927.	1928.	1929.	1930.	1931.	1932.
In Lazaret on 1st January	24	24	24	24	22	21	16	15	17	15	17	20	20	20	20
Admitted during the year	1	4	4	3	3	1	2	8	1	4	5	1	4	3	1
Died during the year	...	2	1	2	2	5	2	...	1	2	1	1	4	2	...
Discharged	1	2	3	1	2	...	1	4	2	...	1	...	...	...	2
Repatriated	...	...	...	2	...	1	...	2	...	...	...	...	...	1	...
Remaining in Lazaret on 31st December	24	24	24	22	21	16	15	17	15	17	20	20	20	20	19
{ Males	19	19	20	17	16	12	11	13	11	14	16	15	17	16	16
{ Females	5	5	4	5	5	4	4	4	4	3	4	5	3	4	3

Birthplaces of Lepers.—The inmates of the Lazaret at the close of the year 1932 were of the following nationalities:—New South Wales, 10; West Australia, 1; Australian Aborigines, 2; Pacific Islands, 1; China, 4; England, 1. Total, 19.

Working Expenses of Lazaret.—During the year 1932, the total cost of the management of this Institution was £3,077 9s. 5d. Calculated on the average number of inmates, the average cost per inmate per annum was £153 17s. 6d.

APPENDIX B.

I.—New Cases, 1931 and 1932.

1931: CASE 183.—A.M., f., born 1911; admitted 1st April, 1931.

History.—When patient was aged 2½ years her father, Case 134, was admitted to the Lazaret on 4th February, 1914, suffering from well marked leprosy of mixed type. He remained in the Lazaret until his death on 17th June, 1915.

The present patient is said to have been well and strong until about 13 years of age when a "rash" appeared on her legs. This disappeared and recurred at intervals. When she was about 16 years the skin on front of thighs became inflamed and sore and the sinews contracted. For two years she could not walk and was wheeled about in an invalid chair. During the past twelve months she has improved, and for six months has been able to walk without assistance. About 1928 the hair of the eyebrows began to fall out. On 23rd March she was admitted to the Newcastle Hospital, and a nasal smear made there was found to contain typical *Lepra* cells and bacilli.

It is noteworthy that as far as can be ascertained she had not been in contact with any leprosy person since the removal of her father to the Lazaret in 1914, i.e., ten years before the above-mentioned "rash" was observed. She had been attending school in apparently good health until 13½ years of age.

On admission—

Head and Neck—General bronzing or cyanosis of the face. Eyebrows almost hairless in the outer halves. Numerous nodules of ear lobes, forehead, cheeks and around mouth. Ulceration and scarring of soft palate. Ulceration of both nostrils.

Trunk—A few brown areas on front and back.

Upper Limbs—Hands and forearms are cyanosed and scaly. Both ulnar nerves are thick and hard. There is partial anaesthesia of hands and forearms.

Lower Limbs—Feet and legs are discoloured like hands and arms. Toes of left foot are ulcerated. There is partial anaesthesia from mid-thigh downwards.

Bacilli—Acid fast, in masses and singly were numerous in smears from right ear lobe and from nasal mucus.

Treatment—Intra-muscular injection of chaulmoogra oil with olive oil and benzocain in the following proportions:—

Chaulmoogra 90 cc. Olive oil 10 cc. Benzocain 3 grammes.

Dose 2 cc. gradually increased to 5 cc. twice weekly.

Temporarily suspended in September and resumed in October.

Weight increased from 74 lb. in April to 86 lb. in December.

CASE 184.—W. L., m., born about 1872; admitted 12th September, 1931.

History.—Came from China as a young man. Has worked on a vegetable garden at Kogarah (suburb of Sydney) for about twenty years. Date of onset of illness cannot be ascertained. Diagnosis was made at Royal Prince Alfred Hospital, where he had applied for treatment.

Condition on admission—

Head and Neck—Numerous dull red nodules on face—size of a pea and smaller. Hair of eyebrows thinned.

Trunk.—Many similar nodules.

Upper Limbs.—Many nodules. Both ulnar nerves thickened.

Lower Limbs.—Many nodules. Left leg from foot to knee dull.

B. *Leprae* from nares and from a nodule above the right knee.

1932: CASE 185.—J.T., m., Bootmaker, born 1872, in England; admitted 27th January, 1932.

History.—Left England for the first time in 1920 and came to Queensland. For the next nine years followed his trade in a small country town. Next door to his shop was a Chinaman's store. He frequently mended shoes for Chinamen, but never for one with leprosy as far as he knows. For the past three years has lived in a suburb of Sydney. About three years ago he began to notice anaesthesia of the left forearm. Six months ago nodules began to appear on the cheeks and for the past three months he has had a generalised nodular eruption.

On admission.—Weight, 138 lb.

1. Head and Neck.—Forehead studded with small smooth pale yellow brown nodules.

Malar eminences and chin similarly affected. Ear lobes slightly infiltrated.

2. Trunk.—Thorax and abdomen, back and front, show a copious maculopapulae dull red rash.

3. Upper limbs.—Both bear numerous small red papules and nodules. L. ulnar nerve is thickened and the hand is anaesthetic in the area supplied by this nerve.

Lower limbs.—Copious eruption of papules and small nodules as on upper limbs.

B. *Leprae* were found in nasal mucus and in serum expressed from an excised nodule.

Treatment—

1. Chaulmoogra oil by mouth—15 minims three times daily, dose gradually increased to 75 minims daily.

2. Intra-muscular injection of chaulmoogra oil—chaulmoogra oil 90 cc., olive oil 10 cc., benzocain 3 grammes, dose 3 cc. twice a week, increased in May to 4 cc., and in October to 5 cc.

Progress.—

He has improved greatly. All nodules have disappeared and now there is left only the stains of the rash on the trunk. His weight has increased to 144 lb.

II.—Re-admission.

1931: CASE 155.—E.T.D., m., born 1888, teamster; re-admitted 28th September, 1931. Originally admitted 10th November, 1920, he was discharged on parole 1st December, 1925.

He has not reported regularly for examination, and now returns with the trophic lesions more advanced. There is a perforating ulcer of the ball of the left big toe, and the "claw" deformity of the hands is more marked. On the trunk there are six macules about the size of a crown piece.

Weight on admission, 12 st. 4 lb.; on 1st December, 12 st. 13 lb. Necrosis of right index terminal phalanx.

1932: There were no re-admissions in 1932.

III.—Discharge.

CASE 182.—L.B., m., born 1891; admitted, 12th September, 1930.

1931: On 15th January, 1931, was discharged to be transferred to a lazaret in Queensland.

CASE 137.—E.W., m., born 1864; admitted 17th November, 1914.

1932: For many years he had had no fresh manifestations.

On 27th September, 1932, his condition was as follows:—

Weight, 154 lb. Well nourished and vigorous, works daily in the garden.

Head and Neck.—No evidence of any lesion except that the eyebrows are almost devoid of hair.

Trunk.—Nil to be seen.

Upper Limbs.—Both ulnars are thickened and hard. In both hands the ring and little fingers are habitually flexed but can be straightened passively. There is partial anaesthesia in these fingers.

Lower limbs.—Nil to be seen.

B. Lepræ.—There are no nodules nor suspicious areas from which smears might be made. Smears of nasal mucus show no acid fast bacilli.

By authority of the Board he was discharged 19th October, 1932, on parole to notify every six months his address and condition.

CASE 174.—D.E.O., f., born 1897; admitted 29th March, 1928.

There had been no active symptoms for over two years. Smears of nasal scrapings showed no acid fast bacilli. There were no surface lesions likely to yield B. Lepræ. On these grounds, by authority of the Board she was discharged on 13th February, 1932, on parole to present herself for re-examination every three months till otherwise instructed.

IV.—Deaths.

1931: CASE 149.—P.P., m., born 1887; admitted 21st February, 1918; died 24th February, 1931.

The Health Department Laboratory reported on tissues, as follows:—

Spleen—One small focus of caseation.

Mesenteric gland—Extensive caseation.

Lung—Area of fibrosis.

Sections stained by Ziehl-Nielson method show fine acid fast bacilli in the gland and throughout the splenic pulp. In the spleen there are numerous small globi typical of B. Lepræ. All the bacilli appear finer than Tubercle bacilli. Two guinea pigs inoculated on 25th February, with emulsion of mesenteric gland and of lung respectively, showed no sign of tuberculosis two months later.

In the hospital laboratory—Acid fast bacilli resembling B. Lepræ were found in Laryngeal mucus and in smears from a caseating lung cavity.

CASE 164.—J.B., m., born 1864; admitted 28th January, 1925; died 24th June, 1931.

No fresh manifestations of Leprosy. But asthma continued to trouble him. He became very depressed and finally committed suicide by cutting his throat.

1932: No deaths occurred at the lazaret during 1932.

V.—Progress Report on Patients Remaining on 31st December, 1931 and 1932.

CASE 87.—F.E.B., m., born 1876; admitted 25th November, 1903.

1931: Still gets about and does a little gardening. Occasionally laid up when some necrosed bone becomes infected and suppuration results.

1932: Feebler than before. Often laid up with local inflammations due to osteomyelitis in feet or legs.

CASE 88.—G.M.S., f., born 1885; admitted 9th February, 1904.

1931: Occasional exacerbations as before, but is still robust and generally well. Weight on December 1st, 13 st. 9 lb.

1932: Much the same as in 1931. Generally very well. Occasionally laid up with inflammation of legs.

- CASE 101.—T.A., m., born 1870; admitted 11th July, 1905.
- 1931 : He is now almost blind through iritis and keratitis. Weight, 11st.
- 1932 : He has aged very much and is now blind with double cataract. Also has chronic osteomyelitis of R. Tibia and Fibula. There have not been any fresh Leprous manifestations.
- CASE 128.—S.C., m., born 1872; admitted 21st May, 1912.
- 1931 : Health uniformly good. No fresh leprous manifestation.
- 1932 : There have been no fresh leprous attacks for over 10 years, and his health is uniformly good. But he is bedridden in consequence of wasting and deformity of the lower limbs.
- CASE 136.—A.C.P., m., born 1898; admitted 23rd June, 1914.
- 1931 : No very active changes. Ol. Chaulmoogra by mouth 90 minims daily and by intramuscular injection twice a week for the latter half of the year. Weight increased 7 lb., to 10 st. 2 lb.
- 1932 : No fresh leprous manifestations. General health good. Weight remains about 10 st. or a little more.
- Throughout the year has had Chaulmoogra Oil by mouth and by intramuscular injection.
- CASE 137.—E.W., m., born 1864; admitted 17th November, 1914.
- 1931 : No change.
- 1932 : Discharged on parole 19th October, 1932.
- CASE 144.—W.J.P., m., born 1904; admitted 25th November, 1916, discharged 5th November, 1924, re-admitted 1st July, 1927.
- 1931 : Throughout the year has continued to have profuse nodular eruption—despite active treatment with Chaulmoogra Oil by mouth and by intramuscular injection.
- His vision is much impaired by keratitis and iritis. Weight on 1st December, 11 st.
- 1932 : Continues to be profusely nodulated on face and limbs despite continuous treatment with Chaulmoogra Oil by mouth and by intramuscular injection.
- Iritis and keratitis cause much disability and pain. Weight on 1st December, 150 lb.
- CASE 155.—E.T.D., m., born 1888; admitted 10th November, 1920; discharged 1st December, 1925; re-admitted 28th September, 1931.
- 1932 : No fresh leprous manifestations.
- Weight has increased from 183 lb. on 1st January to 196 lb. on 1st December.
- He has taken Chaulmoogra Oil by mouth regularly throughout the year and since 26th August, has also had intramuscular injections twice a week.
- CASE 158.—J.C., m., born 1899; admitted 18th August, 1921.
- 1931 : The eruption of nodules has become more profuse. He declines all treatment. Weight in January, 9 st. 9 lb.—in December, 8 st. 11 lb.
- 1932 : As during last year he continues to be covered profusely with nodules. Since 12th July he has submitted to have Chaulmoogra injections twice a week. Weight, 123 lb.
- CASE 163.—H.L.S., m., born 1887; admitted 22nd October, 1929.
- 1931 : On 5th March, the right eye was removed under general anaesthesia. Pathological report—The growth at the limbus of the Cornea on the outer side measured 0.7 c.m. by 0.7 c.m. and in thickness 0.5 c.m. Solid consistency, white colour, does not invade interior of eyeball. Microscopically it is composed of fibro cellular inflammatory tissue. Does not resemble a tuberculous granuloma. Sections contain innumerable acid fast bacilli, grouped in the clusters characteristic of leprosy.
- 1932 : In May his condition was as follows :—
- Face.—Much infiltration of cheeks. Nodules on earlobe and on nose. In left eye conjunctival infiltration encircles the Cornea, thickest on the outer side. Eye cannot be completely closed. Vision is defective.
- Upper limbs.—Many flat nodules of forearms. Both elbow tips are voluminous. Ulnar nerves are thick but not tender. Hands are cyanosed and deformed through Ulnar paresis.
- Lower limbs.—Much pigmented maculation of buttocks and down backs of thighs where there are many flattened purplish nodules. R. Peroneal nerve thickened and tender.
- In December Dr. Halliday (Hon. Ophthalmic Surgeon): reported "Left eye—limbic nodule 12 to 2 o'clock; Cornea clear. Photophobia: Pupil small and inactive."
- Weight on 1st December, 130 lb.
- Has had Chaulmoogra injections twice weekly since 9th December—Previously he declined all treatment.
- CASE 169.—W. T., m., born 1879; admitted 22nd November, 1925.
- 1931 : No fresh manifestations. Health good.
- 1932 : No fresh leprous lesions.
- In December Dr. Halliday reported corneal opacities in right and left eyes, but he still can read. Has taken Chaulmoogra throughout the year by mouth, and since 16th August by injection twice a week. Weight has fallen from 134 lb. in January to 120 lb. in December.
- CASE 174.—D.E.O., f., born 1897; admitted 29th March, 1928.
- 1931 : No further active symptoms.
- Some disability through wasting of right peroneal muscles. Has had Chaulmoogra injections regularly.
- 1932 : Discharged on parole 13th February, 1932.

CASE 175.—A.H., m., born 1879; admitted 28th May, 1929.

1931: No fresh leprous manifestations. Mentally unstable.

1932: No fresh leprous lesions.

Has taken Chaulmoogra Oil by mouth throughout the year, and by injection twice a week since 26th August. Weight in January, 133 lb., in December, 123 lb.

CASE 176.—P.T.I., m., born 1911; admitted 9th December, 1928.

1931: Has become worse. Face and limbs are more infiltrated and nodular and he is almost blind. Refuses treatment.

1932: Improved considerably during the year. In November it was noted that his face was of normal size and fairly free of nodules. But the left eye is blind and not covered by the lids, and the right Cornea has a fairly dense nebula impairing the vision so that he can only just count fingers.

Since 1st February he has taken Tab. Sod. Gynocardate by mouth, and since 12th July injections of Chaulmoogra Oil twice a week. Weight throughout the year has been about 100 lb.

CASE 177.—J.L., m., born 1881; admitted 22nd December, 1928.

1931: About the same. No improvement in the eyes. Weight in December, 11 st. 8 lb.

1932: No fresh leprous manifestations. Eyes have not improved. Hon. Ophthalmic Surgeon noted in December "right eye—white deposit in pupil area, iris fixed." Has taken Chaulmoogra Oil by mouth throughout the year, and since 6th September has had Chaulmoogra injections twice a week. Weight in January 161 lb., and in December 171 lb.

CASE 178.—L.R.M., f., born 1870; admitted 14th September, 1929.

1931: Fairly well through the year without any exacerbation. Takes Sod. Hydnocarpate 98 grains daily. Weight in December, 12 st. 4 lb.

1932: No fresh leprous manifestations. Present condition as follows:—

Face.—Still some brick red colouration of forehead, cheeks and chin. On the molar eminences the skin may be a little thickened.

Upper limbs.—Ulnars not noticeably thickened. Fingers rather glossy but not anaesthetic. Does a good deal of sewing without any difficulty.

Lower limbs.—Dull red remains of old eruption over both legs below knees. Not anaesthetic. Trunk.—Some stains of former eruption. Smears made from the chin showed no acid fast bacilli.

She takes Sod. Hydnocarpate, 98 grains daily. Weight in December 173 lb.

CASE 180.—T.G.J.D., m., born 1916; admitted 4th July, 1930. (Son of Case 155.)

1931: No fresh manifestations. Remains a typical case of *Lepra Nervorum* with no skin infiltration. Chaulmoogra injections throughout the year. Weight in January, 5 st. 9 lb., in December, 6 st. 5 lb.

1932: No fresh leprous manifestations. General health very good.

Takes Tab. Gynocardate daily and since 12th July has had Chaulmoogra injections twice a week. Weight has increased from 87 lb. in January to 106 lb. in December.

CASE 181.—R.C., m., born 1918; admitted 22nd August, 1930.

1931: No fresh nodules. Great improvement in the previously infiltrated areas. The face still is slightly cyanosed but there are no obvious nodules. Chaulmoogra injections throughout the year. Weight in January, 4 st. 12 lb., in December, 5 st. 5 lb.

1932: There is very little indication of leprosy now, but leprosy bacilli were obtained on 15th June and on 8th November from right cheek and left eyebrow. Smears from the nose on the 8th November did not show any bacilli. His general health is very good and his weight increased from 75 lb. in January to 79 lb. in December. Like the lastnamed patient he has taken Gynocardate tablets throughout the year, and since 12th July has had Chaulmoogra injections twice a week.

CASE 183.—A.M., f., born 1911; admitted 1st April, 1931. (Daughter of Case 134.)

1932: She has been very ill most of the year. The intra nasal-ulceration has advanced, destroying the septum, and causing sinusitis. In the limbs, especially the lower, there has been much eruption, very painful. She has been given Chaulmoogra injections except when she was too ill.

CASE 184.—W.L., m., born 1872; admitted 12th September, 1931.

1932: Much improvement during the year.

Has taken Chaulmoogra Oil by mouth regularly. Weight 135 lb. in January, 152 lb. in December.

3.—DAVID BERRY HOSPITAL.

Berry, New South Wales.

REPORT of the Secretary for the years ended 31st December, 1931 and 1932.

Administrative Staff.—Visiting Medical Officer, Dr. H. M. Hollingworth; Matron, Miss D. G. Cawood; Secretary, A. F. Hale.

Resident Staff.—Matron, 1 Sister, 1 Staff Nurse, 5 Pupil Nurses, Cook, Laundress, 2 Housemaids, 2 Male Attendants, 1 inmate worker.

Number of Wards and Beds.—Wards, 6; beds, 22; cots, 4.

General Cases.—Beds, 20; cots, 2. *Infectious Cases.*—Beds, 2; cots, 2.

Sir,

I have the honour to submit herewith the annual report of this hospital for the years 1931 and 1932:—

Admissions and Discharges, 1931.—Remaining in on 1st January, 19; admitted during the year, 340; births, 7; discharges, 319; deaths, 20; remaining in on 31st December, 1931, 20; annual cost of maintenance, £3,834 2s. 11d. Average cost per occupied bed, £182 11s. 5d.

1932.—Remaining in on 1st January, 20; admitted during the year, 406; births, 6; discharges; 382; deaths, 30; remaining in on 31st December, 1932, 20; annual cost of maintenance, £3,874. Average cost per occupied bed, £184 9s. 6d.

In-patients.—The total number of in-patients treated in 1931 was 359, and in 1932, 406, compared with 322 for 1930. Daily average, 21 for both 1931 and 1932, as against 19 in 1930.

Out-patients.—The number of out-patients attended to was 166 in 1931 and 253 in 1932.

Infectious Cases.—Seven infectious cases were admitted in 1931, viz., scarlet fever, 6; measles, 1; and 15 in 1932, viz., diphtheria, 3; infantile paralysis, 1; scarlet fever, 7; typhoid fever, 1; whooping cough, 3.

Anaesthetics.—The total number of operations performed in 1931 was 112 (major, 67; minor, 45), and 43 visits were made by the Nowra doctors in connection with these operations—Dr. Ryan, 15; Dr. Rodway, 13; Dr. Cook, 15.

The total number of operations performed in 1932 was 171 (major, 74; minor, 97). Visits made by the Nowra doctors in connection with these operations were: Dr. Ryan, 18; Dr. Yates, 1 (locum for Dr. Ryan) Dr. Rodway, 16; Dr. Cook, 11; Dr. Thompson, 5.

Collections.—The collections for 1931 totalled £325 17s. 10d., and for 1932, £339 13s. 8d., compared with £356 3s. 4d. for 1930.

Buildings and Grounds.—These are in fair order.

A. F. HALE,
Secretary.

4.—LADY EDELINE HOSPITAL FOR BABIES, GREYCLIFFE, VAUCLUSE.

Annual Report for years ended 31st December, 1931 and 1932.

Visiting Medical Officer.—Dr. L. R. Parker.

Honorary Staff of Consultants.—Sir Charles Clubbe, Consulting Surgeon (died 20th November, 1932); Dr. T. Storie Dixon, Consulting Physician (died 9th December, 1932); Dr. R. N. Paul, Consulting Dermatologist; Dr. R. S. Godsell, Consulting Ear, Nose and Throat Surgeon.

Resident Staff.—Matron, Miss H. J. Turner; 2 Staff Nurses and 6 Pupil Nurses.

Number of Wards.—General, 6; (48 cots, 4 beds). Isolation, 1 (1 cot, 1 bed). Total, 49 cots, 5 beds.

Return of Admissions and Discharges, 1931.—Remaining in hospital on 31st December, 1930, 27 babies and 11 mothers; admitted during 1931, 113 babies and 46 mothers; discharged, 108 babies; died, 7; total number treated, 140 babies. Remaining in hospital on 31st December, 1931, 25 babies and 12 mothers. Daily average number of cots occupied, 22. Out-patients treated, 52. Average daily number of beds occupied by mothers, 10.

1932.—Remaining in 31st December, 1931, 25 babies and 11 mothers; admitted during 1932, 110 babies and 41 mothers; discharged, 106 babies and 30 mothers; died, 5 babies; total number treated, 135 babies. Remaining in hospital 31st December, 1932, 24 babies and 11 mothers. Daily average number of cots occupied, 23. Out-patients treated, 37. Average daily number of beds occupied by mothers, 9.

Annual cost of maintenance and treatment, £2,320 4s. 3d. in 1931, and £2,153 8s. 6d. in 1932.

Average cost per occupied bed, £105 9s. 3d. in 1931, and £97 17s. 8d. in 1932.

VISITING MEDICAL OFFICER'S REPORT.

1931.—During the year, 140 cases were treated at Greycliffe. Of these, 7 cases died, a percentage of 5. Five of these fatal cases occurred in July, when there were numerous cases of gastro-enteritis complicated by pneumonia. The other two cases occurred in October.

1932.—135 babies were treated at Greycliffe. Of these 5 died, a percentage of 3.7. Of the 5 fatal cases, two were acute gastro-enteritis, 1 broncho-pneumonia, 1 lobar pneumonia, and 1 a combination of enteritis and bronchitis.

L. R. PARKER, V.M.O.

MATRON'S REPORT.

The following table shows the ages on admission of babies treated during 1931 and 1932, the number of deaths and duration of stay in hospital of all fatal cases:—

1931.	3 months.	3-6 months.	6-9 months.	9-12 months.	12 months and over.	Total.
		55	29	14	7	35	140
Died	3	2	.....	1	1	7
Duration of stay in hospital of fatal cases	4 days ...1	7 days ...1	.....	7 days ...1	2 mths ...1	...
	5 ,, ...1	9 ,, ...1	.....	.....	.....	...
	2 mths ...1	.....	.....	.....	.....	...
		3	2	1	1	7
1932.	3 months.	3-6 months.	6-9 months.	9-12 months and over.	Total.	
		46	26	28	35	135
Died	1	1	1	2	5	
Duration of stay in hospital of fatal cases	11 days ...1	10 days ...1	6 days ...1	6 days ...1	.....
	.....	.....	.....	10 ,, ...1	.....
		1	1	1	2	5

Nature of Cases Treated.—1931: Acute gastro-enteritis, 15 (3 deaths); congenital heart disease with enteritis, 5 (3 deaths); broncho-pneumonia, 8 (1 death); acute enteritis, 21; malnutrition, 38; acute eczema, 6; bronchitis, 18; enteric malnutrition, 12; prematurity, 4; purulent ophthalmia, 4; scabies, 1; whooping cough, 1; pyloric stenosis, 1; acute meningitis, 1; rachitis, 5. Total cases treated, 140; deaths, 7.

1932: Acute gastro-enteritis, 13 (2 deaths); enteritis, 34 (1 death); broncho-pneumonia, 14 (2 deaths); enteritis with bronchitis, 10; malnutrition, 57; pyloric stenosis, 1; rachitis, 1; hydrocephalus, 1; meningitis, 1; ileocolitis, 3. Total cases treated, 135; deaths, 5.

Infectious cases were transferred to the Coast Hospital and Newington. No spread of infection resulted.

The dairy herd at Carrara Convalescent Home adjoining Greycliffe continues to supply sufficient milk twice daily for the principal constituent of the babies' diet.

The Sun Toy Fund as usual supplied the hospital with useful toys and other presents at Xmas. This kindness is much appreciated as it helps to amuse and keep the little ones happy.

The nursing staff has been reduced by one trained and two pupil nurses during 1931.

Dr. Parker, the Visiting Medical Officer, who was granted 12 months leave on 19th December, 1931, returned to duty on 25th November, 1932. Dr. R. H. Kenny acted as visiting Medical Officer during Dr. Parker's absence.

H. TURNER,
Matron.5.—STRICKLAND CONVALESCENT HOSPITAL FOR WOMEN,
CARRARA, ROSE BAY.

Report of the Matron for the year ended 31st December, 1931 and 1932.

Visiting Medical Officer.—Dr. L. R. Parker.

Resident Staff.—Matron, Miss S. G. Hartley; 1 Senior and 1 Junior Nurse; 1 Attendant.

Number of Wards and Beds.—Wards, 9; beds, 32.

This hospital is utilised for women convalescent after severe illnesses.

Annual Return of Admissions and Discharges.—1931: Number of patients remaining in on 1st January, 1931, 31; admitted during year, 646; discharged, 645; remaining in on 31st December, 1931, 32. Average daily number of beds occupied, 36. Annual cost of maintenance, £2,303 Os. 8d. Average annual

cost per occupied bed, £63 19s. 5d. 1932: Number of patients remaining in on 1st January, 1932, 32; admitted during the year, 714; discharged, 715; remaining in on 31st December, 1932, 31. Average daily number of occupied beds, 36. Annual cost of maintenance, £2,259 3s. 7d. Average annual cost per occupied bed, £62 15s. 1d.

The past two years have been very satisfactory in every way, and patients here show a marked improvement in their general condition.

The hospital is beautifully situated on the Harbour foreshore. The building is in very good condition and is surrounded by 14 acres of land with much natural beauty.

Portion of the grounds is utilised for a dairy herd, the milk from which supplies the infants at the Lady Edeline Hospital for Babies, and partly also the amount required at "Carrara."

There is a plentiful supply of fresh eggs and sufficient poultry for Christmas and Easter.

S. G. HARTLEY,
Matron.

6.—DENISTONE HOUSE CONVALESCENT HOSPITAL FOR MEN, EASTWOOD.

Annual Report for the years ended 31st December, 1931 and 1932.

Visiting Medical Officers.—Drs. D. Guthrie Hunter and Stewart Oag.

Staff.—Matron, Miss L. D. Meares; 1 Nurse; 1 Attendant.

Number of rooms used as wards, 7; indoor beds, 29.

Annual Return of Admissions and Discharges, 1931.—Patients in hospital, 31st December, 1930, 24; admitted during 1931, 439; discharged, 433; remaining in on 31st December, 1931, 30; average daily number of occupied beds, 27. Annual cost of maintenance, £2,120 1s. 8d. Average annual cost per bed, £78 10s. 5d. 1932: Patients in hospital, 31st December, 1931, 30; admitted during 1932, 401; discharged, 419; remaining in on 31st December, 1932, 13; average daily number of occupied beds, 26. Annual cost of maintenance, £2,100 18s. Average cost per occupied bed, £80 16s. 1d.

Denistone House was taxed to its utmost capacity during 1931-1932, there being at times 33 patients in residence.

Sufficient eggs and vegetables were produced for the needs of the Institution, but milk had to be bought for a period of three months.

L. D. MEARES,
Matron.

7.—WATERFALL SANATORIUM.

Annual Report of the Medical Superintendent for the years ended
31st December, 1931 and 1932.

Honorary Consulting Physicians.—Dr. Cecil Purser, Dr. E. W. Fairfax.

Resident Staff.—Medical Superintendent, Dr. H. W. Palmer; Acting Senior Medical Officer, Dr. O. W. Mater; Junior Medical Officer, Dr. G. Saunders; Manager, Mr. R. C. Rowe; Matron, Miss K. Walsh; 1 Sub-matron, 33 Nurses; Clerk and Storekeeper; 1 Junior Clerk; 15 Male Attendants; 5 Cooks; and 9 Artisans. A dentist visits the Sanatorium one day a fortnight.

Bed Accommodation.—There are 292 beds for males and 136 for females. Total, 428 beds.

1931: *Number of Tuberculous Patients* dealt with during 1931, 889. Number of Patients remaining in on 1st January, 1931, 407; admitted during 1931, 483. Total under treatment, 889. Discharged 381 (arrested, 3; quiescent, 18; much improved, 80; improved, 172; stationary, 21; worse, 90); died, 91. Remaining in residence on 31st December, 1931, 414 patients.

1932: Number of Patients remaining in on 1st January, 1932, 414; admitted during 1932, 473; total under treatment, 887. Discharged, 484 (arrested, 6; quiescent, 23; much improved, 60; improved, 139; stationary, 27; worse, 123); died, 106. Remaining in residence on 31st December, 1932, 403 patients (males, 279; females, 124).

During the year there were 890 patients under treatment, namely, 602 male and 288 female patients, of whom 3 men were non-tuberculous. At the beginning of the year there were 287 male and 127 female patients in residence, and during the year 315 male and 161 female patients were admitted, 267 male and 114 female patients were discharged, while 56 male and 50 female patients died.

Average daily number of beds occupied, 407 in 1931, and 394 in 1932.

Total cost of maintenance £31,921 18s. 5d. in 1931, and £31,452 1s. 1d. in 1932.

Average annual cost per patient, £78 8s. 7d., or patients plus 119 inmates, £60 13s. 9d. in 1931; and £79 14s. 9d., or patients plus inmates, £62 3s. 7d. in 1932.

Eight non-tuberculous male patients were treated at Waterfall in 1931, and 3 in 1932; they all recovered from their illnesses, and were discharged. These patients are not included in any of the Tables.

CONDITION on discharge and average residence in days of the 475 tuberculous patients discharged in 1931.

Condition on Discharge.	No. of Patients.	Average Residence in days.
1931—		
Arrested	3	1,983
Quiescent	18	663
Much Improved	80	196
Improved	172	241
Stationary	21	13
Worse	90	168
Died	91	209
Total	475	251

CONDITION on discharge and average residence in days of the 484 tuberculous patients discharged in 1932.

Condition on Discharge.	No. of Patients.	Average Residence in days.
1932—		
Arrested	6	1,781
Quiescent	23	249
Much improved	60	600
Improved	139	241
Stationary	27	13
Worse	123	270
Died	106	490
Total	484	333

"Arrested": A case where no tubercle bacilli have been found in three successive weekly examinations of the sputum, and where the disease has been quiescent for two years.

"Quiescent": To have no symptoms of tuberculosis, and no signs of tuberculosis except such as are compatible with a completely healed lesion, and in which the sputum, if present, is free from tubercle bacilli.

"Much Improved": Is where the general health is good, and the signs and symptoms of tuberculosis are materially diminished, while working capacity is more or less restored.

"Improved": Cases where the disease is better than on admission, but is still active.

This is the scheme for classification of tuberculous patients formulated by the New South Wales Board of Control for the Campaign against Tuberculosis, and adopted by the various organisations. (See page 61.)

CONDITION of patients on admission and discharge, 1931 and 1932.

Condition on Admission.	Arrested.	Quiescent.	Much Improved.	Improved.	Stationary.	Worse.	Died.
1931—							
L1, T1.....	...	...	3	6	1	...	...
L2, T1.....	...	4	17	26	2	5	6
L3, T1.....	1	4	11	38	3	19	11
L1, T2.....	2	...	1	1	...	2	...
L2, T2.....	...	7	17	27	2	9	9
L3, T2.....	...	3	23	58	12	36	34
L1, T3.....	...	...	...	...	...	...	...
L2, T3.....	...	...	1	1	...	1	2
L3, T3.....	...	...	5	17	1	18	29
1932—							
L1, T1.....	...	6	6	12	4	10	...
L1, T2.....	...	...	1	2	...	1	...
L1, T3.....	...	...	...	...	...	...	...
L2, T1.....	...	7	10	22	7	14	7
L2, T2.....	2	4	14	31	1	20	12
L2, T3.....	...	...	1	2	...	4	2
L3, T1.....	...	3	12	35	7	17	...
L3, T2.....	3	3	16	29	4	48	59
L3, T3.....	1	...	...	6	4	9	24

L1, signifies disease limited to part of one lobe of a lung, or slightly to two lobes.

L2, signifies extensive disease limited to one lobe, or moderately to two lobes.

L3, where more extensive disease exists than in L2.

T1, is where toxic symptoms are slight, and where complications if present are slight.

T2, is where toxic symptoms are present but not serious, and where complications are not extensive.

T3, where toxic symptoms or complications are more serious.

This is the classification of tuberculous patients formulated by the Board of Control of the Campaign against Tuberculosis, and adopted by the various organisations. (See page 61.)

AGES of Patients Discharged or Died during the year 1931 and 1932.

	Years, 1 to 9.	Years, 10 to 19.	Years, 20 to 29.	Years, 30 to 39.	Years, 40 to 49.	Years, 50 to 59.	Years, 60 to 69.	Years, Over 69.
1931	4	33	115	131	93	77	23	7
1932	4	28	140	107	96	81	26	2

OCCUPATIONS of Patients Discharged or Died during 1931 and 1932.

Occupation.	Number.		Occupation.	Number.		Occupation.	Number.	
	1931.	1932.		1931.	1932.		1931.	1932.
Labourers.....	87	87	Clerks	24	35	Station Hands	14	14
Housewives	75	62	Factory Hands	20	20	Children	12	11
Housework	44	45	Stowards	18	7	Professions	12	16
Indoor Trades	43	29	Building Trades	17	21	Miners (Coal)	11	11
Mechanics	32	30	Outdoor Workers	16	20	Miners (Quartz)	3	4
Shop Assistants	31	34	Seamen	15	...	Tailors	9	10
Carters .....	...	11						

BIRTHPLACES of Patients Discharged or Died during 1931 and 1932.

Country.	Number.		Country.	Number.		Country.	Number.	
	1931.	1932.		1931.	1932.		1931.	1932.
New South Wales	270	262	European Countries	22	17	U.S. America	5	...
Other Australian States...	55	52	Ireland	21	18	Wales	4	3
England	63	97	Asiatic Countries	9	7	British Dominions	2	...
Scotland	25	20	New Zealand	7	8			

TABLE showing the Age Period at which the first symptom of infection arose, and the number of male and female persons infected in each period, of all individual patients admitted since 1909.

Sex.	1 to 9 Years.	10 to 15 Years.	16 to 19 Years.	20 to 29 Years.	30 to 39 Years.	40 to 49 Years.	50 to 59 Years.	Over 59 Years.
Male	63	123	312	1,569	1,666	1,422	844	50
Female	71	159	363	1,114	757	337	148	49

In only 9.9 per cent. of these cases was a family history of infection obtained.

TABLE showing the relative incidence of infection among the different members of families giving a tuberculous family history.

Member in Family Infected.	1931.		1932.	
	Female Patients.	Male Patients.	Female Patients.	Male Patients.
	Per cent.	Per cent.	Per cent.	Per cent.
Mother	10.2	12.1	20.6	11.9
Father	8.3	10.9	9.4	12.3
Sister	16.3	9.7	17.0	12.3
Brother	9.0	25.8	9.2	25.0
Mother and father	2.4	2.9	2.3	3.4
Mother, father, brother and sister	2.7	3.0	2.3	2.5
Brother and sister	3.1	5.0	3.6	4.7
Father and brother	2.1	4.2	1.8	3.5
Mother and brother .....	.5	.9	.5	.8
Mother and sister	2.5	2.0	2.3	1.8
Father and sister	3.1	.9	3.0	.8
Mother, brother and sister	3.7	.2	3.4	.2
Father, brother and sister .....	.3	.2	.2	.2
Husband or wife	6.9	9.1	7.5	8.3
Husband or wife with son	1.0	1.8	1.0	1.4
Husband or wife with daughter	2.7	.4	2.4	.4
Daughter	4.8	2.0	4.6	1.8
Son	1.9	2.3	1.6	1.9
Other family connection	8.0	6.5	7.6	6.7

TABLE of Yearly Results—1927 to 1932.

Year.	Total Patients Treated.		Total Discharges.				Died.
	In Residence beginning of year.	Admitted during year.	Arrested.	Much Improved.	Improved.	Unimproved.	
1927	432	537	22	109	223	33	173
1928	409	522	29	78	199	121	127
1929	378	537	29	61	215	112	120
1930	372	509	20*	60	175	94*	103
1931	407	490	21*	80	172	111*	91
1932	414	476	29*	60	139	150*	106

* Quiescent cases are included in the arrested column, and stationary and worse cases in the unimproved column.

GENERAL REVIEW OF THE YEAR'S WORK.

The foregoing tables show the number of patients under treatment during 1931 and 1932, and the condition of those discharged.

When one considers the cases of advanced type that have to be admitted, these results compare favourably with previous records. Notwithstanding all the benefits that are available through the present system of co-ordination, few tuberculous persons are coming to Waterfall in that early and suitable period

when there is such urgent need for all persons suffering from the first symptoms of tuberculosis to come under medical control and supervision. This calls for more publicity in directing attention to the early symptoms of tuberculosis; the danger of delaying treatment if recovery is to be obtained, and the facilities that are available at clinics and dispensaries for diagnosis and advice. During the year many of the patients admitted were advanced toxic cases for which little could be done; while a large percentage of the other admissions were chronic cases beyond the stage likely to benefit in a sanatorium, as their condition was too far advanced to react favourably to any special treatment. I would point out once again that sanatorium treatment is too expensive for these chronic cases, most of whom are receiving invalid pensions and require very little extra assistance. If accommodation is to be provided for chronic cases it should be in an institution less costly to maintain than a sanatorium.

Of the male patients discharged in 1932, twenty-five men, all much improved from their stay at Waterfall, were transferred to the Red Cross Home at Exeter; forty-four patients, who did not improve at Waterfall, were transferred to the Randwick Auxiliary Hospital.

Treatment was mainly along ordinary sanatorium lines, all cases being kept strictly at rest, while their condition was active, while the large open wards allowed them to obtain a maximum of fresh air and sunshine. Special attention has been paid to the diet, menus being so arranged that repetition of similar meals only occur at lengthy intervals.

With the improvement in each patient's condition, graduated exercise was allowed, and when the disease was quiet, light work was insisted on. For patients capable of heavier exercise, a carpenter's workshop, provided with motor power, is available; and for patients preferring agricultural work, a vegetable garden is provided, where patients can grow crops, vegetables grown being bought by the sanatorium at current prices.

Special medical and surgical treatment was provided as needed, a number of cases being given pneumothorax treatment, with, in some cases, very satisfactory results, especially in several bad haemorrhage conditions. Solgonal was also used in a few cases in both 1931 and 1932, but the results were disappointing. "Ward's 47 treatment," a remedy supposed to have been used by the Maori people, was given a fair trial, but in no way proved effective. This treatment, under a different name, had been tried at Waterfall some years ago, and was then found of little effect.

"Clauden," a new haemostatic, was also tried in several forms. Little effect was noticed when taken by mouth, but when the full intravenous dose of 10 cc. was given, it controlled severe haemoptysis in each case tried, high cost being its only drawback.

Blood sedimentation tests have been carried out in all cases admitted, and new readings of the old cases made. Although it is difficult to draw true conclusions, some interesting facts were obtained.

In September, 1932, Mr. J. W. Fielding, Senior Technical Assistant at the Sydney School of Public Health and Tropical Medicine, visited Waterfall and carried out comparative tests in staining the sputa of all patients by both the alkaline and acid method. Both methods proved equally reliable, but if anything, the alkaline method may be more useful in old-standing sputa.

During 1932 arrangements were made with Professor C. G. Lambie, of the Faculty of Medicine, University of Sydney, whereby the sixth year medical students could obtain practical clinical experience in all kinds of tuberculous cases. As part of the arrangement, all students in this sixth year paid whole-day visits to Waterfall when a special course of instruction in tuberculosis was given.

MAINTENANCE OF BUILDINGS, IMPROVEMENTS, &c.

A number of minor improvements were carried out. In 1931, the cooling plant was enlarged and an automatic electric freezer installed.

The water supply system was put into order, ensuring an adequate supply for all needs. A large kerosene store was erected, and a petrol pump installed, allowing for better control and economy in both these items. A more efficient fire service was provided for the staff cottages; and special wash sinks were placed in position on the ward verandahs.

In 1932 no new works were undertaken by the Public Works department, but repairs have been carried out on the new steam boiler. Considerable trouble was caused by the heating service in the Nurses' Home breaking down, but at present this is again satisfactory.

Special work by our own staff consisted in the enclosing of the western end of a verandah, in the Women's Division, the glass windows being provided by outside donations. Considerable improvements were made to the hospital grounds, especially in the Women's Division.

The septic tank was completely cleaned out and practically reconditioned.

During the latter half of the year, we have obtained half our milk supply from the Berry Agricultural Farm. After a few initial difficulties, this supply has proved a great improvement on the other milk supplied by the Sydney distributing agents.

Amusements for the patients were well maintained, and a pianola was given to the women patients through the Hon. the Minister for Health (Hon. R. W. D. Weaver) as a Christmas gift. Concert parties visited the sanatorium every month, and cinema performances are given once or twice a week. We have to thank the film proprietor, R. B. Orchard, Esq., O.B.E., Mr. R. Lawson, the Smith Family, and all the visiting artists who have made these entertainments possible and successful.

In addition, there is an extensive wireless installation, every bed being served by head-phones. There is also a large library for both men and women patients, two billiard tables for men, and one billiard table for women, the women also have a ping-pong table. For outdoor amusements, the men have their bowling green, while the women have their croquet lawn.

The children (varying in numbers between 20 and 30) are, when sufficiently recovered, given school lessons by a teacher supplied by the Education Department. The boys have their own open-air ward, quite apart from the wards for adults, but the girls are still on the verandahs of the women's wards. Children do remarkably well at Waterfall, and it is always possible for more children's beds to be made available. I therefore urge that affected children should be given a chance by being sent here.

The Dentist has paid regular visits throughout the year, and his time has been fully occupied attending to needy patients.

As in previous years, special inquiry was made into the age period at which individual patients developed the first symptom of tuberculosis. (See Table above.) Thorough inquiry was made in each individual case for the time at which occurred the very first symptom that could have been caused by tuberculosis in that particular case. Although one cannot say definitely that such symptoms were caused by tuberculosis, we have, for the sake of this investigation, accepted them as tuberculous in origin, and the age at which such symptom occurred as the age period of commencing disease.

H. W. PALMER,
Medical Superintendent.

8.—LIDCOMBE STATE HOSPITAL AND HOME FOR MEN.

Report of the Medical Superintendent for the years ended
31st December, 1931 and 1932.

Honorary Visiting Staff.

Honorary Staff Surgeon, H. C. Rutherford Darling, M.D., M.S., F.R.C.S.; Honorary Assistant Surgeon, J. A. Lawson, M.B., Ch.M.; Honorary Ear, Throat, and Nose Surgeon, N. M. Macindoe, M.B., Ch.M.; Honorary Ophthalmic Surgeons, Falkner J. Blaxland, M.D.; A. L. North, M.B., Ch.M.; Honorary Neurologist, vacant; Honorary Dermatologist, vacant; Honorary Radiographer, Colin R. Cole, M.B., Ch.M.

Administrative Staff.—Medical Superintendent, H. V. D. Baret, B.A., M.B.; Acting Senior Medical Officer, J. McManamey, M.B., B.S.; Junior Medical Officer, R. Segal, M.B., B.S.; Manager, R. J. Brown; Matron, Miss E. M. E. Mance.

Constitution of Hospital Staff on 31st December, 1932.—Medical Superintendent, Resident Medical Officers, 2; Dispenser, Manager, Clerks, 2; Matron, Sub-matron, Nurses, 43; Attendants, 68; other male staff, 18.

A dentist and X-ray technician visit the Institution regularly each week.

Number of Wards and Beds.

Hospital Division.		General Division.		Total Accommodation.	Number of Bed.
Ward No.	Number of Beds.	Dormitories.	Number of Beds.		
4	27	9	92		
5	43	12	60		
6	59	21	75		
7	58	22	75		
10	71	23	75		
11	65	24	75		
14	50	25	75	Hospital Division	910
15	41	26	75	General Division	761
16	61	...	...
17	61	29	25		
18	61	30	23		
19	61	28	22		
20	50	Emergencies (Casuals),			
27	110	Outside Locations	45		
28	92	15A	44		
15	910	...	761	Total	1,671

The foregoing figures represent the total capacity of the various hospital wards and dormitories and show accommodation for 910 patients and 761 inmates, a total of 1,671.

In addition to patients coming daily through the Hospital Admission Department and admissions from local and other sources, the practice of unloading upon this Institution chronic cases from the various metropolitan and country hospitals still continues with resultant constant strain upon our hospital accommodation. To maintain the high standard of treatment set up has meant throughout the whole year a constant high pressure demand upon the services of our limited medical staff. The appointment of an additional resident medical officer is urgently required. This appointment is certainly a pre-requisite to the opening of the new infectious division.

Admissions and Discharges.—1931: Remaining in on 31st December, 1930, 1,556; admitted, 2,705; discharged, 2,320; died, 436. Remaining in on 31st December, 1931, 1,505; hospital division, 879; dormitories, 626. 1932: Remaining in on 31st December, 1931, 1,505; admitted, 2,703; discharged, 2,204; died, 492. Remaining in on 31st December, 1932, 1,512; hospital division, 867; dormitories, 645.

Average daily number of persons resident 1927, 1,490; 1928, 1,514; 1929, 1,639; 1930, 1,591; 1931, 1,563; 1932, 1,556.

1931: Total cost of maintenance and treatment of patients and inmates, £79,078 15s. 3d. Average annual cost per head of patients and inmates, £50 11s. 11d. Total contributions received towards cost of maintenance, £703 0s. 5d. Total proceeds of sales, as livestock, etc., £1,13 96s. 9d. 1932: Total cost of maintenance and treatment of patients and inmates, £64,125 17s. 11d. Average annual cost per head of patients and inmates, £41 4s. 3d. Total contributions received towards cost of maintenance, £970 2s. 9d. Total proceeds of sales, as livestock, etc., £1,344 17s. 3d.

Work of Honorary Medical Officers.—The various honorary surgeons continue to do excellent work; apart from their valued advice in consultations and diagnoses, the following operations were performed by them during 1931:—Dr. Darling, 101; Dr. Lawson, 21; Dr. Blaxland, 28; Dr. North, 59; Dr. Macindoe (commenced 27th August, 1931), 18; Dr. Cole, Hon. Radiologist, paid 31 visits commencing 12th May, 1931. Operations performed, 1932.—Dr. Darling, 85; Dr. Lawson, 20; Dr. Blaxland, 41; Dr. North, 47; Dr. Macindoe, 39; Dr. Cole, Hon. Radiologist, paid 46 visits.

The position of honorary Dermatologist has remained vacant since the resignation of Dr. Chapman. The filling of this position and the appointment of an honorary physician are very desirable, and would tend to further raise the standard of diagnosis and treatment of the patients.

Work of the Staff.—The resident medical staff carried out 109 major and minor operations in 1931 and 85 major operations in 1932. The work of the whole staff continues of the same high standard.

X-ray Department.—This department, opened in September, 1930, has given excellent service, 500 X-rays were taken in 1931, and 602 in 1932.

Massage Department.—The Massage Department continues to do good work; 107 individual cases in 1931 and 210 in 1932 received treatment, of whom 39 in 1931 and 71 in 1932 can be classed as recovered, 31 in 1931 and 99 in 1932 relieved, 7 in 1931 and 10 in 1932 unrelieved, leaving 30 still under treatment at the end of each year.

New Infectious Division.—The first unit of the new infectious division has been completed and furnished, and now awaits the appointment of the necessary additional staff to permit of its being opened for use.

Diets.—In addition to the diets, provided in accordance with the approved scale, the medical officers' lists have been sufficiently liberal to satisfy the full requirements of all who were unable to partake of the scale allowance.

Recreation for the Inmates.—The cinema installed some years ago continued to give a most popular service, and the weekly programme of silent pictures, provided free of cost by the generosity of the Universal Film Manufacturing Co. (Australasia) Ltd. is much appreciated.

In addition to the picture shows, numerous first class entertainments have been provided by our many kind friends who have attended, often at much inconvenience and discomfort to themselves, to give pleasure to our patients. We are also indebted to the "Smith Family," who, despite the unusual demands upon their funds by outside claims, made their usual distribution of Christmas Cheer to the whole of our patients and inmates.

Radio Installation.—The wireless installations provided by the generosity of the late Mr. James Hennessy, a former patient of this Hospital, continued to give much pleasure to our patients and inmates.

Billiard Room.—The billiard room in the main division of the Institution maintained its popularity amongst the inmates able to utilize it.

Bowling Green.—The bowling green was completed and officially opened in April, 1931; it has since been extensively used and is much appreciated by both patients and inmates.

Out-door Section.—In the out-door sections of the Institution the two years' work has shown steady progress. In the ornamental gardens the bright appearance of the various plots has been well maintained; the grounds surrounding Wards 27 and 28 have been re-arranged and brightened with flower beds and improved lawns and paths. In the winter some 300 trees and shrubs were planted in new avenues and to fill up vacant spots in old plantations.

Dairy Work.—The standard of our milking herd continues to be well maintained by carefully selected additions of young stock from tested dams, and regular judicious culling out of inferior production and unprofitable cows. At the Sydney Royal Show our Friesians were again highly successful, securing numerous awards, including a "Reserve Championship" for bull, and prize money amounting to £46 in 1931 and £38 2s. in 1932. The health conditions of the herd continues excellent; for the ninth successive year in the regular tuberculin tests the herd was declared 100 per cent. free from that disease.

79,723 gallons of milk in 1931 and 81,207 gallons in 1932 were produced, fully providing for the requirements of the hospital and general inmate population.

Green Fodder.—53 tons of green forage in 1931 and 120 tons in 1932 were produced from the cultivation areas, thus assisting to reduce the cost of milk production.

Vegetable Garden.—During 1931 134,477 lb. and in 1932 182,016 lb. of vegetables were produced in the vegetable gardens.

Piggery.—The health of our pigs continued uniformly good during the two years. Sales of pigs amounted to £1,035 13s. 7d. in 1931 and £1,218 19s. 4d. in 1932, and pork valued at £98 10s. 6d. in 1931 and £145 in 1932, was consumed by the inmates.

H. BARET,
Medical Superintendent.

9.—LIVERPOOL STATE HOSPITAL AND HOME FOR MEN.

Report of the Medical Superintendent for the years ended 31st December, 1931 and 1932.

Honorary Visiting Staff.—Honorary Ear, Nose and Throat Surgeon, Arthur Lynton Clowes, M.B., Ch.M. (Syd.), F.R.C.S. (Edin.); Honorary Dermatologist, W. A. McDonald, B.A., M.B., Ch.M.; Honorary Medical Officer, J. Pirie, L.R.C.P., L.R.C.S. (Edin.), L.F.P.S. (Glas.)

Staff.—Medical Superintendent, Donald Wallace, M.A., M.B., Ch.M.; Junior Medical Officer, C. R. O'Brien, M.B., Ch.M.; Manager, J. J. Ranshaw; Matron, L. W. McIntosh.

Constitution of Hospital Staff on 31st December, 1932.—Medical Superintendent, Junior Medical Officer, Manager, Matron, Sub-matron, Nurses, 10, Clerk, Storekeeper, Dispenser, Male Attendants, 21, Other Male Staff, 9, Other Female Staff, 1. A dentist visits the Institution fortnightly.

Number of Wards and Beds, 31st December, 1932.

Hospital Division.		General Division.		Total Accommodation.
Wards.	Beds.	Dormitories.	Beds.	
13	293 21 Emergency beds.	13	575*	889 beds.

* Includes verandah beds formerly classified as emergency beds.

Admissions and Discharges for Years ended 31st December, 1931 and 1932.

Number of persons in residence on 1st January, 1931, 729; admitted, 1,878; total, 2,607; discharged, 1,640; died, 160; in residence on 31st December, 1931, 807; average daily number, 825.

Total cost of maintenance and treatment (Patients and Inmates), £37,095 13s. 11d. Average cost per head, £44 19s. 3d.

1932—Number of persons in residence on 1st January, 807; admitted, 1,994; total, 2,801; discharged, 1,792; died, 182; in residence on 31st December, 1932, 827; average daily number, 853.

Total cost of maintenance and treatment (patients and inmates), £36,958 10s. 5d.; average cost per head, £43 6s. 7d.

Summary of Patients treated in the various Wards during 1931 and 1932.

Hospital Section.	In Hospital, 1st January, 1931.	Admitted during year.	Discharged during year.	Died during year.	In Hospital, 31st December, 1931.
1931.					
Cancer Wards	43	132	68	54	53
General „	224	659	566	93	224
Totals	267	791	634	147	277
District Ward	19	251	237	12	21
Grand Total	286	1,042	871	159	298
Hospital Section.	In Hospital, 1st January, 1932.	Admitted during year.	Discharged during year.	Died during year.	In Hospital, 31st December, 1932.
1932.					
Cancer Wards	53	146	82	50	58
General „	224	659	546	116	221
Totals	277	805	628	175	279
District Ward	21	274	263	7	25
Grand Totals	298	1,079	891	182	304

Out-Patients.—The number of district patients seeking relief in the Out-door Department in 1931 showed an increase of 142 on the figures for 1930. There were recorded 10,209 attendances, including 2,476 dressings and operations in the District Ward in 1931, and 11,182 attendances, including 2,309 dressings and operations in 1932. The services of the Honorary Medical Officer (Dr. Pirie) have been available from time to time as required.

Hospital Wards.—The general hospital accommodation was fully utilised throughout both years.

Works.—The following works were completed during 1931 :—Erection of Nurses' Quarters, demolition of the old Moore College, and erection of a residence for the Manager on the site formerly occupied by that building; erection of new Recreation Hall. Towards the close of 1932, the work of reconditioning roads and constructing storm-water drains was commenced.

Recreation of Inmates.—In addition to the regular entertainments provided by "Wireless," concerts have been arranged at frequent intervals by persons interested in the Institution. In this connection special mention should be made of the splendid entertainments provided for the patients and inmates by the "Smith Family" at Christmas time.

Farm and Dairy.—The need for green and uncooked vegetables and fresh milk as a corrective of the regulation institutional diet has been kept in view in directing the operations of the vegetable garden and dairy.

D. WALLACE,
Medical Superintendent.

MANAGER'S REVIEW OF OUT-DOOR WORK FOR THE YEARS ENDED 31ST DECEMBER, 1931 AND 1932.

The supply of inmate labour was fairly well maintained throughout both years, and satisfactory progress was made with the out-door work.

Dairy Farm.—The quantity of milk produced was 27,672 gallons in 1931 and 30,068 gallons in 1932. The appointment of a herdsman to this section is still an urgent necessity.

Piggery.—Revenue derived from the sale of pigs amounted to £316 18s. 6d. in 1931 and £211 9s. 7d. in 1932.

Farm, Vegetable Garden, and Orchard.—The yield from this section in 1931 and 1932 is shown below :—

Year.	Vegetables.	Fruit.	Green Feed.
	lb.	lb.	tons. cwt.
1931	51,533	10,829	40 12
1932	73,488	12,991	39 0

Bakery.—The usual high standard of quality was maintained. The total bread consumption was 250,349 lb., buns, 225 doz., cake, 19,007 lb., in 1931; and bread, 258,660 lb., buns, 251 doz., and cake, 23,896 lb., in 1932.

Condition of Buildings.—All institution buildings were maintained in a reasonable state of efficiency.

Gardens and Grounds.—The condition of the gardens and grounds has been well maintained throughout both years.

J. J. RANSHAW,
Manager.

10.—NEWINGTON STATE HOSPITAL AND HOME FOR WOMEN.

Annual Report for the years ended 31st December, 1931 and 1932.

Honorary Medical Staff.—Surgeon, Walter A. Ramsay Sharpe, M.B., M.S., F.R.C.S. (Edin.); Ophthalmic Surgeon, L. Stanton Cook, M.B., Ch.M. (resigned October, 1932); Neurologist, Andrew Davidson, M.D.

Staff.—Medical Superintendent, Howard K. Denham, M.B., Ch.M., L.L.B.; Visiting Medical Officer, Francis H. Furnivall, M.R.C.S. (Eng.), L.S.A. (Lond.); Resident Medical Officer, Lottie Sharfstein, M.B., Ch.M.; Manager, S. T. Creagh; Matron, Emily Wood; Dispenser, 1; Sub-matron, 1; Clerk, 1; Storekeeper, 1; Nurses, 42; other female staff, 6; other male staff, 12.

A dentist visits the Institution fortnightly.

Admissions and Discharges.

	1931.	1932.
In Institution on 1st January	653	672
Admitted during year	1,194	1,111
Discharged during year	1,005	919
Died during year	170	209
Remaining in on 31st December	672	655
Average daily number resident	687	664

1931—Total expenditure, £32,928 15s. 10d.; average annual cost per bed, £47 18s. 8d.

1932— " " £27,344 8s. 6d. " " £41 3s. 8d.

Hospital Division.

In this section of the Institution there are 11 wards, with 388 beds. The statistics for the years 1931 and 1932 are as follows:—

	1931.	1932.
In Hospital, 1st January	316	342
Admitted during year	827	825
Discharged during year	631	597
Died during year	170	209
Remaining in Hospital on 31st December	342	361

Classification of Cases Discharged.

	1931.	1932.
General diseases	204	184
Alimentary	22	23
Circulatory	159	156
Genito-urinary	30	47
Osseous and arthritic	11	11
Nervous	81	73
Respiratory	59	73
Skin and glands... ..	58	61
Wounds and fractures	29	28
Senility	107	124
Miscellaneous	41	26
	<u>801</u>	<u>806</u>

Result of Treatment.

Cured	193	163
Relieved	341	337
Unrelieved	97	97
Died	170	209
	<u>801</u>	<u>806</u>

REVIEW OF WORK, 1931 AND 1932.

For the first time in the history of the Institution, its control has been placed in the charge of a Medical Superintendent, and Dr. H. K. Denham was appointed to the position on 3rd February, 1931.

The vacant position of Manager was filled by the appointment of Mr. S. T. Creagh on 15th July, 1931. Dr. Stanton Cook, Honorary Ophthalmic Surgeon, resigned in October, 1932.

The work of providing a new entrance roadway into the Institution has been commenced. This entailed new fencing and the substitution of a picket fence in front of Hospital Block J. The fencing work has been completed and the grading and formation of the roadway has been undertaken by the Public Works Department, and the work is still in progress.

With the object of centralising the accommodation for male inmates, a new workshop for the blacksmith is in course of erection, and this building when finished will permit of the portion of the quarters for men now occupied by the blacksmith being made available for dormitories.

A vigorous campaign against the mosquito pest has been and still is being conducted, and the measures adopted have met with marked success.

At the latter end of 1931, the Postmaster-General's Department, with the assistance of inmate workers, under-grounded portion of the telephone reticulation. Except for the services made available for trenching, the work was performed without cost to the Department. A complete underground service would be welcome. A new telephone switchboard was installed by the Postmaster-General's Department in 1932.

A tennis court for the nurses was laid down in October, 1931.

Some parts of the roadways within the Institution grounds have been re-formed and repairs to the roadway from Sutherland-street have been effected. For a considerable period this roadway was in a dangerous condition.

The Public Works Department in December, 1931, commenced work regrading the drain on the river flats and making surface drains in that area. The work was completed in the early part of 1932. The drains are operating satisfactorily.

The outstanding requirement of the Institution is an adequate water supply. Following representations in this connection, officers from the Public Works Department have been investigating the matter, and the laundry section has had attention. Some other services, however, are in a condition causing disquietude.

It is with a feeling of hesitancy that one mentions at this time the necessity of having a properly equipped plant for hot water, steaming services, etc., as the expenditure involved in establishing an efficient service will be large. The need, however, is real and is known to the Public Works Department Officers, who have the matter under consideration, but the need still exists, and is acute.

The verandah between the two dormitory blocks in the yard section of the Hospital was glassed in. This provides a sunny spot for the inmates in winter, and is a shelter from hot winds in summer.

New quarters for nurses have been required for many years, and latest information is that plans have been completed and tenders are likely to be invited at an early date.

It will be observed from the statistical information in the report that over fifty per cent. of the inmates are in the Hospital Division of the Institution.

Regular entertainments have been provided by various organisations and individual parties, and these functions have been enjoyed, as have also the special entertainments during the festive season of Christmas and New Year. The thanks of the administration is tendered to all concerned for the pleasant functions and gifts provided for the inmates.

H. K. DENHAM,
Medical Superintendent.

FARMING AND DAIRYING OPERATIONS.

The gardens have been maintained, and during the latter part of 1931 field crops were sown and have since yielded good returns. This work was continued the following year.

Production—		1931.	1932.
Vegetables produced	... ..	65,350 lbs.	66,000 lbs.
Fruit produced	... ..	2,983 lbs.	1,043 lbs.
Milk...	... ..	38,000 gals.	35,000 gals.
Fodder	... ..	42 tons	108 tons.
Revenue Collections—			
Sales—		£ s. d.	£ s. d.
Farm produce, etc.	... ..	328 12 3	566 15 8

S. T. CREAGH,
Manager.

11.—STATE HOME FOR AGED AND INFIRM MEN, GEORGE-STREET, PARRAMATTA.

Report for the years ended 31st December, 1931 and 1932.

Staff.

Visiting Medical Officer: Dr. W. S. Brown.

Officer-in-Charge: G. M. Strange. Attendants, 5.

Number of beds in hospital, 39 in 1931 and 16 in 1932; in dormitories, 302 in 1931 and 325 in 1932; total, 1931 and 1932, 341.

Admissions and Discharges, 1931.—Remaining in on 31st December, 1930, 293; admitted during year, 1,956; discharged, 1,987; died, 6; remaining in on 31st December, 1931, 256. Average daily population, 307. Total expenditure, £7,980 19s. 10d.; average cost per bed, £25 19s. 11d.

Number in Hospital on 31st December, 1930, 22; admitted during year, 114; discharged, 118; died, 6; remaining in Hospital on 31st December, 1931, 12. Number of visits by visiting Medical Officer, 260. Transferred to other Institutions, 192.

1932: Remaining in on 31st December, 1931, 256 admitted during year, 1984; discharged, 1991; deaths, 5; remaining in on 31st December, 1932, 244. Average daily population, 276. Total expenditure, £7,275 14s. 8d.; average cost per bed, £26 7s. 3d.

Number in Hospital on 31st December, 1931, 12; admitted during year, 88; discharged, 80; died, 5; remaining in on 31st December, 1932, 15. Number of visits by Visiting Medical Officer, 234; inmates seen by V.M.O., 2,550; transferred to other Institutions, 157.

General.—All institution buildings were maintained in a reasonable state of efficiency by inmate labour. A proportion of inmates clothing, bedding, etc., is made by inmate labour.

Amusements.—Inmates have been entertained by various concert parties during the two years. Special thanks are due to the "Smith Family" for their annual distributions of Xmas cheer. The wireless installation has been a source of great pleasure to the inmates. The bowling green is now in good order, and is largely availed of by the inmates.

G. M. STRANGE,
Officer-in-Charge.

12.—STATE HOME FOR THE BLIND AND MEN OF DEFECTIVE SIGHT AND SENILITY, MACQUARIE-STREET, PARRAMATTA.

Report for the years ended 31st December, 1931 and 1932.

Staff.

Visiting Medical Officer, Dr. W. S. Brown.

Officer-in-Charge, Mr. H. A. Pyne.

Attendants, 4. Bakers, 2.

Total Number of Beds.—228.

Admissions and Discharges.—1931: Remaining in on the 31st December, 1930, 207; admitted during 1931, 594; remaining in on 31st December, 1931, 207; daily average number resident, 213. Total cost of maintenance, £6,353 6s. 7d.; average cost per bed, £29 19s. 7d. 1932: Remaining in on 31st December, 1931, 202; admitted during year, 623; remaining in on 31st December, 1932, 196; daily average number resident, 213. Total cost of maintenance, £5,809 18s. 11d.; average cost per bed, £27 5s. 6.

Dental Work.—A qualified dentist visits the institution monthly.

Bakery.—1931: 1,005,640 lb. of bread, and 51,068 lb. of currant cake were baked in the Home, the whole of which was distributed to the State Hospitals at Waterfall, Lidcombe and Newington, and the George-street and Macquarie-street Homes. 794 dozen buns were also distributed at Easter. 1932: 944,124 lb. of bread, and 48,114 lb. of currant cake were baked in the Home, the whole of which was distributed to the State Hospitals at Waterfall, Lidcombe, and Newington, and the George-street and Macquarie-street Men's Homes. 784 dozen buns were also distributed at Easter.

General.—Inmates' clothing, bedding, etc., with the exception of boots and hats, were made in the Home, and all carpentry work, repairs to buildings, painting, bricklaying, etc., are carried out by inmate labour under the supervision of the Officer-in-charge; in 1932 the Reading shelter was rebuilt by inmate labour.

Recreations and Amusements.—Inmates have been entertained by various concert parties during the two years, and at Christmas time the gifts distributed by the Salvation Army and the "Smith Family" were greatly appreciated.

STATISTICAL SUMMARY.

TABLE I.—Summarised Statement of Expenditure :—Lady Edeline Hospital for Babies and Strickland and Denistone Convalescent Homes, for the year ended 31st December, 1931.

Head of Expenditure.	Lady Edeline Hospital for Babies.	Strickland Convalescent Hospital.	Denistone Convalescent Hospital.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Salaries	1,210 8 8	955 1 9	927 16 11	3,093 7 4
Gratuities	191 0 0	194 10 0	200 9 0	585 19 0
Provisions.....	552 3 11	757 0 10	602 4 5	1,961 9 2
Drugs Dressings, etc.	50 11 2	11 10 2	3 12 9	65 14 1
Fuel and Lighting	167 1 11	116 0 11	85 18 4	369 1 2
Forage		175 10 0	97 2 10	272 12 10
Materials for Repairs and Renewals	41 14 5	28 11 11	16 12 8	86 19 0
Transport Expenditure	21 5 3	15 6 6	50 17 2	87 8 11
Workers' Compensation Insurance ...	14 6 9	9 3 2	8 8 8	31 18 7
Clothing and Drapery	23 7 6	8 13 9	10 15 6	42 16 9
Hardware—Ironmongery, etc.	34 6 1	30 0 11	44 8 9	108 15 9
Telephone Charges	1 0 6	1 10 9	2 14 10	5 6 1
Miscellaneous	12 18 1	.....	18 19 10	31 17 11
Total	2,320 4 3	2,363 0 8	2,120 1 8	6,743 6 7
Average Daily Number of Patients ...	22	36	27	85
Average Cost for Occupied Beds	£ s. d. 105 9 3	£ s. d. 63 19 5	£ s. d. 78 10 5	£ s. d. 79 6 8

TABLE II.—SUMMARY STATEMENT of Expenditure, State Hospital and Homes of Lidcombe, Liverpool, and Newington, Parramatta Homes (George and Macquarie street), and Waterfall Sanatorium for the year ended 31st December, 1931.

Head of Expenditure.	Lidcombe.	Liverpool.	Newington.	Waterfall Sanatorium.	Parramatta.		Total.
					Macquarie-st.	George-st.	
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Salaries and Payments in the Nature of Salaries	33,151 13 9	14,516 7 3	11,665 1 5	14,156 10 6	2,582 8 3	2,137 13 4	78,209 14 6
Gratuities to Inmates	4,626 14 1	2,946 18 2	2,399 13 0	2,014 11 0	508 14 0	404 7 4	12,900 17 7
Workers' Compensation Insurance Premiums	253 18 8	91 5 3	94 19 11	112 6 0	15 13 10	11 1 5	579 5 1
Provisions	18,460 15 8	10,457 1 6	7,732 1 3	9,729 10 8	6,599 7 2	3,055 3 8	56,033 19 11
Drugs, Dressings, Surgical Appliances, etc.	1,917 10 8	1,066 9 8	1,152 18 2	446 0 6	7 16 4	4 6 3	4,595 1 7
Fuel and Lighting	2,731 19 11	1,424 13 6	1,648 5 7	1,735 10 0	365 9 2	243 4 8	8,149 2 10
Forage	3,015 18 2	1,140 14 10	2,063 16 7	163 7 8	.....	22 12 10	6,406 10 1
Materials for Minor Repairs Additions and Renewals to Buildings and Plant	1,711 2 7	727 17 0	1,028 17 2	487 8 11	59 9 0	97 16 10	4,112 11 6
Fire Insurance Premiums .....	.....	.....	.....	44 12 0	.....	.....	44 12 0
Transport Expenditure including Freight and Cartage	1,539 0 4	838 6 0	617 14 9	1,272 19 11	298 9 10	244 18 1	4,811 8 11
Clothing and Drapery	3,871 4 11	2,543 11 4	1,953 14 3	440 0 8	230 4 8	908 12 2	9,647 8 6
Hardware, Ironmongery, and General Stores	974 12 8	582 5 8	718 0 4	337 10 1	181 19 0	122 2 2	2,916 9 11
Furniture	1,418 5 10	245 9 6	45 8 9	.....	.....	.....	1,709 4 1
Office Expenses, Telephones, Stationery and Printing	433 17 5	175 4 1	224 3 8	213 1 1	31 11 3	55 3 9	1,133 1 3
Livestock and Farm and Garden Requisites	179 4 3	33 15 8	52 18 0	52 16 0	1 6 3	.....	320 0 2
Miscellaneous	648 0 0	234 12 8	614 16 9	197 12 9	157 13 1	228 13 6	2,081 8 9
Adm Exchange	74,933 18 11	37,024 12 1	32,012 9 7	31,403 17 9	11,040 1 10	7,235 16 0	193,650 16 2
	3,289 8 4	143 3 7	1,155 3 3	615 7 3	360 6 5	944 3 6	6,507 12 4
Deduct Exchange	78,223 7 3	37,167 15 8	33,167 12 10	32,019 5 0	11,400 8 3	8,179 19 6	200,158 8 6
	136 13 2	.....	1,599 10 1	.....	4,754 2 11	235 3 11	6,725 10 1
Total	78,086 14 1	37,167 15 8	31,568 2 9	32,019 5 0	6,646 5 4	7,944 15 7	193,432 18 5
Stock on hand 31st December, 1930	10,082 1 8	3,582 11 8	4,795 5 9	1,949 19 1	881 16 8	644 9 0	21,736 3 10
Grand Total	88,168 15 9	40,550 7 4	36,363 8 6	33,969 4 1	7,528 2 0	8,589 4 7	215,169 2 3
<i>Deduct—</i>							
Stock on hand 31st December, 1931	7,672 0 7	2,992 8 2	3,127 0 2	1,939 2 9	1,042 15 1	542 15 5	17,316 2 2
Proceeds of Sales, etc.	1,417 19 11	462 5 3	307 12 6	462 16 7	132 0 4	65 9 4	2,848 3 11
Total Deductions.....	9,090 0 6	3,454 13 5	3,434 12 8	2,401 19 4	1,174 15 5	608 4 9	20,164 6 1
Total Cost.....	79,078 15 3	37,095 13 11	32,928 15 10	31,567 4 9	6,353 6 7	7,980 19 10	195,004 16 2
Average daily population	1,563	825	687	526*	213	307	4,121
Average annual cost per inmate....	50 11 11	44 19 3	47 18 8	60 0 3	29 16 7	25 19 11	47 6 5
Annual contributions towards maintenance	14,768 12 6	5,758 7 5	7,763 17 9	3,733 14 4	1,781 16 4	790 9 6	34,596 17 10

* Patients 407; inmate workers 119.

STATISTICAL SUMMARY.

TABLE I.—SUMMARISED STATEMENT OF EXPENDITURE—Lady Edeline Hospital for Babies and Strickland and Denistone Convalescent Homes for the year ended 31st December, 1932.

Head of Expenditure.	Lady Edeline Hospital for Babies.	Strickland Convalescent Hospital.	Denistone Convalescent Hospital.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Salaries	1,078 16 8	822 16 5	798 11 7	2,700 4 8
Gratuities	184 0 0	177 0 0	198 7 0	559 7 0
Provisions	496 13 6	761 10 10	704 9 11	1,962 14 3
Drugs, dressings, etc.	47 2 2	10 0 7	2 0 9	59 3 6
Fuel and lighting	197 10 11	118 14 2	86 18 5	403 3 6
Forage	2 19 7	208 3 7	123 13 5	334 16 7
Materials for repairs and renewals	19 9 5	42 5 5	33 6 4	95 1 2
Transport expenditure	1 7 11	12 9 0	62 12 3	76 9 2
Workers' Compensation Insurance	13 8 0	8 11 2	7 17 7	29 16 9
Clothing and drapery	29 19 5	43 3 8	16 18 9	90 1 10
Hardware—Ironmongery, etc.	24 12 1	14 19 10	36 18 4	76 10 3
Telephone charges	34 12 6	25 0 6	15 17 11	75 10 11
Miscellaneous	22 16 4	14 8 5	13 5 9	50 10 6
Total	£ 2,153 8 6	2,259 3 7	2,100 18 0	6,513 10 1
Average daily number of patients	22	36	26	84
Average cost for occupied beds	£ s. d. 97 17 8	£ s. d. 62 15 1	£ s. d. 80 16 1	£ s. d. 77 10 10

TABLE II.—SUMMARY STATEMENT OF EXPENDITURE—State Hospital and Homes of Lidcombe, Liverpool, and Newington, Parramatta Homes, George and Macquarie streets, and Waterfall Sanatorium for the year ended 31st December, 1932.

Head of Expenditure.	Lidcombe.	Liverpool.	Newington.	Waterfall Sanatorium.	Parramatta.		Total.
					Macquarie-st.	George-st.	
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Salaries and payments in the nature of salaries	30,277 13 9	12,683 10 1	11,267 8 3	12,360 16 9	2,064 8 4	1,976 7 10	70,630 5 0
Gratuities to inmates	4,200 8 4	2,708 16 4	2,072 5 10	1,916 3 0	469 15 10	404 18 5	11,772 7 9
Workers' Compensation Insurance premiums	243 0 7	86 7 6	80 10 2	104 19 10	12 10 2	10 9 7	546 17 10
Provisions	19,388 13 3	11,523 2 7	6,902 8 1	10,447 13 11	6,274 9 9	2,846 10 1	57,382 17 8
Drugs, dressings, surgical appliances, etc.	2,147 0 2	1,263 4 9	862 1 5	379 19 3	5 2 5	10 6 10	4,667 14 10
Fuel and lighting	2,458 18 6	1,583 16 10	1,409 12 9	1,682 16 4	357 19 6	215 6 8	7,708 10 7
Forage	2,904 6 3	1,027 16 10	1,642 10 8	237 3 10	.....	28 9 3	5,840 6 10
Materials for minor repairs, additions and renewals to buildings and plant	1,484 0 2	642 12 5	574 18 10	456 2 6	55 5 2	94 14 0	3,307 13 1
Fire insurance premiums .....	.....	.....	.....	39 18 6	.....	.....	39 18 6
Transport expenditure including freight and cartage	1,744 3 8	1,174 7 11	607 6 4	1,365 18 1	219 17 5	259 2 5	5,370 15 10
Clothing and drapery	5,880 3 0	1,766 10 11	1,655 17 7	484 2 1	336 4 4	733 15 0	10,856 12 11
Hardware, ironmongery, and general stores	876 17 10	1,476 12 3	317 19 10	314 11 8	318 19 10	74 12 1	3,379 13 6
Furniture	83 7 0	727 14 7	.....	75 0 0	.....	.....	886 1 7
Office expenses, telephones, stationery and printing	408 16 4	159 12 7	212 4 10	272 15 9	42 15 2	86 9 4	1,182 14 0
Live stock and farm and garden requisites	158 16 9	71 10 11	77 11 6	42 1 9	10 5 11	0 2 9	360 9 7
Miscellaneous	505 4 9	170 19 6	176 3 2	290 4 9	51 5 9	44 19 10	1,238 17 9
Add Exchange	£ 72,761 10 4	37,066 16 0	27,867 19 3	30,470 8 0	10,218 19 7	6,786 4 1	185,171 17 3
Deduct Exchange	£ 3,350 10 11	179 16 2	1,201 8 2	681 0 3	422 16 7	938 17 1	6,774 9 2
Total	£ 76,112 1 3	37,246 12 2	29,069 7 5	31,151 8 3	10,641 16 2	7,725 1 2	191,946 6 5
Stock on hand 31st December, 1931	7,672 0 7	2,992 8 2	3,127 0 2	1,939 2 9	1,042 15 1	542 15 5	17,316 2 2
Grand Total	£ 83,617 7 11	40,238 13 11	30,547 5 7	33,055 10 6	6,821 6 7	7,996 3 4	202,276 7 10
Deduct—							
Stock on hand 31st December, 1932	7,347 1 10	2,858 18 5	2,636 1 5	1,535 17 6	842 11 2	640 7 7	15,860 17 11
Proceeds of Sales, etc.	1,693 10 2	421 5 1	566 15 8	314 5 2	168 16 6	80 1 1	3,244 13 8
Total Deductions	£ 9,040 12 0	3,280 3 6	3,202 17 1	1,850 2 8	1,011 7 8	720 8 8	19,105 11 7
Total Cost	£ 74,576 15 11	36,958 10 5	27,344 8 6	31,205 7 10	5,809 18 11	7,275 14 8	183,170 16 3
Average daily population	1,556	853	664	505*	213	276	4,067
Average annual cost per inmate	£ s. d. 47 18 7	£ s. d. 43 6 7	£ s. d. 41 3 8	£ s. d. 61 15 10	£ s. d. 27 5 6	£ s. d. 26 7 3	£ s. d. 45 0 8
Annual contributions towards maintenance	13,159 0 9	5,621 4 6	7,271 11 0	3,312 15 3	1,574 17 2	597 15 2	31,537 3 10

* Patients 394. Inmates 111.

SECTION IV.

Report of the Principal Microbiologist for the years ended
31st December, 1931 and 1932.

<i>Contents.</i>	<i>PAGE.</i>
PART I.—Routine work, comprising Microbiological, Pathological, Serological, and Medico-Legal Examinations, and Examinations of Rats for Plague	128
PART II.—Investigational Work :—	
A case of Malaria acquired in Sydney (E. L. Morgan)	131

Staff.

Principal Microbiologist.—Ernest Leslie Morgan, M.B., Ch.M.

Assistant Microbiologists.—Elsie J. Dalyell, M.B.; Marie M. Hamilton, M.B., Ch.M.; Stanley M. King, M.R.C.S., L.R.C.P.; Isobel M. Brown, M.B., B.S.; Muriel C. Letchford, B.Sc.

Senior Laboratory Assistant.—John O. Sergeant. Laboratory Assistants, 2; Junior Assistants, 8; Attendants, 4.

Clerk and Librarian.—Florence Stuart Wearne. Shorthand-writers and Typists, 3; Messenger, 1.

Sir,

I have the honour to submit the following summarised report dealing with the work performed in the Microbiological Laboratory during 1931 and 1932.

The amount of revenue collected from examinations, sale of sera, etc., was £157 11s. in 1931 and £105 7s. 6d. in 1932.

The volume of work in 1931 and 1932, as represented by the number of specimens examined, is set out below. It remained practically constant in 1930 and 1931, but in 1932 there was an increase of over 2,500 in the number of general specimens examined, or approximately 5 per cent.

	1930.	1931.	1932.
General	57,905	57,443	59,987
Rats for plague	4,097	4,531	3,812
Total	62,002	61,974	63,799

It is interesting to note that with the depressed economic conditions fewer specimens were received from private medical practitioners in 1931 than in 1930, the numbers for the three years being, 1930, 22,133; 1931, 19,525; 1932, 20,294. There was, however, a considerable increase in the specimens received from public hospitals, the figures being 14,788 in 1930; 16,313 in 1931; and 20,296 in 1932. The number of specimens submitted by the departmental institutions also showed an increase from 19,965 in 1930 to 20,199 in 1931; but a decrease to 18,288 in 1932.

Plague.—The State continued free from this disease. Trapping of rats is continuous both at Sydney and Newcastle along the waterfronts used by shipping.

Tuberculosis.—The number of examinations of sputa, etc., made were—4,266 in 1930; 4,416 in 1931; and 4,104 in 1932; the percentage of positives each year was 16.31 per cent. (696) in 1930; 17.52 per cent. (774) in 1931; and 16.5 per cent. (678) in 1932.

Diphtheria.—5,749 swabbings were examined in 1932; 5,951 in 1931; and 5,450 in 1930. The number positive was 1,219 (22.36 per cent.) in 1930; 1,270 (21.3 per cent.) in 1931; and 1,281 (22.2 per cent.) in 1932.

There were 57 tests for toxicity in 1931, and 98 in 1932.

Typhoid.—The number of blood specimens submitted for Widal reactions were—486 in 1930; 388 in 1931; and 405 in 1932. There was a very low incidence of typhoid fever in the State during 1931 and 1932.

Examinations of specimens of urine and faeces were—497 in 1930; 549 in 1931; and 506 in 1932.

Hydatid.—79 examinations were made in 1930; 72 in 1931; and 92 in 1932. The number positive in each year is given below:—

	1930.	1931.	1932.
Sputa, smears, etc.	3	1	2
Complement deviation test	8	5	15
	<hr/>	<hr/>	<hr/>
	11	6	17
	<hr/>	<hr/>	<hr/>

Malaria.—Examination was made of 14 blood slides in 1930 (positive, 6); 18 (positive, 1) in 1931; and 12 (positive, 1) in 1932. One of the rare cases of indigenous malaria in New South Wales occurred early in 1931, and is reported on page 131.

Histological Examinations.—There was again an increase in the number of histological examinations. Tissues submitted in 1930 numbered 1,739 (malignant, 443, or 25.47 per cent.); in 1931, 1,854 (malignant, 512, or 27.61 per cent.); and in 1932, 2,022 (malignant, 581, or 28.73 per cent.). The steady increase in this section of the laboratory work makes heavy inroads on the time of the senior medical staff.

Blood Counts.—813 bloods were submitted for full and differential counts in 1931, and 944 in 1932, compared with 776 in 1930.

Biochemical Work.—4,800 examinations were made in this section in 1931, compared with 4,479 in 1930, and 4,646 in 1932. Of the examinations approximately half (2,289 in 1931 and 2,097 in 1932) were carried out at the Coast Hospital laboratory. The number of test meals were 349 in 1930; 841 in 1931; and 705 in 1932; there was a decrease in the number of urica tests from 1,043 in 1930 to 830 in 1931, and 744 in 1932.

Veneral Diseases—Syphilis.—The number of serological examinations required for syphilis was 24,566 in 1931, and 25,603 in 1932, compared with 25,155 in 1930.

The lower numbers in 1931 and 1932 were due to a decrease of specimens from two large State institutions where a systematic test of the blood of inmates had been made over a period of about two years. The number of specimens received from this source decreased by over 1,000 in 1931, the figures being 7,490 in 1930, and 6,485 in 1931. In 1932 specimens submitted from these institutions numbered 2,246, a decrease of over 4,000 on the figures for 1931.

Examinations for spirochaetes increased from 56 in 1930 to 107 in 1931, and 130 in 1932. These tests are mainly asked for by the Venereal Diseases Division with the object of avoiding delay in treating recently infected patients.

Gonorrhoea.—5,714 examinations of smears, etc., were made for gonorrhoea in 1931, and 6,505 in 1932; the figures for 1930 were 5,734. There were 3,657 complement deviation tests in 1931 and 4,433 in 1932.

Medico-legal Examinations.—Examinations were made of 105 parcels of exhibits in 1931, compared with 93 in 1930, and 87 in 1932. Of these, 12 examinations in 1931, and 16 in 1932 were made of implements, clothing and human remains, etc., in connection with charges of bodily injury, manslaughter or suspected murder; and 93 in 1931, and 66 in 1932 were of clothing, smears, etc., in connection with sexual offences.

During 1931 a charge of murder was laid against a Chinese at Ocean Island, and the Western Pacific High Commission, having no expert of its own, referred the exhibits to this department for the purpose of determining whether stains which were present on a garment were human blood stains or not.

The trial took place in Suva (Fiji) early in September, 1931, where I attended the Court and gave evidence.

Blood Tests for Paternity, Family and Race Relationship, Etc.—Intricate laboratory tests are being brought more and more into use in Europe and America for determination of disputed legal points, such as the determination of blood groups of dried blood stains, racial characteristics, paternity, etc., and in some countries (Germany, for instance), they are being adopted as a regular procedure. Even if full details of the technique of such tests were available here, a considerable amount of investigational work would be necessary before they could be adopted.

First hand experience in carrying out these delicate procedures can only be gained in laboratories where the technique has been perfected, and an early visit to overseas laboratories for the purpose of gaining familiarity with the more recent developments and advances in microscopic technique and procedures is becoming an urgent necessity. Such an educational visit would also afford an opportunity for a comprehensive study of collections of different types of human and animal hairs, the identification of which is a constantly recurring requirement in connection with medico-legal examinations.

Bacteriological Examination of the Sydney Milk Supply.—As indicated on page 127 of the Annual Report for 1930, the systematic investigations into the Sydney Milk Supply begun by this Department in 1927, were temporarily in abeyance at the end of 1930 pending completion of arrangements with the then recently constituted Metropolitan Milk Board. In May, 1931, the Milk Board sought the co-operation of this Department in maintaining a continuous bacteriological supervision over the Sydney milk supply by which it was estimated that about 700 samples annually would be examined.

The first series of samples under this arrangement were received on 15th June, 1931, and 214 samples of milk were examined between that date and 31st December, 1931. In 1932, 386 samples were examined.

Water and Sewage Examinations.—These comprised, as usual, routine bacteriological examinations of samples from the water supplies of country towns, and from fresh water swimming baths; and samples of effluents from various sources.

A heavy demand was made on the time of the laboratory during the months of November and December, 1931, when the Metropolitan Water, Sewerage and Drainage Board found it necessary temporarily to divert the discharge into Botany Bay of the sewage ordinarily carried by the main Southern and Western Suburbs Ocean Outfall Sewer during repair of a defective portion of the main sewer. Examinations were made of 196 samples of sea water from various parts of Botany Bay during the period of discharge into it of 344,213,000 gallons of chlorinated sewage.

Overcrowded Condition of Laboratory.—I would again stress the urgency of providing additional space for the working staff of the laboratory. At the present time it is constantly necessary to use one room for several different examinations which the ordinary rules of safety against contamination of cultures demand should be carried out in entirely separate rooms. The shortage of space has become so acute that any examination or investigation additional to the routine work of the laboratory could not be undertaken, as not even laboratory bench room can be found for any additional work.

E. L. MORGAN,
Principal Microbiologist.

PART I.—TABLE showing the Routine Examinations made for the Various Branches of the State Department of Public Health, other Government Departments, Subsidised Hospitals, etc.

	Number of Examinations. Comparative Statement.		
	1930.	1931.	1932.
Department of Public Health—			
Head Office Submissions	1,163	2,171	1,976
Coast Hospital	8,412	8,269	7,261
" (Night Clinic for V.D.)	1,563	2,018	2,555
David Berry Hospital, Berry	79	26	89
Lady Edeline Hospital for Babies	2	.....	7
Lidcombe State Hospital and Home	5,283	5,003	3,960
Liverpool State Hospital and Home	781	880	877
Newington State Hospital and Home	2,207	1,482	1,361
Strickland Convalescent Home	2	3	.....
Waterfall Sanatorium	31	24	84
Medical Officer of Health, Metropolitan Districts	26	24	45
" " Newcastle	13	4	21
Commonwealth Government	403	295	52
State Departments—			
Agriculture and Stock .....	.....	2	1
Australian Museum	1	.....	.....
Chief Secretary (Fisheries Department)	1	4	4
Education Department	296	147	340
Government Stores Department .....	.....	22	23
Metropolitan Milk Board .....	.....	219	276
Metropolitan District Water Supply, Sewerage and Drainage Board .....	.....	25	.....
Police Department	63	62	47
Prisons Department (Long Bay Gaol, etc.)	390	401	271
Public Works Department	19	102	58
Railways and Tramways Department	4	5	4
Reception House .....	.....	2	1
State Insurance Office	1	8	2
Sydney Harbour Trust	97	6	22
Taronga Park Trust	1	4	.....
Workers' Compensation Commission	7	1	3
Private Practitioners	22,133	19,525	20,294
Public Hospitals and Institutions other than State Hospitals	14,788	16,613	20,296
Municipal and Shire Councils	139	96	48
	57,905	57,443	59,987
Total Examinations—			
General	57,905	57,443	59,987
Rats for Plague	4,097	4,531	3,812
Grand Total	62,002	61,974	63,799

In the following Statement the Routine Work is divided into sections to disclose the purposes for which the various examinations were made.

	Number of Examinations. (Comparative Statement.)		
	1930.	1931.	1932.
<i>A.—Microbiological Examinations.</i>			
1. Of materials from diseased persons and animals—			
Actinomycosis	19	10	6
Bilharzia	2	3	2
Brucella abortus	9	1	11
Cholera .....	.....	3	.....
Diphtheria (swabbings)	5,450	5,951	5,749
" (toxicity)	79	57	98
Dysentery	6	9	13
Gonorrhœa (smears and urine)	5,734	5,714	6,505
" (complement deviation test)	4,226	3,657	4,433
Hæmolytic streptococci .....	.....	.....	79
Hookworm	21	1	.....
Hydatids (sputa, smears, etc.)	26	21	21
" (complement deviation test).....	53	51	71
Leprosy (human)	9	7	8
Malaria	14	18	12
Mastitis (bovine)	3	2	.....
Meningitis	122	118	177
Syphilis (Wassermann reactions)	13,418	12,700	13,219
" (Kahn's flocculation test)	12,737	11,866	12,389
" (spirochaetes)	56	107	130
Tetanus	7	6	2
Tinea	16	19	15
Tuberculosis	4,266	4,416	4,104
Typhoid (Widal reactions)	486	388	405
" (urine, faeces)	497	549	506
" (miscellaneous, water, milk, etc.)	14	1	3
Unclassified: "No growths" from pus, etc.	1,389	1,389	1,298
Typhus	27	1	9
Vincent's Angina	44	70	58
Psittacosis	4	.....	.....
	48,734	47,135	49,333
2. Examinations for Anthrax—			
Human beings	2	4	5
Bottle Brushes	2	.....	.....
	4	4	5
3. Of Materials, etc.—			
Chemical closet contents	4	2	7
Disinfectants	5	38	45
Homatrophin for spores .....	.....	1	.....
Rag flock	1	.....	7
Sewage, effluents, etc.	9	208	10
Soil .....	.....	1	.....
Water	247	193	138
Water from swimming baths	19	19	66
	285	462	273
4. Examination of Foods for Bacterial Contamination—			
Beer .....	.....	2	.....
Bread .....	.....	.....	9
Meat	1	.....	1
Milk—			
Special bacterial counts, Sydney milk supply, including examination for tubercle bacilli	25	.....	93
Milk samples for bacteriological count submitted by the Metropolitan Milk Board	.....	219	293
Miscellaneous milks for bacterial counts, etc.	20	25	.....
Mussels .....	.....	.....	3
Oysters (parcels)	1	3	9
Sardines.....	.....	.....	1
	47	249	409
5. Examinations for Food Poisoning	2	1	5
	2	1	5
<i>B.—Pathological Examinations.</i>			
1. Of Animals—			
Mammals	14	6	4
Birds .....	.....	2	.....
Fish .....	.....	1	1
	14	9	5
2. Of Body Fluids—			
Blood for full and differential count.....	776	813	944
" " blood typing	24	4	18
" " coagulation time	4	5	7
Chemical Examinations—			
Blood for sugar	2,007	2,186	2,231
" " " tolerance	79	129	95
" " urea	499	744	815
" " " and creatinin	23	10	18
Urine for sugar (quantative)	279	60	38
" " urea	1,043	830	744
Test meal specimens	349	841	705
Calculus	10	6	6
Casoni Tests .....	.....	5	2
Miscellaneous	128	135	144
Fæces	61	48	72
Urine (general examinations).....	1,022	1,024	1,103
	6,304	6,840	6,942

B.—Pathological Examinations—*continued.*

	Number of Examinations. (Comparative Statement.)		
	1930.	1931.	1932.
Brought forward .....	.....	.....	6,942
3. Of Tissues—			
Malignant tumours	443	512	581
Tubercular	23	22	11
Other conditions	1,273	1,320	1,430
	1,739	1,854	2,022
C.— <i>Examination of Parasites.</i>			
Ecto-parasites (fleas, ticks, etc.)	2	1	1
Endo-parasites (round and flat worms)	3	11	11
Protozoa .....	.....	2	1
Insects (including flies and mosquitoes) and spiders ...	7	2	10
	12	16	23
D.— <i>Medico-Legal Examinations.</i>			
Examination of Exhibits for—			
Blood stains	13	12	16
Gonococci	7	9	13
Seminal stains	41	47	30
Spermatozoa	25	30	23
Other examinations	5	7	3
Poison tests	2	.....	2
	93	105	87
E.— <i>Examination of Specimens for Preparation of Vaccines.</i>			
Preparation of Autogenous Vaccines from sputa, urine, acne pustules, boils, wounds and other septic conditions	671	754	884
Preparation of measles serum .....	.....	9	.....
Preparation of Anti Virus (Hæmolytic streptococci).....	.....	4	.....
	671	767	884
Total	57,905	57,442	59,987

ROUTINE EXAMINATION OF RATS FOR THE PRESENCE OF PLAGUE.

TABLE showing the Number and Species of Rodents Examined in Sydney and Newcastle each month during the years ended 31st December, 1931 and 1932.

Month.	Sydney.				Newcastle.			
	<i>R.R.</i> <i>Rattus</i>	<i>Rattus</i> <i>Norvegicus</i>	<i>M.</i> <i>Musculus</i>	Total.	<i>R.R.</i> <i>Rattus</i>	<i>Rattus</i> <i>Norvegicus</i>	<i>M.</i> <i>Musculus</i>	Total.
1931.								
January	187	22	30	239	62	1	1	64
February	212	32	29	273	53	2	9	64
March	323	59	29	411	76	2	8	86
April	235	44	18	297	...	...	...	...
May	271	74	27	372	18	...	...	18
June	321	63	33	417	22	2	...	24
July	276	47	28	351	59	6	...	65
August	273	38	24	335	77	...	1	78
September	341	72	51	464	47	2	...	49
October	336	97	61	494	41	8	...	49
November	253	85	113	451	48	3	...	51
December	267	33	127	427	7	2	...	9
Total	3,295	666	570	4,531	510	28	19	557
1932.								
January	185	25	24	234	44	7	...	51
February	241	55	7	303	53	2	...	55
March	164	59	8	231	66	4	...	70
April	291	106	34	341	65	4	...	69
May	278	96	41	415	40	3	...	43
June	221	110	61	392	76	10	6	92
July	211	86	68	365	60	1	1	62
August	211	96	36	343	44	3	1	48
September	276	61	23	360	52	5	1	58
October	242	56	58	356	10	2	...	12
November	210	74	7	291	43	2	...	45
December	118	60	3	181	80	6	...	86
Total	2,558	884	370	3,812	633	49	9	691

A CASE OF MALARIA ACQUIRED IN SYDNEY, N.S.W.

(E. L. MORGAN.)

During 1931 a case of malaria occurred in a female, aet 9, B.S., living with her mother and father at Botany, a suburb of Sydney. She was born at Sydney, was one of a family of ten (five brothers and five sisters) and had never been out of Sydney. No member of her family gave a history of malarial infection nor had they been in areas where malaria was known to exist.

Apart from measles and whooping cough, the family had been free from illness in recent years and for six months prior to the present illness the patient was in good health and had never been away from the suburb in which she resided.

History of Present Illness.—On 23rd November, 1930, the patient complained of a pain in the stomach and experienced a "cold shiver" which lasted half an hour and was accompanied by sweating of the forehead. The shivers recurred daily at the same time and the patient had to go to bed to keep warm. On 2nd January, 1931, she was admitted to the Royal Alexandra Hospital for Children where she was found to be suffering from malaria, a blood slide showing the presence of numerous benign tertian parasites (*Plasmodium vivax*).

Enquiries at the patient's home and at five houses in the immediate vicinity failed to yield any information as to a possible carrier of malaria. The doors and windows of the patient's home were fitted with gauze screens, and the mother stated that she regularly sprayed the house with liquid mortein. On searching the house and an outbuilding used as a motor garage a few *Culicines*, but no *Anophelines*, were found, although this latter species is known to exist in the locality.

Botany is an industrial suburb with a population of moderate density which includes a sprinkling of Southern Europeans and Asiatics who have come from malarial countries and might reasonably afford a means whereby a mosquito could become infected with parasites.

I am indebted to Dr. Steigrad, Chief Resident Medical Officer of the Royal Alexandra Hospital for Children, for drawing attention to this case.

Malaria was made a notifiable disease in New South Wales during the period March, 1915, to November, 1919, and during this period 229 cases were notified, but of these two only were acquired in New South Wales. The case now recorded appears to be the seventh in recent years where infection was acquired within the State. Particulars of these cases are given below:—

Date.	Case.	Age.	Sex.	Place of Residence at Time of Infection.	Type.	Case Reported by.
1915	F. B.	58	M	Gosford District	Tertian ...	Dr. Sydney Jamieson. (1)
1919	.....	7	F	Wyang	" ..	Dr. W. Evans. (2)
1921	Mrs. M	33	F	Tumbarumba District ..	" ..	Drs. Harry J. Clayton and Leslie Utz. (3)
1921	.....	...	F	Forbes	" ..	
1921	Aboriginal ...	...	...	Barraba	" ..	Dr. R. Angel Money. (4)
1926	.....	24	M	Sydney (Gladesville) ...	" ..	Dr. E. L. Morgan.
1931	B. S.	9	F	Sydney (Botany)	" ..	

A further case of interest was reported by Fairfax and Cleland in 1914 as a case of "congenital" malaria, in which a baby girl on the tenth day after birth showed the presence of malarial parasites. The mother, an Australian, had had several severe attacks of malaria during a stay of five or six months in the Federated Malay States. She then came to Sydney, where she resided for two months before the baby was born.

1 S. Jamieson, *Medical Journal Australia*, 20th February, 1915, page 163.

2 W. Evans, *Medical Journal Australia*, 20th December, 1919, page 526.

3 J. H. Clayton and L. Utz, *Medical Journal Australia*, 7th May, 1921, page 382 (3 cases).

4 R. A. Money, *Medical Journal Australia*, 28th August, 1926, page 283.

5 E. W. Fairfax and J. B. Cleland, *Annual Report Director-General of Public Health, New South Wales, 1914*, page 202.

[15 graphs, 1 photograph.]

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO
DEPARTMENT OF CHEMISTRY
5408 SOUTH ELLIS AVENUE
CHICAGO, ILLINOIS 60637
TEL: 773-936-3700
FAX: 773-936-3701
WWW: WWW.CHEM.UCHICAGO.EDU

THE UNIVERSITY OF CHICAGO
DEPARTMENT OF CHEMISTRY
5408 SOUTH ELLIS AVENUE
CHICAGO, ILLINOIS 60637
TEL: 773-936-3700
FAX: 773-936-3701
WWW: WWW.CHEM.UCHICAGO.EDU



