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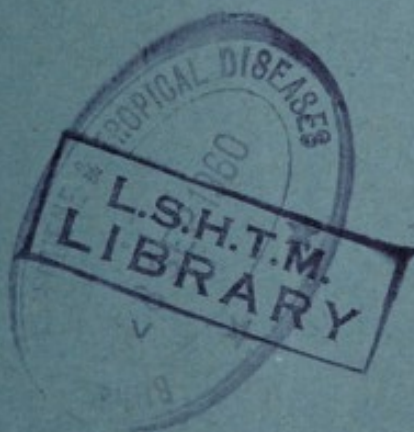


STATE OF SINGAPORE

# REPORT OF THE MINISTRY OF HEALTH

for the year ended 31st December, 1958

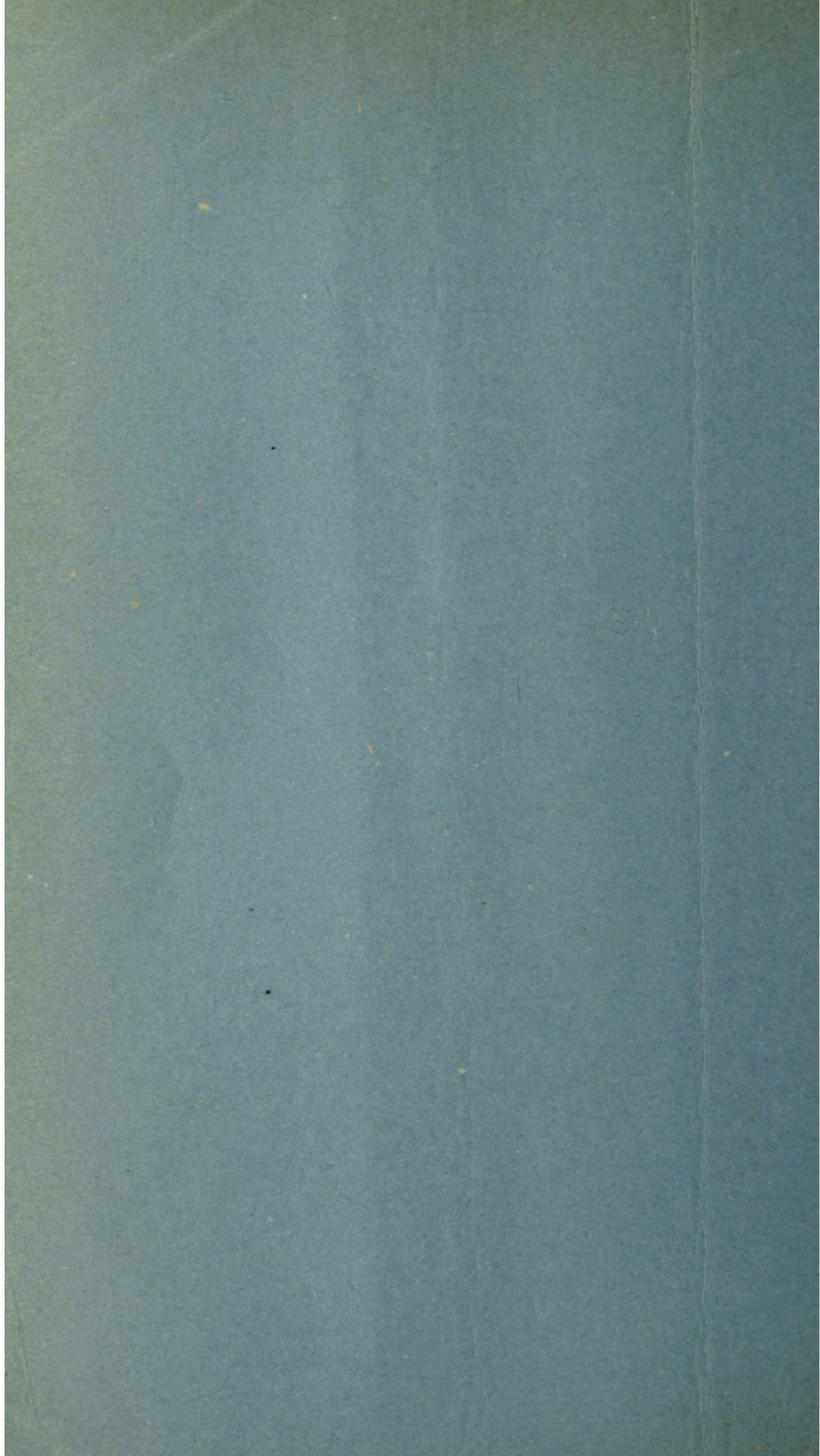
BEING THE ANNUAL REPORT ON THE MEDICAL DEPARTMENT  
BY THE DIRECTOR OF MEDICAL SERVICES  
FOR THE YEAR  
1958



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## INTRODUCTION

To THE HONOURABLE MR. A. J. BRAGA, M.L.A.,  
MINISTER FOR HEALTH,  
SINGAPORE.

Sir,

I have the honour to submit a report on the state of the Medical and Health Services in Singapore for the year ended 31st December, 1958.

### GENERAL REVIEW

2. Government's Statement of Policy on Malayanisation was published as a White Paper (Sessional Paper No. Cmd. 65 of 1956) in December 1956. It was hoped that expatriate officers, particularly those holding senior posts, would remain for the full period of retention which varied between one and ten years. This hope has not been realised and the large majority of expatriate officers have left the service. At the present time only three senior posts are filled by expatriate officers on the permanent establishment and subject to the policy of Malayanisation.

3. This rapid programme of Malayanisation has thrown a considerable strain on the resources of the Department, and the position has been further aggravated by the retirement or resignation of certain senior local officers including the Permanent Secretary to the Ministry of Health, the Senior Ophthalmic Surgeon and the Ear, Nose and Throat Surgeon. During 1959 two other senior officers reach the age of retirement and will leave the service, the Assistant Director of Medical Services (Tuberculosis) and the Senior Pathologist.

4. It will be appreciated that these resignations and retirements will create a very difficult situation in the senior branches of the Department during 1959, particularly at a time when there is an acute shortage of staff in all fields. This shortage is particularly marked in the Nursing Service. It has proved impossible to open new ward blocks during 1958 because of lack of nursing staff at a time when there is a grave shortage of hospital beds in Singapore. It is impossible at the present time to step up the training programme because of the grave shortage of Sister Tutors. During 1958, of an establishment of 15 Sister Tutors, only four posts were filled.

### STAFF POSITION

5. The approved establishment and the number of vacancies at the end of 1958 is shown in Table 1.

#### *Primary Examination of the R.A.C.S.*

6. Through the generosity of the Australian Commonwealth Government it has again been possible under the Colombo Plan for the Royal Australasian College of Surgeons to conduct a Primary Examination for the Fellowship in Singapore during March/April of this year. Beginning the 17th February, 1958 and concluding on the 18th March, 1958 an intensive course of lectures in Anatomy, Pathology and Physiology was conducted by Australian lecturers to prepare candidates for the Primary Examination. The lecturers for the preparatory course were Mr. H. H. Eddey, Examiner in Anatomy

and Surgery, University of Melbourne, Professor G. S. Christie, Associate Professor of Pathology, Melbourne University and Mr. R. H. Hawker, Senior Lecturer in Physiology, University of Queensland. The Primary Examination was conducted by Professor E. S. J. King, Professor of Pathology, University of Melbourne, Professor S. Sunderland, Dean of the Faculty of Medicine and Professor of Anatomy, University of Melbourne, Dr. F. C. Courtice, Director of the Institute of Pathology, Sydney Hospital, and Mr. P. J. Kenny, Lecturer in Surgical Anatomy, University of Sydney.

TABLE 1  
PROFESSIONAL STAFF POSITION OF MEDICAL DEPARTMENT  
31ST DECEMBER, 1958

| MEDICAL OFFICERS  |            |            |            |            |                           |                     |               |
|---|------------|------------|------------|------------|---------------------------|---------------------|---------------|
|   | Grade<br>C | Grade<br>D | Grade<br>E | Grade<br>G | Senior<br>Regis-<br>trars | Medical<br>Officers | House-<br>men |
| Approved Establishment ..                                 | 1          | 1          | 12         | 35         | 30                        | 211                 | 50            |
| Number of vacancies at 31-12-58 ..                        | ..         | ..         | 3          | 20         | 16                        | 6                   | ..            |
| Number of officers on overseas study leave at 31-12-58 .. | ..         | ..         | ..         | ..         | ..                        | 27                  | ..            |
| Effective personnel at 31-12-58 ..                        | 1          | 1          | 9          | 15         | 14                        | 178                 | 50            |

| NURSING STAFF   |                          |            |             |         |                                 |
|---|--------------------------|------------|-------------|---------|---------------------------------|
|   | MATRONS                  |            |             | Sisters | Staff Nurses and Student Nurses |
|   | Prin-<br>cipal<br>Matron | Grade<br>I | Grade<br>II |         |                                 |
| Approved Establishment ..                                 | 1                        | 5          | 11          | 199     | 1,038                           |
| Number of vacancies at 31-12-58 ..                        | ..                       | 2          | 4           | 60      | 178                             |
| Number of officers on overseas study leave at 31-12-58 .. | ..                       | ..         | ..          | 4       | 11                              |
| Effective personnel at 31-12-58 ..                        | 1                        | 3          | 7           | 135     | 849                             |

| ANCILLARY STAFF                    |                    |                       |                            |          |
|------------------------------------|--------------------|-----------------------|----------------------------|----------|
|                                    | Radio-<br>graphers | Physio-<br>therapists | Occupational<br>Therapists | Almoners |
| Approved Establishment ..          | 29                 | 18                    | 9                          | 28       |
| Number of vacancies at 31-12-58 .. | 15                 | ..                    | 5                          | 7        |

7. A total of 36 doctors and four dentists undertook the Primary course of study, of whom 19 were from the Singapore Medical Department and were sponsored by the Government of Singapore. A total of 35 sat for the Primary Examination in March/April and of these 13 were successful, of whom six were employed in the Department.

#### *Institute of Health*

8. The people of the United Kingdom presented to the people of Singapore on the 14th May, 1958 a unique institution known as the Institute of Health costing approximately \$1.5 millions, which unifies within one building all preventive health aspects of children including children of school-going age, instruction of medical and para-medical personnel and research facilities pertaining to numerous health problems.

#### *Training of Nursing and Auxiliary Personnel*

9. During the year 159 student nurses entered the training school and 144 nurses passed the Final Examination of the Singapore Nursing Board. Four nurses went to the United Kingdom and Australia on post-basic scholarships, and a further two nurses went to New Zealand on Sister Tutor Courses.

10. The psychiatric nurse training at Woodbridge Hospital continues to make good progress in spite of a shortage of female nurses. During the year 12 female and 19 male nurses commenced training. At the same time there were nine staff nurses undergoing psychiatric training. This increase in staff has resulted in an improvement in the staffing of this hospital.

11. The General Nursing Council for England and Wales in November gave official recognition to the Mental Nurses training at Woodbridge Hospital. This recognition means that nurses trained at Woodbridge Hospital can now be registered by the Council. This recognition has naturally given great encouragement to the teaching staff at the hospital.

12. The training of Assistant Nurses has continued to make excellent progress. During the year 110 students were accepted for training by Tan Tock Seng Hospital and 29 Assistant Nurses passed the Final Examination of the Singapore Nursing Board. Two trained Assistant Nurses went to the United Kingdom on six months N.A.P.T. Scholarships.

13. The Midwifery training has been maintained and during the year 60 pupil midwives and 59 trained nurses started this midwifery training at Kandang Kerbau Hospital, and 36 pupil midwives and 35 trained nurses passed the Final Examination of the Central Midwives Board, Singapore.

14. The first local course for the training of Health Visitors was started by Miss M. Sankey of the World Health Organisation with eight candidates. The final examination was held in July under the auspices of the Royal Society of Health, London, and six of the candidates were successful. Miss Sankey left Singapore in August. A District Nursing Course was started by Miss M. Chalmers, also of the World Health Organisation for those nurses who had passed the examination for Health Visitors. The District Nurses Examination was held in December 1958.

15. During the year we had in addition the services of three other World Health Organisation experts, Miss J. McLarty, Miss M. Lange and Miss D. Potts, who assisted in nursing administration and post-basic courses. Miss Potts left Singapore in October.

#### *Sanitary Inspectors*

16. Since 1921 a course of training for Sanitary Inspectors has been carried out in Singapore leading to the Certificate of the Royal Society for

the Promotion of Health. The course of training was given previously in part of the Government Health Office, but the opening of the Institute of Health in May 1958 has meant greatly improved teaching and training facilities. Thirty-six Sanitary Inspectors passed the examination of the Royal Society of Health in November 1958.

#### *Ancillary Staff*

17. During 1958 eight pupil almoners were under training locally and none qualified this year. Five pupil occupational therapists and six pupil physio-therapists were overseas under training in 1958; in addition one almoner proceeded on a one year's training course in the United Kingdom.

### PREVENTIVE AND SOCIAL MEDICINE

#### *General*

18. It is expected that in 1959 three Rural District Councils will be established. In anticipation of this, decentralisation of the environmental rural health services was undertaken during the past year.

19. Rural sanitation has continued to receive particular attention. During the year 12 new villages were brought into the scheme of rural sanitation, bringing the total to 54 villages.

#### *Health Education*

20. Programmes of health education were continued during 1958. Radio broadcasts were made every Sunday during the earlier part of the year and weekly film shows were held throughout the year in the rural area.

21. A course of training in health education for teachers, medical students and para-medical personnel was given during the year. In-service training was given to a number of departmental officers who were specially instructed in methods and media of health education.

22. The Health Education Section took part in many exhibitions during the year. A major effort of the Department was the World Health Day Exhibition when during April 1958 exhibitions were held simultaneously at eight centres all over the island. The theme was 'Ten Years of Health Progress' and besides showing developments in international health, emphasis was laid on the great improvement in health in Singapore over the previous ten years.

23. Other exhibitions in which the Health Education Section participated included exhibitions sponsored by the Department of Information Services entitled *Our Singapore* and exhibitions sponsored by the City Council in connection with their Anti-litter, Anti-pest and Anti-spitting Campaigns.

#### *School Health Service*

24. The school population increased from 260,444 students in 1957 to 295,481, an increase of over 13 per cent. The number of schools at the end of 1958 was 702 including 107 private schools. With the large number of schools coming into the Government's Grant-in-Aid Scheme over the past two or three years, there has been a very great improvement in the environmental hygiene of school premises. Up to the end of the year 74,058 were examined. This represents 23.65 per cent of the school population. During the year 528 of the 595 Government and Government Aided schools had been visited by school health officers for the purpose of school medical inspection.

25. The School Health Service also runs minor treatment clinics at four centres on the island. 95,106 school children attended these clinics, an increase

of 8 per cent over the previous year. In addition a school travelling dispensary was available for the treatment of children attending rural schools; over 17,000 children were treated by this travelling dispensary.

26. In April the School Tuberculosis Service was integrated with the Tuberculosis Service of the Colony.

#### *Maternal and Child Health Services*

27. The Rural Maternal and Child Health Service was awarded the Kettering Shield by the National Baby Welfare Council, London, in their overseas competition for outstanding work in the field of Maternal and Child Welfare. The Shield was presented to Dr. (Mrs) R. Calderwood, the Lady Medical Officer in charge of the Maternal and Child Welfare Service, by the Minister for Health, the Hon'ble Mr. A. J. Braga, on behalf of the National Baby Welfare Council at a ceremony held at the Institute of Health on 16th October, 1958.

28. The Maternal and Child Health Service has now 20 main clinics with resident staff, 25 visiting clinics with no resident staff and eight village midwife centres with a resident midwife in each.

29. As well as providing a full domiciliary midwifery service a full immunisation service is provided for infants and pre-school children. The drive against diphtheria continued, and during the year over 18,000 children were fully immunised and 8,200 received booster doses. The poliomyelitis epidemic between October and December naturally interfered with the immunisation campaign.

#### *Social Diseases*

30. The Domiciliary Midwifery Service is assisted by two mobile Social Hygiene dispensaries. Specimens of blood are taken for serological tests and vaginal discharges examined. Where necessary treatment is carried out. The positive rate for syphilis in this ante-natal group was only 0.7 per cent amongst 10,000 women examined which is the lowest figure ever recorded and compares very favourably with the rates published in better developed countries in the world.

31. The total number of cases of venereal disease diagnosed and treated and the total attendances at the V.D. clinics in Singapore over the past three years has been—

|                              | 1956    | 1957    | 1958    |
|------------------------------|---------|---------|---------|
| V.D. cases ... ..            | 4,803   | 5,452   | 5,233   |
| Syphilitic infections ... .. | 1,011   | 1,048   | 878     |
| Gonorrhœa ... ..             | 2,584   | 2,856   | 2,808   |
| Total attendances ... ..     | 185,452 | 190,549 | 197,333 |

#### *Mental Health*

32. Woodbridge Hospital is situated in the outskirts of the City and is the centre of the Mental Health Service. This hospital has a total bed strength of 2,040 beds and at the end of the year there were 1,643 patients compared with a total of 2,269 at the end of 1957. The number of admission for the year was 1,552, compared with 1,853 the previous year.

33. There was a reduction of 626 patients in the hospital at the end of 1958 compared with 1957. This does not mean that there is any reduction in the incidence of mental illness in Singapore but due to the implementation of a new policy based on the accepted theory that the best therapeutic agency in very many cases is the environment from which the patient originated, i.e. the therapeutic effect of community life plus where indicated attendance at

psychiatric out-patient clinics rather than incarceration for long periods in a mental hospital which reduces the capacity of the patient for social re-adjustment.

34. It is still considered that there should be a second mental hospital in Singapore in order that existing personnel may be used to best advantage along modern lines for those patients still requiring institutional care.

35. Four Psychiatric out-patient clinics holding six sessions per week were in operation throughout the year. As may be imagined the work of these clinics has increased with the implementation of the hospital policy outlined above.

## ENDEMIC AND EPIDEMIC DISEASES

### *Malaria*

36. No case of malaria of indigenous origin was reported during the year. Singapore continues to enjoy freedom from malaria but only as a result of constant vigilance on the part of the Health Department. The island of Singapore is potentially malarious and ideal for the breeding of dangerous malarial vectors.

37. *Aedes Control at the International Airport, Singapore.*—It is necessary to maintain strict *aedes* control around the International Airport as Singapore is a yellow fever receptive area. A special health team ensures control within the area 880 metres from the airport perimeter fence; control is maintained by residual spraying, swing fogging, clearing of secondary vegetation and the filling of tree holes and bamboo stumps. Rigorous check surveys ensure that the control is being carried out satisfactorily. *Aedes aegypti* index was nil on each of the four major surveys carried out. The *Aedes albopictus* index is now 1.56 per cent. In November 1954 the *Aedes aegypti* index was 6 per cent and the *Aedes albopictus* index 33 per cent.

### *Poliomyelitis*

38. A major outbreak of poliomyelitis occurred in Singapore beginning in August and continuing until the end of the year. The only causative virus identified was Poliomyelitis Type I. The cases reported were as follows:

|           | <i>Cases</i> |     |     |
|-----------|--------------|-----|-----|
| August    | ...          | ... | 6   |
| September | ...          | ... | 32  |
| October   | ...          | ... | 168 |
| November  | ...          | ... | 121 |
| December  | ...          | ... | 75. |

39. The Government started a programme of mass vaccination with live attenuated virus using the Sabin vaccine. In roughly four weeks in November and December over 200,000 children were immunised. Studies are now in progress to assess the effect of this vaccination programme on the course of the epidemic.

## HOSPITALS, CLINICS AND OTHER CURATIVE SERVICES

### *General Hospital*

40. The General Hospital remains the only hospital in Singapore for the treatment of acute medical and surgical conditions. It has a bed strength of 1,191. During 1958 the admissions to the hospital totalled 36,852, compared with 34,623 in 1957.

41. During the year the construction of an Ambulance Station and the conversion of two wards into a modern Physiotherapy Unit was completed. At the end of the year work was in progress of a block of quarters for Sisters and Matrons, a Burns Unit and a block of quarters for Housemen.

#### *Kandang Kerbau Hospital*

42. Kandang Kerbau Hospital is the only hospital in Singapore dealing with obstetrical and gynæcological cases. There are 276 obstetrical beds and 40 gynæcological beds, but in spite of this small number of beds, births in hospital averaged 2,500 per month.

43. This hospital also provides facilities for training in midwifery and gynæcology for the Faculty of Medicine of the University of Malaya. It also trains midwives for the examination of the Central Midwives Board.

44. The hospital also provides a full out-patient service for ante-natal and post-natal and gynæcological conditions together with separate general out-patient service for women and children.

45. The following table summarises the work of the hospital during 1958, compared with the same period in 1957.

|  | 1957    | 1958    |
|--|---------|---------|
| Total number of cases admitted ...             | 35,832  | 39,480  |
| Total number of maternity admissions ...       | 30,747  | 33,491  |
| Total number of deliveries ...                 | 27,765  | 30,146  |
| Total number of gynæcological admissions       | 5,085   | 5,989   |
| Total attendances at the out-patients unit ... | 106,233 | 105,561 |
| Domiciliary Delivery Service—deliveries ...    | 1,515   | 1,578   |
| Domiciliary Aftercare Service—cases ...        | 8,128   | 9,104   |

46. During the year the work on the new Matrons' and Sisters' quarters was completed. Further work on the extensions to this hospital is in progress. Block E is being remodelled into a gynæcological wing with 130 beds with two large twin theatres and one minor theatre. A central sterile supply unit adjacent to this wing is also under construction. In addition the central kitchen, boiler house and bulk store are being re-constructed.

#### *Tan Tock Seng's Hospital*

47. During the year the out-patient department treated 2,790 new cases of active pulmonary tuberculosis. The total attendances, including re-visits, were 364,272.

48. In July 1958 a team of experts from Australia arrived in Singapore under the Colombo Plan to conduct a tuberculosis case finding programme in Singapore. The team consisted of Dr. S. Cotter Harvey, a chest physician, Dr. C. Rubinstein, a radiologist, Miss G. M. J. Rodda, a bacteriologist, and Mr. D. J. Grant, a radiological engineer. This team was ably assisted by local staff and carried out the survey over a period of four months. During this period a mass X-ray examination was made of 50,000 persons, 40,000 in two crowded urban areas and 10,000 in two rural areas. All cases showing signs of tuberculosis were fully investigated. The figures are being compiled and it is expected that the full results of this survey will be published in 1959.

49. The proposed Assistant Nurses' hostel which was included in the Medical Plan for Tan Tock Seng Hospital had to be postponed on the grounds of economy. This postponement has necessitated converting one of the two new ward blocks into an Assistant Nurses' Hostel and Training School to accommodate 200 assistant nurses.

50. During the year work on the new kitchen and boilers was completed. Two new ward blocks were finished about the middle of the year.

#### *Trafalgar Home, Leprosy Settlement*

51. Trafalgar Home is reserved solely for the treatment of leprosy and has accommodation for about 1,000 patients. There is a male and female infirmary for those acutely ill and a ward of 20 beds for patients suffering from pulmonary tuberculosis in addition to Hansen's disease. There is also a ward for the chronically ill patients. The remainder are housed in small huts within the settlement.

52. The Medical staff consists of the Medical Superintendent and three doctors. The nursing care is provided by five hospital assistants and sisters of the Franciscan Order.

53. As the disease can be of considerable duration, occupational therapy is of great importance. This work is supervised by an Occupational Therapist.

54. There is an out-patient clinic situated about  $7\frac{1}{2}$  miles away from the home for the follow up of discharged patients and to which cases can be referred from general out-patient clinics. There are at present about 3,000 patients on the register at this out-patient clinic.

#### *Out-patient Services*

55. This service is responsible for all the static and mobile out-patient clinics throughout the Island. Under the supervision of the Service are also certain specialised out-patient clinics for Police, prisoners and other special groups. A total of 1,560,222 patients were seen by the out-patient service and of these 411,613 were new cases. There was an increase of 24 per cent over the figures for the previous year.

56. Two new out-patient clinics are being built at Pegu Road and Bukit Panjang. These are based on a standard plan and will cost about \$100,000 each. Each clinic will be large enough to treat about 500 patients daily and are expected to be ready for opening to the public by January 1959.

#### *Opium Treatment Centre*

57. This Centre which is situated on St. John's Island was established in 1955. The treatment of opium addiction covers three phases. First the phase of the withdrawal of the drug is carried out in the local prison hospital. The second or rehabilitation phase is carried out at the Opium Treatment Centre on St. John's Island. The third stage is that of follow up after discharge, and for this purpose a clinic is held regularly at the General Hospital.

58. During the year there were 399 admissions to St. John's Island and this included the encouraging figure of 42 volunteer patients. 324 convicted inmates and 41 volunteers were discharged from St. John's Island. 656 patients were seen at the follow up clinic at the General Hospital.

#### DENTAL SERVICE

59. The establishment of this section has posts for 42 dental officers; 35 of these posts are filled. The work of the section is divided into clinical dentistry and preventive dentistry.

60. *Clinical Dentistry*.—During 1958 there was an expansion of the service with the opening of a large school dental clinic at the new Institute of Health. Four dental officers were put to work in this clinic at the start. With the return from study leave of a dental officer who has obtained the D.Orth. R.C.S. (Eng.) an orthodontic section in this clinic has been opened.

61. The other school dental centre at Tan Tock Seng's Hospital continued its work and school children were also given systematic dental treatment at four dental clinics located at the schools and manned by five dental nurses under the supervision of dental officers. Three mobile dental clinics provided treatment for several schools in the rural areas.

62. There was no definite expansion in the hospital services though the Dental Clinic at the General Hospital had to cope with an increasing demand for dental treatment. The chronic sick at the Woodbridge Hospital, Trafalgar Home and Tan Tock Seng's Hospital were attended to by one dental officer.

63. In the Maternal and Child Health Division the number of dental clinics serving expectant and nursing mothers and their toddlers was increased with a new clinic at the Prinsep Street Maternity and Child Health Clinic. This new clinic was the first one established in the City area. Three dental clinics, located at the Sims Avenue Community Centre, Bouna Vista Community Centre and the Siglap Community Centre continued to provide treatment to under-privileged children attending some 15 Social Welfare Centres throughout the island.

64. Treatment was provided as before for the rank and file of the Singapore Police Force and the Royal Malayan Navy, and prisoners in Changi Prison. The three mobile dental clinics continued to extend treatment to children at the St. Andrew's Orthopædic Hospital, Boys Town, the Blind School and the Lee Kuo Chuan Salvation Army Nursery.

65. *Preventive Dentistry*.—Towards the end of 1957 the City Water Engineer announced the fact that the entire municipal water supply in Singapore had been successfully fluoridated, and therefore 1958 marked the first complete year of fluoridation in Singapore. During January and February the fourth annual dental survey in connection with the fluoridation scheme was carried out. This survey helps in assessing the efficacy of fluoridation in controlling tooth decay.

#### GOVERNMENT MEDICAL STORE

66. The Store dealt with slightly over 8,000 requisitions during the year compared with 6,600 in 1957. Due to improvements in hospital facilities and increase in attendances at dispensaries and clinics the total value of drugs, pharmaceuticals, surgical dressings, instruments, ward equipment, etc. issued by the Store to all establishments rose to \$2,596,000. Of this about two-thirds represents drugs and pharmaceuticals, the balance being dressings, equipment and sundries. The organisation for central importing and distribution of these supplies operated smoothly throughout the year. In addition to these issues, raw materials and containers to the value of \$580,000 were issued from the Store to the pharmaceutical manufacturing laboratories in the same premises at Silat Road for conversion into manufactured pharmaceuticals.

67. This year the Store supplied for the first time the requirements of the City Council dispensaries which mounted to a further \$120,000 worth of medicines and equipment. In addition supplies were made as usual to S.A.T.A., the University of Malaya and a number of other non-Government institutions and these stores amounted to \$89,000.

68. In the pharmaceutical laboratories, another increase in overall production was achieved and the principal items in the output of pharmaceuticals were:

|                       |     |     |                             |
|-----------------------|-----|-----|-----------------------------|
| Ampoules              | ... | ... | 535,000                     |
| Eyedrop/Eardrop Vials | ... | ... | 44,000                      |
| Ointments             | ... | ... | 11,000 lb. and 71,000 tubes |
| Tablets               | ... | ... | 55 millions                 |
| Transfusion Fluids    | ... | ... | 74,600 bottles.             |

69. Although the production at the laboratories has increased very greatly, particularly in the packing of 'Wets' and ointments, the staff engaged in this work was reduced slightly during the year. The laboratories are now well equipped and during the year under review a new Rotary tablet machine, a large mixing machine and a filterpress for the packing of transfusion fluids were purchased.

#### CIVIL DEFENCE

70. During the year 1958 the Civil Defence Section continued its activities along the lines of previous years. The Singapore Hospital Reserve was formed in 1952 and the training carried out aims at supplementing with trained personnel the nursing and hospital staff of all hospitals in Singapore in time of war or any civil emergency.

71. At the beginning of the year the strength of the Hospital Reserve was 887, but with only 91 enrolments and 224 resignations, it was reduced by the end of the year to 754, made up of 541 Nursing Auxiliaries and 213 in the General Duties Section.

72. *Training.*—Sixty-seven Nursing Auxiliaries are still undergoing the first phase of training in the various wards at the General Hospital. Another batch of 25 who have passed their 'B' Course Examination will soon be completing their 20 hours of ward duties in preparation for the 'A' Course.

73. During the period under review nine Nursing Courses (five 'A' and four 'B') were held. 66 men and women were successful in obtaining 'B' badges and 35 'A' badges of Efficiency, while another six Nursing Auxiliaries qualified as Volunteer Instructors to conduct 'B' and 'A' classes at the Hospital Reserve Classroom, at the Civil Defence Headquarters in Kolam Ayer.

74. *Emergency Duties.*—Members of the Hospital Reserve gave very valuable assistance in nursing and other general duties during the mass evacuation of Dutch subjects from Indonesia at the beginning of the year. In April they again gave voluntary service at the Geylang English School which was used temporarily to house the persons left homeless as a result of the destructive fire at Lorong 3. During the immunisation campaign against poliomyelitis, nursing auxiliaries assisted at two of the centres.

75. At the end of October and the beginning of November a combined civil defence exercise was held and members of the Hospital Reserve participated to man the hospital and First Aid Post services required during the exercise.

#### VOLUNTARY AND CHARITABLE INSTITUTIONS

##### *St. Andrew's Mission Hospital.*

76. This hospital has 60 beds for children and during the year admitted 872 patients. The out-patients treated during the year were 50,438.

*Kwong Wai Siu Free Hospital (Chinese)*

77. This hospital has 445 beds and during the year 1,381 patients were admitted. Out-patient attendances were 30,611.

*Royal Singapore Tuberculosis Clinic*

78. The past year has been another busy year for this voluntary organisation. During the tuberculosis case finding survey this organisation assisted in the examination of a proportion of the cases discovered by X-ray. This clinic has no accommodation for in-patients, and during 1958 a total of 222,143 out-patient attendances were recorded.

79. The Medical Advisory Council met several times during the year and made recommendations on such matters as Silicosis and other Dust Diseases, Compulsory Inoculation of Children against Diphtheria, Island-wide Inoculation against Cholera, etc. Further amendments to the Food and Drugs Regulations were also under consideration.

80. I append herewith a Table (Table 2) showing the number of professional officers available for work of the Ministry on 1st January, 1959.

I have the honour to be,

Sir,

Your obedient servant,

M. DORAISINGHAM, O.B.E.,  
L.M.S. (Singapore), D.P.H. (London),  
*Director of Medical Services,  
Singapore.*

TABLE 2

TOTAL NUMBER OF OFFICERS AUTHORISED AND AVAILABLE  
1ST JANUARY, 1959

|  | Estimates<br>1959 | Permanent | Short<br>contract<br>and<br>temporary | Gone<br>or going<br>on leave<br>(Including<br>study) | Total<br>to be<br>available |
|--|-------------------|-----------|---------------------------------------|--|-----------------------------|
| <i>A.—Administration</i>   |                   |           |                                       |  |                             |
| Director .. .. .   | 1                 | 1         | ..                                    | ..   | 1                           |
| Deputy Director .. .. .  | 1                 | 1         | ..                                    | ..   | 1                           |
| Deputy Secretary (Adminis-<br>tration) .. .. .                                 | 1                 | 1         | ..                                    | ..   | 1                           |
| A.D.M.S. (Health) .. .. .  | 1                 | 1         | ..                                    | ..   | 1                           |
| A.D.M.S. (Hospitals) .. .. .   | 1                 | 1         | ..                                    | ..   | 1                           |
| A.D.M.S. (Tuberculosis) .. .. .  | 1                 | 1         | ..                                    | ..   | 1                           |
| Medical Superintendent,<br>General Hospital .. .. .                            | 1                 | 1         | ..                                    | ..   | 1                           |
| Medical Superintendent,<br>Kandang Kerbau Hospital .. .. .                     | 1                 | 1         | ..                                    | ..   | 1                           |
| Medical Superintendent, Tan<br>Tock Seng's Hospital .. .. .                    | 1                 | 1         | ..                                    | ..   | 1                           |
| Medical Superintendent,<br>Woodbridge Hospital .. .. .                         | 1                 | ..        | 1                                     | ..   | 1                           |
| Medical Superintendent,<br>Trafalgar Home .. .. .                              | 1                 | 1         | ..                                    | ..   | 1                           |
| Medical Superintendent,<br>Thomson Road Chronic<br>Hospital .. .. .            | 1                 | ..        | ..                                    | ..   | ..                          |
| Chief Dental Officer .. .. .   | 1                 | 1         | ..                                    | ..   | 1                           |
| Senior Medical Officer, Social<br>Hygiene .. .. .                              | 1                 | ..        | 1                                     | ..   | 1                           |
| Superintendent Pharmaceuti-<br>cal Chemist .. .. .                             | 1                 | 1         | ..                                    | ..   | 1                           |
| Senior Pathologist .. .. .   | 1                 | 1         | ..                                    | ..   | 1                           |
| Senior Health Officer .. .. .  | 1                 | 1         | ..                                    | ..   | 1                           |
| Deputy Medical Superinten-<br>dent Woodbridge Hospital .. .. .                 | 1                 | 1         | ..                                    | ..   | 1                           |
| Medical Officer in-charge Out-<br>patients Department .. .. .                  | 1                 | 1         | ..                                    | ..   | 1                           |
| Health Officer i/c Schools .. .. .   | 1                 | 1         | ..                                    | ..   | 1                           |
| Health Officer i/c Maternal<br>and Child Health Services<br>(Rural) .. .. .    | 1                 | ..        | 1                                     | ..   | 1                           |
| Principal Matron .. .. .   | 1                 | 1         | ..                                    | ..   | 1                           |
| <i>B.—Hospitals Division</i>   |                   |           |                                       |  |                             |
| Specialist Officer, Grade 'E'  | 6                 | 6         | ..                                    | ..   | 6                           |
| Specialist Officer, Grade 'G'  | 24                | 12        | 5                                     | ..   | 17                          |
| Medical Officer including<br>Senior Registrars (excluding<br>Housemen) .. .. . | 221               | 124       | 70                                    | 27   | 167                         |
| Housemen .. .. .   | 50                | 50        | ..                                    | ..   | 50                          |
| Matrons .. .. .  | 14                | 7         | 1                                     | ..   | 8                           |
| Sisters .. .. .  | 186               | 57        | 62                                    | 4  | 115                         |
| Nurses* .. .. .  | 969               | 724       | 114                                   | 10   | 828                         |

\* Excludes Assistant Nurses.

TABLE 2—continued

|  | Estimates<br>1959 | Permanent | Short<br>contract<br>and<br>temporary | Gone<br>or going<br>on leave<br>(Including<br>study) | Total<br>to be<br>available |
|--|-------------------|-----------|---------------------------------------|--|-----------------------------|
| <i>B.—Hospitals Division—contd.</i>        |                   |           |                                       |  |                             |
| Hospital Assistants ..                     | } 327             | 217       | 29                                    | 8  | 238                         |
| Dispensing Assistants ..                   |                   |           |                                       |  |                             |
| Qualified Midwives*                        | 99                | 26        | 44                                    | ..   | 70                          |
| Dental Officers (including<br>Housemen) .. | 40                | 31        | 5                                     | 3  | 33                          |
| Pharmaceutical Chemists ..                 | 2                 | 1         | ..                                    | ..   | 1                           |
| Pharmacists ..                             | 23                | 18        | 2                                     | 2  | 18                          |
| Laboratory Assistants ..                   | 93                | 76        | 4                                     | ..   | 80                          |
| Male Nurses ..                             | 13                | 4         | 3                                     | ..   | 7                           |
| <i>C.—Health Division</i>                  |                   |           |                                       |  |                             |
| Health Officers ..                         | 32                | 11        | 21                                    | ..   | 32                          |
| Health Education Officers ..               | 2                 | 1         | ..                                    | ..   | 1                           |
| Public Health Engineer ..                  | 1                 | 1         | ..                                    | ..   | 1                           |
| Supervisor of Public Health<br>Works ..    | 1                 | ..        | ..                                    | ..   | ..                          |
| Chief Sanitary Inspector ..                | 1                 | 1         | ..                                    | ..   | 1                           |
| Sanitary Inspectors ..                     | 7                 | 6         | ..                                    | ..   | 6                           |
| Matrons ..                                 | 2                 | 1         | 1                                     | ..   | 2                           |
| Health Sisters ..                          | 15                | 7         | 7                                     | ..   | 14                          |
| Health Nurses ..                           | 78                | 10        | 45                                    | ..   | 55                          |
| Hospital Assistants ..                     | 21                | 12        | 4                                     | ..   | 16                          |
| Qualified Midwives ..                      | 104               | 42        | 40                                    | ..   | 82                          |
| Assistant Health Nurses ..                 | 20                | 18        | 1                                     | ..   | 19                          |

Table 2 - continued

| Year | Number of cases | Number of deaths | Number of recoveries | Number of relapses | Number of patients discharged | Number of patients who died | Number of patients who were cured | Number of patients who were not cured |
|------|-----------------|------------------|----------------------|--------------------|-------------------------------|-----------------------------|-----------------------------------|---------------------------------------|
| 1950 | 10              | 2                | 8                    | 0                  | 8                             | 2                           | 8                                 | 2                                     |
| 1951 | 15              | 3                | 12                   | 0                  | 12                            | 3                           | 12                                | 3                                     |
| 1952 | 20              | 4                | 16                   | 0                  | 16                            | 4                           | 16                                | 4                                     |
| 1953 | 25              | 5                | 20                   | 0                  | 20                            | 5                           | 20                                | 5                                     |
| 1954 | 30              | 6                | 24                   | 0                  | 24                            | 6                           | 24                                | 6                                     |
| 1955 | 35              | 7                | 28                   | 0                  | 28                            | 7                           | 28                                | 7                                     |
| 1956 | 40              | 8                | 32                   | 0                  | 32                            | 8                           | 32                                | 8                                     |
| 1957 | 45              | 9                | 36                   | 0                  | 36                            | 9                           | 36                                | 9                                     |
| 1958 | 50              | 10               | 40                   | 0                  | 40                            | 10                          | 40                                | 10                                    |
| 1959 | 55              | 11               | 44                   | 0                  | 44                            | 11                          | 44                                | 11                                    |
| 1960 | 60              | 12               | 48                   | 0                  | 48                            | 12                          | 48                                | 12                                    |
| 1961 | 65              | 13               | 52                   | 0                  | 52                            | 13                          | 52                                | 13                                    |
| 1962 | 70              | 14               | 56                   | 0                  | 56                            | 14                          | 56                                | 14                                    |
| 1963 | 75              | 15               | 60                   | 0                  | 60                            | 15                          | 60                                | 15                                    |
| 1964 | 80              | 16               | 64                   | 0                  | 64                            | 16                          | 64                                | 16                                    |
| 1965 | 85              | 17               | 68                   | 0                  | 68                            | 17                          | 68                                | 17                                    |
| 1966 | 90              | 18               | 72                   | 0                  | 72                            | 18                          | 72                                | 18                                    |
| 1967 | 95              | 19               | 76                   | 0                  | 76                            | 19                          | 76                                | 19                                    |
| 1968 | 100             | 20               | 80                   | 0                  | 80                            | 20                          | 80                                | 20                                    |
| 1969 | 105             | 21               | 84                   | 0                  | 84                            | 21                          | 84                                | 21                                    |
| 1970 | 110             | 22               | 88                   | 0                  | 88                            | 22                          | 88                                | 22                                    |
| 1971 | 115             | 23               | 92                   | 0                  | 92                            | 23                          | 92                                | 23                                    |
| 1972 | 120             | 24               | 96                   | 0                  | 96                            | 24                          | 96                                | 24                                    |
| 1973 | 125             | 25               | 100                  | 0                  | 100                           | 25                          | 100                               | 25                                    |
| 1974 | 130             | 26               | 104                  | 0                  | 104                           | 26                          | 104                               | 26                                    |
| 1975 | 135             | 27               | 108                  | 0                  | 108                           | 27                          | 108                               | 27                                    |
| 1976 | 140             | 28               | 112                  | 0                  | 112                           | 28                          | 112                               | 28                                    |
| 1977 | 145             | 29               | 116                  | 0                  | 116                           | 29                          | 116                               | 29                                    |
| 1978 | 150             | 30               | 120                  | 0                  | 120                           | 30                          | 120                               | 30                                    |
| 1979 | 155             | 31               | 124                  | 0                  | 124                           | 31                          | 124                               | 31                                    |
| 1980 | 160             | 32               | 128                  | 0                  | 128                           | 32                          | 128                               | 32                                    |
| 1981 | 165             | 33               | 132                  | 0                  | 132                           | 33                          | 132                               | 33                                    |
| 1982 | 170             | 34               | 136                  | 0                  | 136                           | 34                          | 136                               | 34                                    |
| 1983 | 175             | 35               | 140                  | 0                  | 140                           | 35                          | 140                               | 35                                    |
| 1984 | 180             | 36               | 144                  | 0                  | 144                           | 36                          | 144                               | 36                                    |
| 1985 | 185             | 37               | 148                  | 0                  | 148                           | 37                          | 148                               | 37                                    |
| 1986 | 190             | 38               | 152                  | 0                  | 152                           | 38                          | 152                               | 38                                    |
| 1987 | 195             | 39               | 156                  | 0                  | 156                           | 39                          | 156                               | 39                                    |
| 1988 | 200             | 40               | 160                  | 0                  | 160                           | 40                          | 160                               | 40                                    |
| 1989 | 205             | 41               | 164                  | 0                  | 164                           | 41                          | 164                               | 41                                    |
| 1990 | 210             | 42               | 168                  | 0                  | 168                           | 42                          | 168                               | 42                                    |
| 1991 | 215             | 43               | 172                  | 0                  | 172                           | 43                          | 172                               | 43                                    |
| 1992 | 220             | 44               | 176                  | 0                  | 176                           | 44                          | 176                               | 44                                    |
| 1993 | 225             | 45               | 180                  | 0                  | 180                           | 45                          | 180                               | 45                                    |
| 1994 | 230             | 46               | 184                  | 0                  | 184                           | 46                          | 184                               | 46                                    |
| 1995 | 235             | 47               | 188                  | 0                  | 188                           | 47                          | 188                               | 47                                    |
| 1996 | 240             | 48               | 192                  | 0                  | 192                           | 48                          | 192                               | 48                                    |
| 1997 | 245             | 49               | 196                  | 0                  | 196                           | 49                          | 196                               | 49                                    |
| 1998 | 250             | 50               | 200                  | 0                  | 200                           | 50                          | 200                               | 50                                    |
| 1999 | 255             | 51               | 204                  | 0                  | 204                           | 51                          | 204                               | 51                                    |
| 2000 | 260             | 52               | 208                  | 0                  | 208                           | 52                          | 208                               | 52                                    |
| 2001 | 265             | 53               | 212                  | 0                  | 212                           | 53                          | 212                               | 53                                    |
| 2002 | 270             | 54               | 216                  | 0                  | 216                           | 54                          | 216                               | 54                                    |
| 2003 | 275             | 55               | 220                  | 0                  | 220                           | 55                          | 220                               | 55                                    |
| 2004 | 280             | 56               | 224                  | 0                  | 224                           | 56                          | 224                               | 56                                    |
| 2005 | 285             | 57               | 228                  | 0                  | 228                           | 57                          | 228                               | 57                                    |
| 2006 | 290             | 58               | 232                  | 0                  | 232                           | 58                          | 232                               | 58                                    |
| 2007 | 295             | 59               | 236                  | 0                  | 236                           | 59                          | 236                               | 59                                    |
| 2008 | 300             | 60               | 240                  | 0                  | 240                           | 60                          | 240                               | 60                                    |
| 2009 | 305             | 61               | 244                  | 0                  | 244                           | 61                          | 244                               | 61                                    |
| 2010 | 310             | 62               | 248                  | 0                  | 248                           | 62                          | 248                               | 62                                    |
| 2011 | 315             | 63               | 252                  | 0                  | 252                           | 63                          | 252                               | 63                                    |
| 2012 | 320             | 64               | 256                  | 0                  | 256                           | 64                          | 256                               | 64                                    |
| 2013 | 325             | 65               | 260                  | 0                  | 260                           | 65                          | 260                               | 65                                    |
| 2014 | 330             | 66               | 264                  | 0                  | 264                           | 66                          | 264                               | 66                                    |
| 2015 | 335             | 67               | 268                  | 0                  | 268                           | 67                          | 268                               | 67                                    |
| 2016 | 340             | 68               | 272                  | 0                  | 272                           | 68                          | 272                               | 68                                    |
| 2017 | 345             | 69               | 276                  | 0                  | 276                           | 69                          | 276                               | 69                                    |
| 2018 | 350             | 70               | 280                  | 0                  | 280                           | 70                          | 280                               | 70                                    |
| 2019 | 355             | 71               | 284                  | 0                  | 284                           | 71                          | 284                               | 71                                    |
| 2020 | 360             | 72               | 288                  | 0                  | 288                           | 72                          | 288                               | 72                                    |
| 2021 | 365             | 73               | 292                  | 0                  | 292                           | 73                          | 292                               | 73                                    |
| 2022 | 370             | 74               | 296                  | 0                  | 296                           | 74                          | 296                               | 74                                    |
| 2023 | 375             | 75               | 300                  | 0                  | 300                           | 75                          | 300                               | 75                                    |
| 2024 | 380             | 76               | 304                  | 0                  | 304                           | 76                          | 304                               | 76                                    |
| 2025 | 385             | 77               | 308                  | 0                  | 308                           | 77                          | 308                               | 77                                    |
| 2026 | 390             | 78               | 312                  | 0                  | 312                           | 78                          | 312                               | 78                                    |
| 2027 | 395             | 79               | 316                  | 0                  | 316                           | 79                          | 316                               | 79                                    |
| 2028 | 400             | 80               | 320                  | 0                  | 320                           | 80                          | 320                               | 80                                    |
| 2029 | 405             | 81               | 324                  | 0                  | 324                           | 81                          | 324                               | 81                                    |
| 2030 | 410             | 82               | 328                  | 0                  | 328                           | 82                          | 328                               | 82                                    |
| 2031 | 415             | 83               | 332                  | 0                  | 332                           | 83                          | 332                               | 83                                    |
| 2032 | 420             | 84               | 336                  | 0                  | 336                           | 84                          | 336                               | 84                                    |
| 2033 | 425             | 85               | 340                  | 0                  | 340                           | 85                          | 340                               | 85                                    |
| 2034 | 430             | 86               | 344                  | 0                  | 344                           | 86                          | 344                               | 86                                    |
| 2035 | 435             | 87               | 348                  | 0                  | 348                           | 87                          | 348                               | 87                                    |
| 2036 | 440             | 88               | 352                  | 0                  | 352                           | 88                          | 352                               | 88                                    |
| 2037 | 445             | 89               | 356                  | 0                  | 356                           | 89                          | 356                               | 89                                    |
| 2038 | 450             | 90               | 360                  | 0                  | 360                           | 90                          | 360                               | 90                                    |
| 2039 | 455             | 91               | 364                  | 0                  | 364                           | 91                          | 364                               | 91                                    |
| 2040 | 460             | 92               | 368                  | 0                  | 368                           | 92                          | 368                               | 92                                    |
| 2041 | 465             | 93               | 372                  | 0                  | 372                           | 93                          | 372                               | 93                                    |
| 2042 | 470             | 94               | 376                  | 0                  | 376                           | 94                          | 376                               | 94                                    |
| 2043 | 475             | 95               | 380                  | 0                  | 380                           | 95                          | 380                               | 95                                    |
| 2044 | 480             | 96               | 384                  | 0                  | 384                           | 96                          | 384                               | 96                                    |
| 2045 | 485             | 97               | 388                  | 0                  | 388                           | 97                          | 388                               | 97                                    |
| 2046 | 490             | 98               | 392                  | 0                  | 392                           | 98                          | 392                               | 98                                    |
| 2047 | 495             | 99               | 396                  | 0                  | 396                           | 99                          | 396                               | 99                                    |
| 2048 | 500             | 100              | 400                  | 0                  | 400                           | 100                         | 400                               | 100                                   |

CHAPTER I

CONSTITUTION

1. The Board of Directors of the Hospital shall be composed of not more than twenty-five members, of whom not more than ten shall be laymen, and not more than five shall be members of the clergy. The Board shall elect a President and a Vice-President, and shall also elect a Secretary and a Treasurer.

PART I

GENERAL

2. The Board of Directors shall have the right to acquire, hold, lease, convey, mortgage, and otherwise dispose of real and personal property, and to incur any liability, in the name of the Hospital, for the purpose of carrying out its objects.

3. The Board of Directors shall have the right to borrow money, to issue bonds, to mortgage any real or personal property of the Hospital, and to incur any liability, in the name of the Hospital, for the purpose of carrying out its objects. The Board shall also have the right to make any contract, to execute any instrument, and to do any act, which may be necessary or proper for the carrying out of its objects. The Board shall also have the right to make any contract, to execute any instrument, and to do any act, which may be necessary or proper for the carrying out of its objects.

4. The Board of Directors shall have the right to make any contract, to execute any instrument, and to do any act, which may be necessary or proper for the carrying out of its objects.

5. The Board of Directors shall have the right to make any contract, to execute any instrument, and to do any act, which may be necessary or proper for the carrying out of its objects. It shall also have the right to make any contract, to execute any instrument, and to do any act, which may be necessary or proper for the carrying out of its objects.

6. The Board of Directors shall have the right to make any contract, to execute any instrument, and to do any act, which may be necessary or proper for the carrying out of its objects.

7. The Board of Directors shall have the right to make any contract, to execute any instrument, and to do any act, which may be necessary or proper for the carrying out of its objects.

8. The Board of Directors shall have the right to make any contract, to execute any instrument, and to do any act, which may be necessary or proper for the carrying out of its objects. It shall also have the right to make any contract, to execute any instrument, and to do any act, which may be necessary or proper for the carrying out of its objects.

PART I  
GENERAL

## CHAPTER ONE

### LEGISLATION

81. Much legislation was being planned and introduced during 1958. Four Ordinances were passed during the year and another two were placed before the Assembly in the forms of Bills. It is expected that this legislation will be approved early in the new year.

#### *Hospitals Board (Amendment) Ordinance, 1958 (No. 15 of 1958)*

82. This Ordinance is the result of the administrative re-organisation in changes in departmental titles in the Treasury and in the Ministry of Health. The Bill substitutes 'a Deputy Secretary (Treasury)' for 'the Deputy Financial Secretary' and 'the Assistant Director of Medical Services (Hospitals)' for 'the Chief Medical Officer' respectively.

#### *Quarantine and Prevention of Disease (Amendment) Ordinance, 1958 (No. 19 of 1958)*

83. In pursuance of the Government's programme in connection with tuberculosis, a Central Registry under the direction of the Assistant Director of Medical Services (Tuberculosis) has been set up and this amending ordinance enables the Registry to carry out functions in connection with obtaining all particulars of persons suffering from or who have died from tuberculosis. The amendment makes it obligatory of medical practitioners to notify the Assistant Director of Medical Services (Tuberculosis) of cases of tuberculosis; these were formally notified to the Health Officer of the local authority. The form of notification has been amended to give more complete and fuller details of the patient and information in respect of radiologic and laboratory examinations done.

#### *Kwong Wai Shiu Hospital (Amendment) Ordinance, 1958 (No. 28 of 1958)*

84. This Ordinance enables the permitted maximum number of committee members to be increased from 40 to 60. This has been considered necessary as a result of the rapid expansion of the hospital which is run on a charitable basis and maintained solely by members of the Cantonese community through voluntary subscriptions and donations. It has been felt that the number of members provided for in the Principal Ordinance in 1910 is inadequate for the working administration and affairs of the hospital at the present time.

#### *The Factories Ordinance, 1958 (No. 41 of 1958)*

85. This legislation was introduced by the Minister for Labour and Welfare, but there has been consultation with this Ministry especially in regard to the provisions for the health and conditions of work in the factories.

86. Part IV of this Ordinance lays down in considerable details general provisions regarding the clean and sanitary state of factories and workshops, has provisions for ventilation, lighting and drainage and for sanitary conveniences. Special provisions and powers for making regulations are also provided for the removal of dust or fumes, for protection of clothing and appliances, for the protection of eyes in certain processes, and for notification

of certain industrial diseases. Provision is also made for medical supervision if this is deemed necessary in certain classes of factories or for certain categories of workers.

#### *Nursing Homes and Maternity Homes Bill*

87. This Bill (approved since by the Assembly as No. 5 of 1959) provides for the registration control and supervision of premises used for the reception of sick or convalescent persons and of premises used for the reception of pregnant women or of women immediately after childbirth. Maternity homes or nursing homes maintained by Government or a local authority or places licensed under local authority by laws for the reception of sick or dying are exempt from the provisions of this Ordinance.

88. The power to register such homes is vested in the local authority with consequential powers of entry and inspection. Provision is made for the Minister to make regulations regarding the nature of records to be kept, the notification of births and deaths in the Home and the standards of siting, construction, accommodation, sanitation, water-supply, lighting, staffing and equipment.

#### *Midwives (Amendment) Bill*

89. This Bill was finalised during the year and has since then been tabled in the Legislative Assembly. It was approved by the Assembly in February 1959.

90. Some of the provisions are consequential to changes in respect of the administration of Christmas Island and the Cocos and Keeling Islands. Other provisions are consequential to the re-organization of the local government in Singapore. Persons who are entitled to be registered under the Ordinance is defined more accurately. The Midwives Board is given more extension power to make rules to enable it to carry out its duties and exercise its power under the Ordinance. Provision is also made for the compilation and publication of a Register of Midwives.

### SUBSIDIARY LEGISLATION

#### *Methyl Bromide Fumigation Regulations*

91. During the course of the year the Methyl Bromide Fumigation Regulations and together with the Hydrogen Cyanide Application Order were brought into force to enable fumigation with Methyl Bromide to be controlled under the provisions of the Hydrogen Cyanide Fumigation Ordinance. The object of this is to restrict such operations to licensed operators who will work under special licences granted by the Director of Medical Services and who will be required to take such precautions as are necessary in the use of this toxic gas.

#### *Food and Drug Regulations*

92. The Food and Drugs Sub-committee of the Medical Advisory Council studied the operation of the revised Food and Drugs Regulations which were published in 1957 and have finalised recommendations to the Medical Advisory Council for a number of amendments—some of them involving major changes of policy regarding the control of certain food for submission to the Minister for his consideration. These recommendations have since been approved by the Medical Advisory Council and submitted to the Minister.

## CHAPTER TWO

### STAFF WELFARE

93. During the course of 1958 the major problem which received the attention of both Government and the Staff Side was the re-organisation by the Medical Services, in particular, the re-organisation of Division II and Division III. The re-organisation of Division IV was tied up with the re-organisation of other departments and had already been completed. This re-organisation involved the preparation of schemes of service and the unifying of a multiplicity of salary scales on to four basic salary scales which had been accepted for the General Civil Service re-organisation. This work had reached its final stages by the end of 1958 and is expected to be approved by Government early in 1959.

94. The Personnel and Welfare Section of the Government Health Department continued to provide a Welfare Service for daily rated labour force. The distribution of the labour force to the three future District Councils with the retention of a small nucleus for the work of the Central Health Office was done satisfactorily taking into account the personal problems involved in such transfers. A healthy relation between the official side and the labour force has been maintained. The financial position of the Government Health Department Labourers' Co-operative Credit Society Ltd. is given in Table 3.

TABLE 3

#### FINANCIAL SUMMARY OF GOVERNMENT HEALTH DEPARTMENT LABOURERS' CO-OPERATIVE CREDIT SOCIETY LTD.

|                          |     | <i>Year ended<br/>31st December,<br/>1957</i> | <i>Year ended<br/>31st December,<br/>1958</i> |
|--------------------------|-----|---|---|
| Post Office Savings Bank | ... | 10,026 79                                     | 9,185 06                                      |
| Chartered Bank           | ... | 1,435 65                                      | 3,492 84                                      |
| Cash in transit          | ... | 1,865 90                                      | 2,111 65                                      |
| Investments              | ... | 50,256 25                                     | 50,256 25                                     |
| Loans outstanding        | ... | 8,051 25                                      | 8,373 00                                      |
|                          |     | <hr/>   | <hr/>   |
| Total Credit balance     | ... | 71,635 84                                     | 73,418 80                                     |
|                          |     | <hr/>   | <hr/>   |
| Membership               | ... | 209   | 200   |
| Total staff eligible     | ... | 1,132   | 1,224   |

95. The Annual Sports of the Singapore Medical Services was held in October. General Hospital won the Challenge Shield.

96. Concerts, social activities and children's parties were held in various institutions during the year.

CHAPTER THREE

VITAL STATISTICS

97. The population for the mid-year 1958 is based on the actual 1957 census figure plus migration surplus cases both over death census then on this calculation is estimated as 1,514,900. The details of the population by race since the census of 1911 are given in Table 4.

TABLE 4  
POPULATION OF SINGAPORE, 1911-58

| Year               | Chinese   | Malay-<br>sians | Indians<br>and<br>Pakis-<br>tanis | Euro-<br>peans | Eura-<br>sians | Others | Total     |
|--------------------|-----------|-----------------|-----------------------------------|----------------|----------------|--------|-----------|
| 1911 (Census) ..   | 219,577   | 41,806          | 27,755                            | 5,711          | 4,671          | 3,801  | 303,321   |
| 1921 (Census) ..   | 315,151   | 53,595          | 32,314                            | 6,145          | 5,346          | 5,717  | 418,358   |
| 1931 (Census) ..   | 418,640   | 65,014          | 50,811                            | 8,082          | 6,903          | 8,295  | 557,745   |
| 1947 (Census) ..   | 729,473   | 113,803         | 68,967                            | 9,279          | 9,110          | 7,512  | 938,144   |
| 1957 (Census) ..   | 1,090,595 | 197,060         | 124,084                           | 10,826         | 11,382         | 11,982 | 1,445,929 |
| 1958 (Mid-Year) .. | 1,141,800 | 207,300         | 129,500                           | 12,100         | 11,100         | 12,500 | 1,514,900 |

TABLE 5  
MID-YEAR POPULATION ESTIMATES OF SINGAPORE BY RACIAL GROUP  
AND SEX, 1958

| Racial Group                 | Male    | Female  | Total     |
|------------------------------|---------|---------|-----------|
| Chinese .. ..                | 580,600 | 561,200 | 1,141,800 |
| Malaysians .. ..             | 108,300 | 99,000  | 207,300   |
| Indians and Pakistanis .. .. | 88,800  | 40,700  | 129,500   |
| Europeans .. ..              | 6,300   | 5,800   | 12,100    |
| Eurasians .. ..              | 5,800   | 5,900   | 11,700    |
| Others .. ..                 | 6,600   | 5,900   | 12,500    |
| Total .. ..                  | 796,400 | 718,500 | 1,514,900 |

98. The ratio of females to males in 1931 was 584 to 1,000. At the 1947 census it was 819 to 1,000. The ratio of females to males in the 1957 census was 940 to 1,000; in 1958 this ratio was 902 to 1,000.

99. The annual increases in the number of births continues to increase. The 1958 figure of 63,572 constitutes an all time record; this compares with 62,685 in 1957.

100. The crude birth rate was 41.9. The trend in the birth rate now appears to be stabilising around 42 for the last two or three years.

TABLE 6

LIVE-BIRTHS WHICH OCCURRED IN 1958

BY RACIAL GROUP AND AGE OF MOTHER AND BY SEX OF CHILD

| Mothers<br>Age in<br>Years | TOTAL   |        |        | CHINESE |        | MALAYSIANS |       | INDIANS AND<br>PAKISTANIS |       | EURO-<br>PEANS |     | EURA-<br>SIANS |     | OTHERS |     |
|----------------------------|---------|--------|--------|---------|--------|------------|-------|---------------------------|-------|----------------|-----|----------------|-----|--------|-----|
|                            | M. & F. | M.     | F.     | M.      | F.     | M.         | F.    | M.                        | F.    | M.             | F.  | M.             | F.  | M.     | F.  |
| 12                         | 3       | 2      | 1      | ..      | ..     | 2          | 1     | ..                        | ..    | ..             | ..  | ..             | ..  | ..     | ..  |
| 13                         | 4       | 1      | 3      | ..      | 1      | ..         | 1     | 1                         | 1     | ..             | ..  | ..             | ..  | ..     | ..  |
| 14                         | 32      | 16     | 16     | 1       | 4      | 7          | 8     | 8                         | 4     | ..             | ..  | ..             | ..  | ..     | ..  |
| 15                         | 102     | 49     | 53     | 12      | 12     | 25         | 25    | 11                        | 16    | ..             | ..  | ..             | ..  | 1      | ..  |
| 16                         | 356     | 188    | 168    | 57      | 45     | 86         | 73    | 39                        | 44    | ..             | ..  | ..             | ..  | 6      | 6   |
| 17                         | 848     | 437    | 411    | 175     | 170    | 167        | 169   | 82                        | 63    | 1              | 1   | 3              | 1   | 9      | 7   |
| 18                         | 1,738   | 907    | 831    | 455     | 442    | 320        | 241   | 117                       | 125   | 5              | 4   | 2              | 4   | 8      | 15  |
| 19                         | 2,121*  | 1,115  | 1,005  | 627     | 569    | 341        | 298   | 121                       | 111   | 12             | 8   | 7              | 4   | 7      | 15  |
| 20                         | 3,003   | 1,567  | 1,436  | 932     | 843    | 393        | 390   | 182                       | 165   | 22             | 20  | 11             | 11  | 27     | 7   |
| 21                         | 2,767   | 1,370  | 1,397  | 856     | 869    | 286        | 308   | 162                       | 149   | 35             | 38  | 13             | 11  | 18     | 22  |
| 22                         | 4,008   | 2,090  | 1,918  | 1,420   | 1,305  | 407        | 392   | 181                       | 151   | 50             | 44  | 12             | 14  | 20     | 12  |
| 23                         | 4,032   | 2,059  | 1,973  | 1,465   | 1,419  | 362        | 351   | 160                       | 141   | 46             | 35  | 10             | 8   | 16     | 19  |
| 24                         | 3,992   | 2,040  | 1,952  | 1,513   | 1,422  | 314        | 287   | 137                       | 158   | 52             | 55  | 9              | 11  | 15     | 19  |
| 25                         | 3,980   | 2,120  | 1,860  | 1,478   | 1,340  | 383        | 316   | 180                       | 136   | 41             | 46  | 15             | 9   | 23     | 13  |
| 26                         | 3,773   | 1,984  | 1,789  | 1,508   | 1,342  | 258        | 251   | 136                       | 120   | 48             | 40  | 16             | 16  | 18     | 20  |
| 27                         | 3,578   | 1,810  | 1,768  | 1,381   | 1,339  | 243        | 235   | 110                       | 128   | 50             | 36  | 9              | 14  | 17     | 16  |
| 28                         | 4,032   | 2,029  | 2,003  | 1,495   | 1,477  | 335        | 315   | 129                       | 148   | 38             | 36  | 13             | 10  | 19     | 17  |
| 29                         | 3,145   | 1,623  | 1,522  | 1,293   | 1,211  | 196        | 172   | 77                        | 89    | 33             | 30  | 7              | 6   | 17     | 14  |
| 30                         | 3,545   | 1,832  | 1,713  | 1,341   | 1,264  | 303        | 288   | 127                       | 105   | 35             | 35  | 6              | 11  | 20     | 10  |
| 31                         | 2,430   | 1,279  | 1,151  | 1,042   | 957    | 116        | 103   | 63                        | 58    | 34             | 20  | 12             | 8   | 12     | 5   |
| 32                         | 2,363   | 1,195  | 1,168  | 936     | 914    | 152        | 144   | 67                        | 68    | 27             | 26  | 7              | 6   | 6      | 10  |
| 33                         | 1,854   | 958    | 896    | 760     | 713    | 107        | 95    | 53                        | 54    | 19             | 21  | 11             | 4   | 8      | 9   |
| 34                         | 1,861   | 950    | 911    | 801     | 735    | 90         | 97    | 37                        | 39    | 15             | 18  | 2              | 12  | 5      | 10  |
| 35                         | 1,872   | 977    | 895    | 746     | 655    | 144        | 175   | 60                        | 41    | 20             | 13  | 4              | 7   | 3      | 4   |
| 36                         | 1,481   | 753    | 728    | 651     | 600    | 66         | 69    | 25                        | 40    | 6              | 11  | 2              | 6   | 3      | 2   |
| 37                         | 1,344   | 705    | 639    | 609     | 550    | 46         | 48    | 31                        | 32    | 9              | 5   | 4              | 3   | 6      | 1   |
| 38                         | 1,295   | 656    | 639    | 557     | 531    | 64         | 69    | 20                        | 21    | 8              | 14  | 4              | 2   | 3      | 2   |
| 39                         | 946     | 478    | 468    | 411     | 407    | 42         | 33    | 16                        | 13    | 2              | 7   | 3              | 5   | 4      | 3   |
| 40                         | 965     | 507    | 458    | 436     | 385    | 46         | 50    | 12                        | 19    | 8              | 2   | 2              | 2   | 3      | ..  |
| 41                         | 582     | 273    | 309    | 242     | 282    | 13         | 12    | 8                         | 12    | 6              | 1   | 1              | 1   | 3      | 1   |
| 42                         | 527†    | 275    | 251    | 256     | 236    | 6          | 11    | 5                         | 3     | 8              | ..  | ..             | ..  | ..     | 1   |
| 43                         | 362     | 186    | 176    | 181     | 167    | 4          | 6     | 1                         | ..    | ..             | 2   | ..             | 1   | ..     | ..  |
| 44                         | 245     | 133    | 112    | 121     | 107    | 6          | 3     | 3                         | 1     | 3              | 1   | ..             | ..  | ..     | ..  |
| 45                         | 205     | 105    | 100    | 92      | 85     | 12         | 12    | ..                        | 3     | 1              | ..  | ..             | ..  | ..     | ..  |
| Over 45                    | 174     | 86     | 88     | 75      | 86     | 10         | 2     | 1                         | ..    | ..             | ..  | ..             | ..  | ..     | ..  |
| Un-<br>known               | 7       | 4      | 3      | 2       | 2      | ..         | ..    | ..                        | ..    | ..             | ..  | ..             | ..  | 2      | 1   |
| Total ..                   | 63,572‡ | 32,759 | 30,811 | 23,927  | 22,486 | 5,352      | 5,050 | 2,362                     | 2,258 | 634            | 569 | 185            | 187 | 299    | 261 |

\* Includes 1 of unknown sex (Indians and Pakistanis).

† Includes 1 of unknown sex (Chinese).

‡ Includes 2 of unknown sex.

TABLE 7  
LIVE-BIRTHS WHICH OCCURRED IN 1958  
REGISTRATION AREA, RACIAL GROUP OF FATHER AND SEX OF CHILD

| Racial Group           | CITY AREA |        |         | RURAL AREA |        |        | SINGAPORE TOTAL |        |         |
|------------------------|-----------|--------|---------|------------|--------|--------|-----------------|--------|---------|
|                        | Male      | Female | Total   | Male       | Female | Total  | Male            | Female | Total   |
|                        | Chinese   | 18,535 | 17,312  | 35,848*    | 5,286  | 5,055  | 10,341          | 23,821 | 22,367  |
| Malaysians             | 2,769     | 2,636  | 5,405   | 2,390      | 2,210  | 4,600  | 5,159           | 4,846  | 10,005  |
| Indians and Pakistanis | 2,121     | 2,041  | 4,163*  | 486        | 467    | 953    | 2,607           | 2,508  | 5,116*  |
| Europeans              | 458       | 413    | 871     | 206        | 195    | 401    | 664             | 608    | 1,272   |
| Eurasians              | 138       | 164    | 302     | 35         | 25     | 60     | 173             | 189    | 362     |
| Others                 | 288       | 246    | 534     | 47         | 47     | 94     | 335             | 293    | 628     |
| Total                  | 24,309    | 22,812 | 47,123† | 8,450      | 7,999  | 16,449 | 32,759          | 30,811 | 63,572† |

\* Includes 1 of unknown sex.

† Includes 2 of unknown sex.

TABLE 8

LIVE-BIRTHS WHICH OCCURRED IN 1958

BY PLACE OF USUAL RESIDENCE OF PARENTS, RACIAL GROUP OF FATHER AND SEX OF CHILD

| Place of Usual Residence | Chinese |        | Malaysians |       | Indians and Pakistanis |       | Europeans |     | Eurasians |     | Others |     | TOTAL  |        |         |
|--------------------------|---------|--------|------------|-------|------------------------|-------|-----------|-----|-----------|-----|--------|-----|--------|--------|---------|
|                          | M.      | F.     | M.         | F.    | M.                     | F.    | M.        | F.  | M.        | F.  | M.     | F.  | M.     | F.     |         |
|                          | City .. | 14,880 | 13,957     | 2,557 | 2,420                  | 1,610 | 1,468     | 245 | 230       | 73  | 96     | 220 | 204    | 19,585 | 18,375  |
| Katong ..                | 2,564   | 2,516  | 1,505      | 1,375 | 309                    | 331   | 119       | 107 | 66        | 42  | 54     | 52  | 4,617  | 4,423  | 9,041*  |
| Serangoon ..             | 4,004   | 3,804  | 442        | 393   | 483                    | 478   | 237       | 208 | 26        | 41  | 35     | 23  | 5,227  | 4,947  | 10,174  |
| Bukit Panjang ..         | 1,236   | 1,086  | 197        | 215   | 156                    | 173   | 16        | 17  | 4         | 7   | 5      | 2   | 1,614  | 1,500  | 3,115†  |
| Jurong ..                | 1,040   | 900    | 167        | 166   | 30                     | 37    | 4         | 5   | 2         | 1   | 2      | 2   | 1,245  | 1,111  | 2,356   |
| Southern Islands ..      | 64      | 67     | 272        | 260   | 6                      | 13    | 3         | 4   | 1         | 1   | 2      | ..  | 348    | 345    | 693     |
| Singapore Unspecified .. | 15      | 23     | 6          | 2     | 6                      | 4     | 4         | 1   | ..        | 1   | 1      | 1   | 32     | 32     | 64      |
| Federation ..            | 16      | 12     | 13         | 13    | 7                      | 3     | 35        | 34  | 1         | ..  | 16     | 9   | 88     | 71     | 159     |
| Overseas ..              | 2       | 2      | ..         | 2     | ..                     | 1     | 1         | 2   | ..        | ..  | ..     | ..  | 3      | 7      | 10      |
| Total ..                 | 23,821  | 22,367 | 5,159      | 4,846 | 2,607                  | 2,508 | 664       | 608 | 173       | 189 | 335    | 293 | 32,759 | 30,811 | 63,572‡ |

\* Includes 1 of unknown sex (Indians and Pakistanis).

† Includes 1 of unknown sex (Chinese).

‡ Includes 2 of unknown sex.

TABLE 9  
LIVE-BIRTHS WHICH OCCURRED IN 1958

BY PLACE OF USUAL RESIDENCE OF PARENTS, REGISTRATION AREA AND SEX OF CHILD

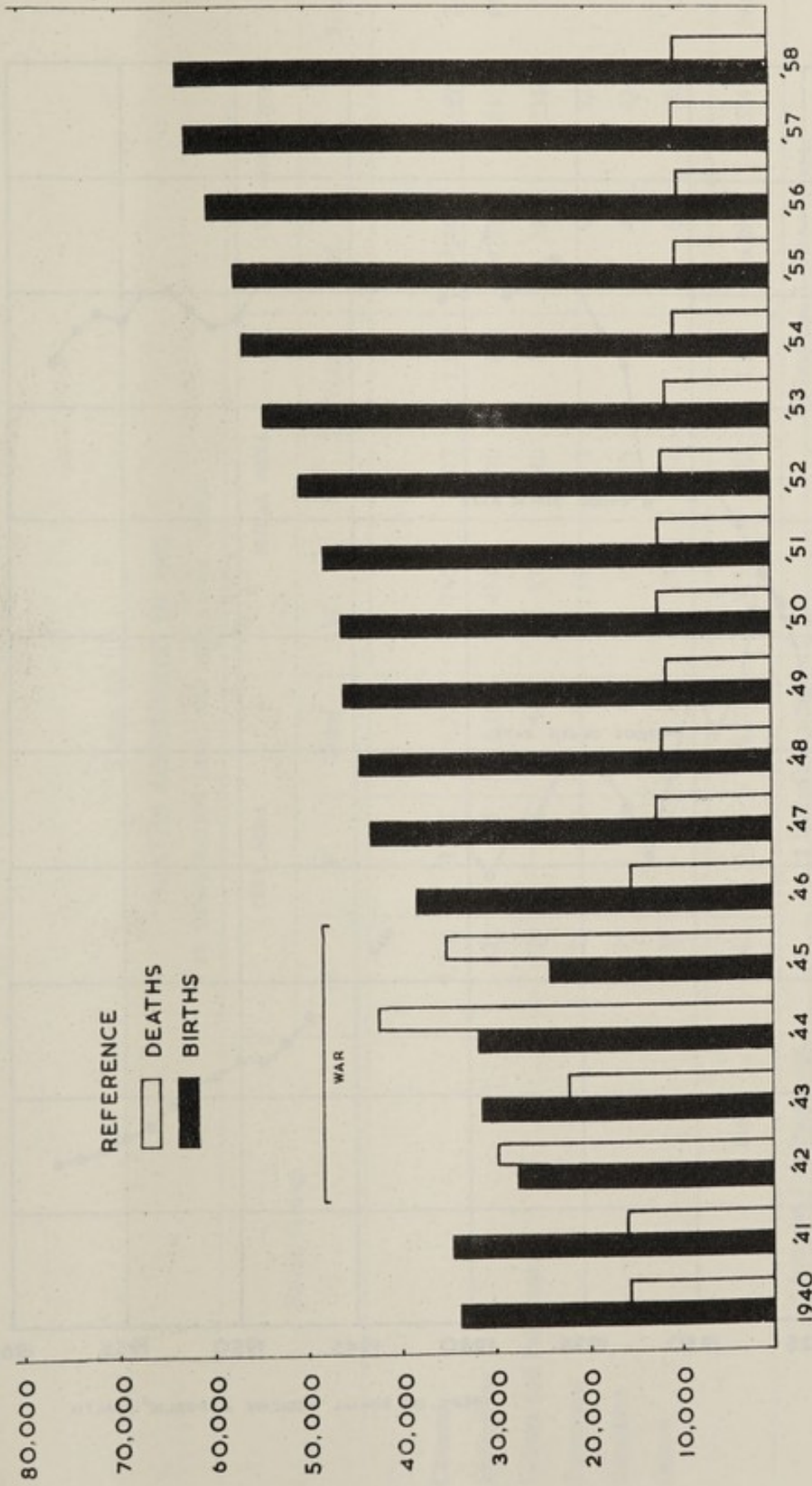
| Place of Usual Residence | REGISTRATION AREA |        |         |            |        |        | TOTAL  |        |         |
|--------------------------|-------------------|--------|---------|------------|--------|--------|--------|--------|---------|
|                          | CITY AREA         |        |         | RURAL AREA |        |        | Male   | Female | Total   |
|                          | Male              | Female | Total   | Male       | Female | Total  |        |        |         |
| City ..                  | 19,427            | 18,223 | 37,650  | 158        | 152    | 310    | 19,585 | 18,375 | 37,960  |
| Katong ..                | 1,518             | 1,510  | 3,029*  | 3,099      | 2,913  | 6,012  | 4,617  | 4,423  | 9,041*  |
| Serangoon ..             | 2,223             | 2,074  | 4,297   | 3,004      | 2,873  | 5,877  | 5,227  | 4,947  | 10,174  |
| Bukit Panjang ..         | 598               | 539    | 1,138*  | 1,016      | 961    | 1,977  | 1,614  | 1,500  | 3,115*  |
| Jurong ..                | 392               | 325    | 717     | 853        | 786    | 1,639  | 1,245  | 1,111  | 2,356   |
| Southern Islands ..      | 46                | 48     | 94      | 302        | 297    | 599    | 348    | 345    | 693     |
| Singapore Unspecified .. | 23                | 30     | 53      | 9          | 2      | 11     | 32     | 32     | 64      |
| Federation ..            | 79                | 57     | 136     | 9          | 14     | 23     | 88     | 71     | 159     |
| Overseas ..              | 3                 | 6      | 9       | ..         | 1      | 1      | 3      | 7      | 10      |
| Total ..                 | 24,309            | 22,812 | 47,123† | 8,450      | 7,999  | 16,449 | 32,759 | 30,811 | 63,572† |

\* Includes 1 of unknown sex.

† Includes 2 of unknown sex.

SINGAPORE

DIAGRAM TO SHOW TOTAL BIRTHS & DEATHS FOR PERIOD 1940 - 1958



# SINGAPORE

## TREND OF CRUDE BIRTH AND DEATH RATES: 1920 ONWARDS

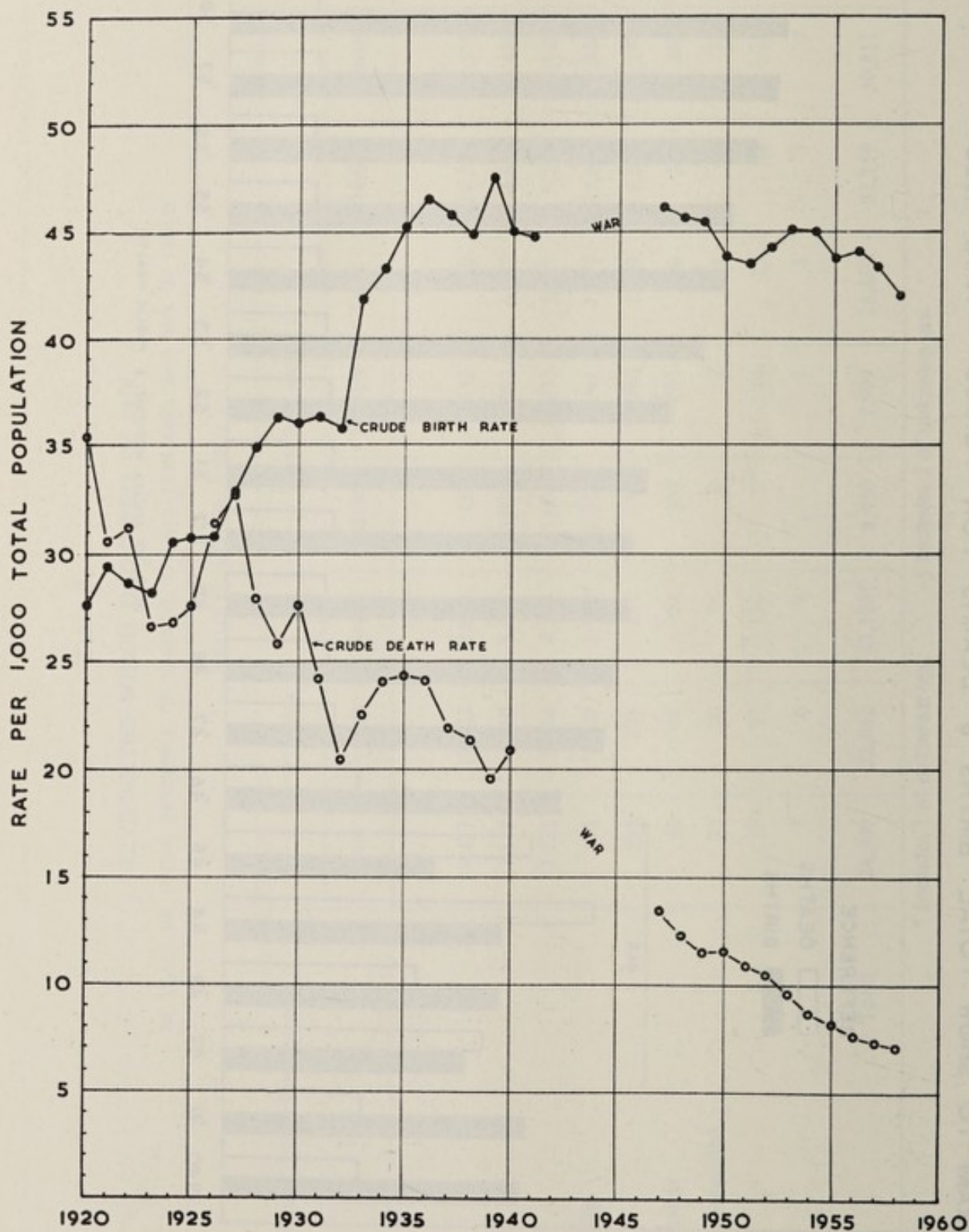


TABLE 10  
DEATHS REGISTERED IN 1958  
BY REGISTRATION AREA, SEX AND RACIAL GROUP

| Racial Group           | CITY AREA |       |        | RURAL AREA |       |       | SINGAPORE TOTAL |       |         |
|------------------------|-----------|-------|--------|------------|-------|-------|-----------------|-------|---------|
|                        | M.        | F.    | Total  | M.         | F.    | Total | M.              | F.    | Total   |
| Chinese                | 3,722     | 2,532 | 6,255* | 741        | 617   | 1,358 | 4,463           | 3,149 | 7,613*  |
| Malaysians             | 622       | 485   | 1,107  | 454        | 370   | 824   | 1,076           | 855   | 1,931   |
| Indians and Pakistanis | 470       | 195   | 665    | 87         | 40    | 127   | 557             | 235   | 792     |
| Europeans              | 79        | 20    | 99     | 13         | 2     | 15    | 92              | 22    | 114     |
| Eurasians              | 35        | 28    | 63     | 9          | 15    | 24    | 44              | 43    | 87      |
| Others                 | 55        | 22    | 83†    | 11         | 8     | 19    | 66              | 30    | 102†    |
| Total                  | 4,983     | 3,282 | 8,272† | 1,315      | 1,052 | 2,367 | 6,298           | 4,334 | 10,639† |

\* Includes 1 unknown sex.

† Includes 6 unknown sex.

‡ Includes 7 unknown sex.

TABLE 11  
DEATHS REGISTERED IN 1958  
BY PLACE OF USUAL RESIDENCE, SEX AND RACIAL GROUP

| Place of Usual Residence | Chinese |       | Malaysians |     | Indians and<br>Pakistans |     | Europeans |    | Eurasians |    | Others |    | TOTAL |       |         |
|--------------------------|---------|-------|------------|-----|--------------------------|-----|-----------|----|-----------|----|--------|----|-------|-------|---------|
|                          | M.      | F.    | M.         | F.  | M.                       | F.  | M.        | F. | M.        | F. | M.     | F. | M.    | F.    |         |
|                          |         |       |            |     |                          |     |           |    |           |    |        |    |       |       |         |
| City ..                  | 3,011   | 2,094 | 518        | 421 | 357                      | 160 | 46        | 15 | 21        | 19 | 39     | 15 | 3,992 | 2,724 | 6,717*  |
| Katong ..                | 394     | 336   | 313        | 275 | 79                       | 28  | 15        | .. | 14        | 14 | 10     | 9  | 825   | 662   | 1,487   |
| Serangoon ..             | 628     | 457   | 102        | 54  | 79                       | 35  | 11        | 5  | 7         | 10 | 4      | 3  | 831   | 564   | 1,395   |
| Bukit Panjang ..         | 169     | 125   | 40         | 34  | 19                       | 11  | 3         | .. | 1         | .. | ..     | .. | 232   | 170   | 402     |
| Jurong ..                | 135     | 95    | 48         | 33  | 7                        | 1   | ..        | .. | ..        | .. | ..     | .. | 190   | 129   | 319     |
| Southern Islands ..      | 13      | 4     | 41         | 26  | 2                        | ..  | ..        | .. | ..        | .. | ..     | .. | 56    | 30    | 86      |
| Singapore Unspecified .. | 67      | 16    | 2          | 3   | 10                       | ..  | 4         | .. | ..        | .. | 5      | .. | 88    | 19    | 113†    |
| Federation ..            | 42      | 21    | 11         | 9   | 4                        | ..  | 3         | 2  | 1         | .. | 8      | 2  | 69    | 34    | 103     |
| Overseas ..              | 4       | 1     | 1          | ..  | ..                       | ..  | 10        | .. | ..        | .. | ..     | 1  | 15    | 2     | 17      |
| Total ..                 | 4,463   | 3,149 | 1,076      | 855 | 557                      | 235 | 92        | 22 | 44        | 43 | 66     | 30 | 6,298 | 4,334 | 10,639‡ |

\* Includes 1 unknown sex (Chinese).

† Includes 6 unknown sex (Others).

‡ Includes 7 unknown sex.

TABLE 12  
DEATHS REGISTERED IN 1958  
BY PLACE OF USUAL RESIDENCE, REGISTRATION AREA AND SEX

| Place of Usual Residence | REGISTRATION AREA |        |        |            |        |       | TOTAL |        |         |
|--------------------------|-------------------|--------|--------|------------|--------|-------|-------|--------|---------|
|                          | CITY AREA         |        |        | RURAL AREA |        |       | Male  | Female | Total   |
|                          | Male              | Female | Total  | Male       | Female | Total |       |        |         |
| City ..                  | 3,936             | 2,692  | 6,629* | 56         | 32     | 88    | 3,992 | 2,724  | 6,717*  |
| Katong ..                | 324               | 196    | 520    | 501        | 466    | 967   | 825   | 662    | 1,487   |
| Serangoon ..             | 366               | 233    | 599    | 465        | 331    | 796   | 831   | 564    | 1,395   |
| Bukit Panjang ..         | 109               | 67     | 176    | 123        | 103    | 226   | 232   | 170    | 402     |
| Jurong ..                | 76                | 38     | 114    | 114        | 91     | 205   | 190   | 129    | 319     |
| Southern Islands ..      | 15                | 8      | 23     | 41         | 22     | 63    | 56    | 30     | 86      |
| Singapore Unspecified .. | 84                | 18     | 108†   | 4          | 1      | 5     | 88    | 19     | 113†    |
| Federation ..            | 59                | 28     | 87     | 10         | 6      | 16    | 69    | 34     | 103     |
| Overseas ..              | 14                | 2      | 16     | 1          | ..     | 1     | 15    | 2      | 17      |
| Total ..                 | 4,983             | 3,282  | 8,272‡ | 1,315      | 1,052  | 2,367 | 6,298 | 4,334  | 10,639‡ |

\* Includes 1 of unknown sex. † Includes 6 of unknown sex. ‡ Includes 7 of unknown sex.

TABLE 13  
DEATHS REGISTERED IN 1958  
BY AGE GROUP, RACIAL GROUP AND SEX

| Age Group                        | Total   |       |       | Chinese |       | Malay-<br>sians |     | Indians<br>and<br>Pakis-<br>tanis |     | Euro-<br>peans |    | Eura-<br>sians |    | Others |    |
|----------------------------------|---------|-------|-------|---------|-------|-----------------|-----|-----------------------------------|-----|----------------|----|----------------|----|--------|----|
|                                  | M. & F. | M.    | F.    | M.      | F.    | M.              | F.  | M.                                | F.  | M.             | F. | M.             | F. | M.     | F. |
| Under 1 day ..                   | 295     | 171   | 124   | 117     | 71    | 33              | 34  | 9                                 | 10  | 8              | 4  | 2              | 4  | 2      | 1  |
| 1 day and under 2 days ..        | 203     | 127   | 76    | 87      | 48    | 27              | 15  | 8                                 | 11  | 2              | .. | 1              | 2  | 2      | .. |
| 2 days and under 3 days ..       | 134     | 82    | 52    | 56      | 38    | 19              | 12  | 5                                 | 2   | ..             | .. | ..             | .. | 2      | .. |
| 3 days and under 4 days ..       | 101†    | 63    | 37    | 41      | 21    | 14              | 10  | 5                                 | 4   | 2              | 1  | ..             | .. | 1      | 1  |
| 4 days and under 5 days ..       | 67      | 39    | 28    | 21      | 15    | 15              | 11  | 3                                 | 2   | ..             | .. | ..             | .. | ..     | .. |
| 5 days and under 6 days ..       | 44      | 26    | 18    | 16      | 13    | 8               | 2   | 1                                 | 2   | 1              | .. | ..             | 1  | ..     | .. |
| 6 days and under 7 days ..       | 50      | 25    | 25    | 17      | 17    | 6               | 6   | 2                                 | 1   | ..             | 1  | ..             | .. | ..     | 1  |
| 7 days and under 14 days ..      | 152     | 99    | 53    | 67      | 35    | 23              | 12  | 7                                 | 4   | ..             | 1  | ..             | .. | 2      | 1  |
| 14 days and under 21 days ..     | 82      | 56    | 26    | 41      | 15    | 9               | 8   | 5                                 | 2   | 1              | 1  | ..             | .. | ..     | .. |
| 21 days and under 28 days ..     | 80      | 46    | 34    | 28      | 19    | 14              | 12  | 4                                 | 3   | ..             | .. | ..             | .. | ..     | .. |
| Neo-Natal Deaths ..              | 1,208†  | 734   | 473   | 491     | 292   | 168             | 122 | 49                                | 41  | 14             | 8  | 3              | 7  | 9      | 3  |
| 28 days and under 2 months ..    | 286     | 170   | 116   | 86      | 65    | 66              | 36  | 17                                | 13  | ..             | 2  | ..             | .. | 1      | .. |
| 2 months and under 3 months ..   | 231     | 132   | 99    | 62      | 57    | 58              | 37  | 10                                | 5   | ..             | .. | ..             | .. | 2      | .. |
| 3 months and under 4 months ..   | 169     | 94    | 75    | 45      | 40    | 41              | 26  | 6                                 | 7   | ..             | 1  | 1              | 1  | 1      | .. |
| 4 months and under 5 months ..   | 151     | 80    | 71    | 42      | 44    | 31              | 18  | 4                                 | 8   | 1              | .. | ..             | 1  | 2      | .. |
| 5 months and under 6 months ..   | 115     | 60    | 55    | 36      | 31    | 20              | 18  | 4                                 | 5   | ..             | .. | ..             | .. | ..     | 1  |
| 6 months and under 7 months ..   | 149     | 85    | 64    | 40      | 45    | 33              | 17  | 8                                 | 2   | ..             | .. | 1              | .. | 3      | .. |
| 7 months and under 8 months ..   | 113     | 48    | 65    | 24      | 31    | 18              | 27  | 5                                 | 5   | ..             | 1  | ..             | .. | 1      | 1  |
| 8 months and under 9 months ..   | 97      | 54    | 43    | 36      | 22    | 14              | 16  | 4                                 | 3   | ..             | 1  | ..             | .. | ..     | 1  |
| 9 months and under 10 months ..  | 91      | 44    | 47    | 32      | 26    | 9               | 17  | 3                                 | 3   | ..             | .. | ..             | 1  | ..     | .. |
| 10 months and under 11 months .. | 77      | 35    | 42    | 21      | 29    | 13              | 11  | 1                                 | 1   | ..             | .. | ..             | 1  | ..     | .. |
| 11 months and under 1 year ..    | 74      | 36    | 38    | 18      | 14    | 17              | 22  | 1                                 | 1   | ..             | .. | ..             | .. | ..     | 1  |
| Infant Mortality* ..             | 2,761†  | 1,572 | 1,188 | 933     | 696   | 488             | 367 | 112                               | 94  | 15             | 13 | 5              | 11 | 19     | 7  |
| Under 1 year ..                  | 2,761†  | 1,572 | 1,188 | 933     | 696   | 488             | 367 | 112                               | 94  | 15             | 13 | 5              | 11 | 19     | 7  |
| 1 year and under 2 years ..      | 469     | 255   | 214   | 155     | 143   | 82              | 50  | 15                                | 17  | 1              | 2  | 2              | 1  | ..     | 1  |
| 2 years and under 3 years ..     | 259     | 137   | 122   | 84      | 93    | 43              | 21  | 10                                | 8   | ..             | .. | ..             | .. | ..     | .. |
| 3 years and under 4 years ..     | 150     | 77    | 73    | 58      | 51    | 12              | 20  | 4                                 | 1   | 1              | .. | 1              | 1  | 1      | .. |
| 4 years and under 5 years ..     | 121     | 78    | 43    | 61      | 31    | 14              | 11  | 2                                 | 1   | 1              | .. | ..             | .. | ..     | .. |
| 5—9 years ..                     | 248     | 128   | 120   | 100     | 83    | 19              | 26  | 6                                 | 8   | 1              | .. | 1              | 1  | 1      | 2  |
| 10—14 years ..                   | 133     | 83    | 50    | 64      | 32    | 12              | 11  | 6                                 | 6   | ..             | 1  | ..             | .. | 1      | 1  |
| 15—19 years ..                   | 140     | 77    | 63    | 60      | 39    | 11              | 17  | 1                                 | 5   | 3              | .. | 1              | 2  | 1      | .. |
| 20—24 years ..                   | 151     | 88    | 63    | 59      | 28    | 13              | 25  | 6                                 | 9   | 8              | .. | ..             | .. | 2      | 1  |
| 25—29 years ..                   | 189     | 108   | 81    | 65      | 48    | 18              | 25  | 10                                | 5   | 9              | .. | 1              | .. | 5      | 3  |
| 30—34 years ..                   | 201     | 121   | 80    | 70      | 57    | 20              | 16  | 17                                | 4   | 6              | 2  | 3              | 1  | 5      | .. |
| 35—39 years ..                   | 271     | 170   | 101   | 107     | 69    | 13              | 20  | 39                                | 9   | 6              | 1  | 2              | 1  | 3      | 1  |
| 40—44 years ..                   | 409     | 257   | 152   | 165     | 114   | 35              | 29  | 44                                | 5   | 8              | 1  | 2              | 1  | 3      | 2  |
| 45—49 years ..                   | 539     | 374   | 165   | 275     | 130   | 34              | 23  | 55                                | 8   | 2              | 1  | 6              | 1  | 2      | 2  |
| 50—54 years ..                   | 689     | 493   | 196   | 379     | 147   | 35              | 36  | 67                                | 10  | 6              | .. | 3              | 3  | 3      | .. |
| 55—59 years ..                   | 771     | 540   | 231   | 403     | 185   | 54              | 31  | 69                                | 12  | 9              | .. | 1              | 1  | 4      | 2  |
| 60—64 years ..                   | 817     | 547   | 270   | 448     | 219   | 54              | 38  | 33                                | 10  | 5              | 1  | 2              | 2  | 5      | .. |
| 65—69 years ..                   | 776     | 471   | 305   | 384     | 266   | 42              | 19  | 28                                | 14  | 7              | 1  | 5              | 3  | 5      | 2  |
| 70—74 years ..                   | 668     | 361   | 307   | 304     | 279   | 33              | 20  | 13                                | 4   | 2              | .. | 5              | 3  | 4      | 1  |
| 75—79 years ..                   | 418     | 198   | 220   | 170     | 197   | 14              | 16  | 10                                | 4   | 1              | .. | 1              | 3  | 2      | .. |
| 80—84 years ..                   | 262     | 102   | 160   | 79      | 140   | 17              | 15  | 3                                 | ..  | 1              | .. | 2              | 4  | ..     | 1  |
| 85 years and over ..             | 184     | 55    | 129   | 38      | 102   | 13              | 18  | 4                                 | 1   | ..             | .. | ..             | 4  | ..     | 4  |
| Unknown ..                       | 13‡     | 6     | 1     | 2       | ..    | ..              | 1   | 3                                 | ..  | ..             | .. | ..             | .. | 1      | .. |
| Total ..                         | 10,639§ | 6,298 | 4,334 | 4,463   | 3,149 | 1,076           | 855 | 557                               | 235 | 92             | 22 | 44             | 43 | 66     | 30 |

\* Includes neo-natal deaths. † Includes 1 of unknown sex (Chinese). ‡ Includes 6 of unknown sex (Others).  
§ Includes 7 of unknown sex.

TABLE 14  
DEATHS REGISTERED IN 1958

BY REGISTRATION AREA, AGE GROUP AND SEX

| Age Group                        | Singapore Total |       |       | City Area |       |       | Rural Area |       |       |
|----------------------------------|-----------------|-------|-------|-----------|-------|-------|------------|-------|-------|
|                                  | M.&F.           | M.    | F.    | M.&F.     | M.    | F.    | M.&F.      | M.    | F.    |
| Under 1 day ..                   | 295             | 171   | 124   | 258       | 149   | 109   | 37         | 22    | 15    |
| 1 day and under 2 days ..        | 203             | 127   | 76    | 179       | 112   | 67    | 24         | 15    | 9     |
| 2 days and under 3 days ..       | 134             | 82    | 52    | 125       | 76    | 49    | 9          | 6     | 3     |
| 3 days and under 4 days ..       | 101†            | 63    | 37    | 89†       | 60    | 28    | 12         | 3     | 9     |
| 4 days and under 5 days ..       | 67              | 39    | 28    | 56        | 31    | 25    | 11         | 8     | 3     |
| 5 days and under 6 days ..       | 44              | 26    | 18    | 40        | 23    | 17    | 4          | 3     | 1     |
| 6 days and under 7 days ..       | 50              | 25    | 25    | 43        | 22    | 21    | 7          | 3     | 4     |
| 7 days and under 14 days ..      | 152             | 99    | 53    | 135       | 93    | 42    | 17         | 6     | 11    |
| 14 days and under 21 days ..     | 82              | 56    | 26    | 66        | 48    | 18    | 16         | 8     | 8     |
| 21 days and under 28 days ..     | 80              | 46    | 34    | 64        | 40    | 24    | 16         | 6     | 10    |
| Neo-Natal Deaths ..              | 1,208†          | 734   | 473   | 1,055†    | 654   | 400   | 153        | 80    | 73    |
| 28 days and under 2 months ..    | 286             | 170   | 116   | 196       | 109   | 87    | 90         | 61    | 29    |
| 2 months and under 3 months ..   | 231             | 132   | 99    | 155       | 85    | 70    | 76         | 47    | 29    |
| 3 months and under 4 months ..   | 169             | 94    | 75    | 111       | 60    | 51    | 58         | 34    | 24    |
| 4 months and under 5 months ..   | 151             | 80    | 71    | 116       | 56    | 60    | 35         | 24    | 11    |
| 5 months and under 6 months ..   | 115             | 60    | 55    | 90        | 47    | 43    | 25         | 13    | 12    |
| 6 months and under 7 months ..   | 149             | 85    | 64    | 105       | 57    | 48    | 44         | 28    | 16    |
| 7 months and under 8 months ..   | 113             | 48    | 65    | 80        | 35    | 45    | 33         | 13    | 20    |
| 8 months and under 9 months ..   | 97              | 54    | 43    | 75        | 45    | 30    | 22         | 9     | 13    |
| 9 months and under 10 months ..  | 91              | 44    | 47    | 70        | 37    | 33    | 21         | 7     | 14    |
| 10 months and under 11 months .. | 77              | 35    | 42    | 57        | 23    | 34    | 20         | 12    | 8     |
| 11 months and under 1 year ..    | 74              | 36    | 38    | 49        | 22    | 27    | 25         | 14    | 11    |
| Infant Mortality* ..             | 2,761†          | 1,572 | 1,188 | 2,159†    | 1,230 | 928   | 602        | 342   | 260   |
| Under 1 year ..                  | 2,761†          | 1,572 | 1,188 | 2,159†    | 1,230 | 928   | 602        | 342   | 260   |
| 1 year and under 2 years ..      | 469             | 255   | 214   | 347       | 189   | 158   | 122        | 66    | 56    |
| 2 years and under 3 years ..     | 259             | 137   | 122   | 190       | 100   | 90    | 69         | 37    | 32    |
| 3 years and under 4 years ..     | 150             | 77    | 73    | 122       | 61    | 61    | 28         | 16    | 12    |
| 4 years and under 5 years ..     | 121             | 78    | 43    | 88        | 59    | 29    | 33         | 19    | 14    |
| 5—9 years ..                     | 248             | 128   | 120   | 211       | 109   | 102   | 37         | 19    | 18    |
| 10—14 years ..                   | 133             | 83    | 50    | 114       | 74    | 40    | 19         | 9     | 10    |
| 15—19 years ..                   | 140             | 77    | 63    | 121       | 72    | 49    | 19         | 5     | 14    |
| 20—24 years ..                   | 151             | 88    | 63    | 131       | 80    | 51    | 20         | 8     | 12    |
| 25—29 years ..                   | 189             | 108   | 81    | 170       | 98    | 72    | 19         | 10    | 9     |
| 30—34 years ..                   | 201             | 121   | 80    | 176       | 108   | 68    | 25         | 13    | 12    |
| 35—39 years ..                   | 271             | 170   | 101   | 232       | 148   | 84    | 39         | 22    | 17    |
| 40—44 years ..                   | 409             | 257   | 152   | 342       | 217   | 125   | 67         | 40    | 27    |
| 45—49 years ..                   | 539             | 374   | 165   | 466       | 333   | 133   | 73         | 41    | 32    |
| 50—54 years ..                   | 689             | 493   | 196   | 587       | 430   | 157   | 102        | 63    | 39    |
| 55—59 years ..                   | 771             | 540   | 231   | 604       | 427   | 177   | 167        | 113   | 54    |
| 60—64 years ..                   | 817             | 547   | 270   | 623       | 423   | 200   | 194        | 124   | 70    |
| 65—69 years ..                   | 776             | 471   | 305   | 577       | 353   | 224   | 199        | 118   | 81    |
| 70—74 years ..                   | 668             | 361   | 307   | 452       | 240   | 212   | 216        | 121   | 95    |
| 75—79 years ..                   | 418             | 198   | 220   | 270       | 130   | 140   | 148        | 68    | 80    |
| 80—84 years ..                   | 262             | 102   | 160   | 158       | 62    | 96    | 104        | 40    | 64    |
| 85 years and over ..             | 184             | 55    | 129   | 120       | 35    | 85    | 64         | 20    | 44    |
| Unknown ..                       | 13‡             | 6     | 1     | 12‡       | 5     | 1     | 1          | 1     | ..    |
| Total ..                         | 10,639§         | 6,298 | 4,334 | 8,272§    | 4,983 | 3,282 | 2,367      | 1,315 | 1,052 |

\* Includes neo-natal deaths.

† Includes 1 of unknown sex.

‡ Includes 6 of unknown sex.

§ Includes 7 of unknown sex.

TABLE 15

## BIRTHS AND BIRTH RATES

| Racial Group                     | 1931   |       | 1947   |       | 1957   |       | 1958    |       |
|----------------------------------|--------|-------|--------|-------|--------|-------|---------|-------|
|                                  | No.    | Rate  | No.    | Rate  | No.    | Rate  | No.     | Rate  |
| Chinese .. ..                    | 15,993 | 37.85 | 33,629 | 46.20 | 46,263 | 42.4  | 46,189  | 40.45 |
| Malaysians ..                    | 2,862  | 43.69 | 5,473  | 47.73 | 9,317  | 47.3  | 10,005  | 48.26 |
| Indians and Pakistanis           | 1,020  | 19.64 | 3,087  | 43.30 | 5,020  | 40.4  | 5,116   | 39.52 |
| Europeans ..                     | 169    | 20.55 | 312    | 35.79 | 1,140  | 31.0  | 1,272   | 33.38 |
| Eurasians ..                     | 199    | 28.53 | 359    | 39.84 | 360    | 31.4  | 362     | 30.85 |
| Others .. ..                     | 227    | 29.09 | 185    | 28.27 | 585    | 44.5  | 628     | 46.12 |
| Unknown ..                       | ..     | ..    | ..     | ..    | ..     | ..    | ..      | ..    |
| Total ..                         | 20,470 | 36.37 | 43,045 | 45.89 | 62,685 | 42.5  | 63,572  | 41.96 |
| Males .. ..                      | 10,753 | ..    | 22,152 | ..    | 32,280 | ..    | 32,759  | ..    |
| Females .. ..                    | 9,717  | ..    | 20,893 | ..    | 30,400 | ..    | 30,811  | ..    |
|                                  | 20,470 | ..    | 43,045 | ..    | 62,685 | ..    | 63,572* | ..    |
| Male births per 100 births .. .. | ..     | 52.04 | ..     | 51.23 | ..     | 51.50 | ..      | ..    |

\* Includes 2 unknown sex.

TABLE 16  
DEATHS AND DEATH RATES

| Racial Group           | 1931   |       | 1947   |       | 1957   |      | 1958   |      |
|------------------------|--------|-------|--------|-------|--------|------|--------|------|
|                        | No.    | Rate  | No.    | Rate  | No.    | Rate | No.    | Rate |
| Chinese .. ..          | 10,599 | 25.09 | 9,368  | 12.87 | 7,696  | 7.1  | 7,613  | 6.67 |
| Malaysians ..          | 1,905  | 29.08 | 2,029  | 17.70 | 1,967  | 10.0 | 1,931  | 9.32 |
| Indians and Pakistanis | 820    | 15.81 | 878    | 12.32 | 791    | 6.4  | 792    | 6.12 |
| Europeans ..           | 51     | 6.20  | 74     | 8.49  | 95     | 2.6  | 114    | 2.99 |
| Eurasians ..           | 103    | 14.76 | 84     | 9.32  | 75     | 6.5  | 87     | 7.41 |
| Others .. ..           | 145    | 18.58 | 78     | 11.92 | 86     | 6.5  | 102    | 7.49 |
| Total ..               | 13,623 | 24.20 | 12,511 | 13.34 | 10,710 | 7.3  | 10,639 | 7.02 |

101. The death rate in 1958 is the lowest on record at 7.0 per thousand of the population and compares very favourably with any country as crude death rate.

TABLE 17  
INFANT DEATHS AND INFANT MORTALITY RATE, 1958

| <i>Racial Group</i>    | <i>Number</i> | <i>Rate</i> |
|------------------------|---------------|-------------|
| Chinese .. ..          | 1,630         | 35.29       |
| Malaysians ..          | 855           | 85.46       |
| Indians and Pakistanis | 206           | 40.27       |
| Europeans ..           | 28            | 22.01       |
| Eurasians ..           | 16            | 44.20       |
| Others .. ..           | 26            | 41.40       |
| Total .. ..            | 2,761         | 43.43       |

102. The infant mortality rate now stands at 43.43 this compares with the figure of 191.3 in 1931, 103.47 in 1939, 284.95 in 1944, 87.33 in 1947, 69.97 in 1952, 49.67 in 1955 and 41.11 in 1957. As in previous years of the three main races the Chinese rate is still the lowest at 35.29 compared with 32.81 in 1957, the Indians are intermediate being 40.27 compared with 39.64 in 1957 and the Malaysians the highest at 85.46 compared with 86.40 in 1957.

103. It appears that the progressive drop in infant mortality rates which was a feature of the post-war period also appears to be stabilising itself in the region of 35-40 per thousand live births. The fact that the Malay infant mortality rate is more than double that of the other two major racial groups has been commented on in previous years. The still-birth rate in 1958 was 15.16.

104. The number of maternal deaths during the year was 50. The maternal rate was 0.8 per thousand live births.

TABLE 18

## STILL BIRTHS AND STILL BIRTH RATE

| Year       | Still-Births | Still-Birth Rate | Year       | Still-Births | Still-Birth Rate |
|------------|--------------|------------------|------------|--------------|------------------|
| 1931 .. .. | 568          | 27.0             | 1945 .. .. | 459          | 18.4             |
| 1932 .. .. | 528          | 24.8             | 1946 .. .. | 645          | 16.4             |
| 1933 .. .. | 527          | 23.9             | 1947 .. .. | 671          | 15.3             |
| 1934 .. .. | 586          | 25.1             | 1948 .. .. | 753          | 16.7             |
| 1935 .. .. | 650          | 24.5             | 1949 .. .. | 803          | 17.1             |
| 1936 .. .. | 693          | 24.1             | 1950 .. .. | 807          | 17.1             |
| 1937 .. .. | 755          | 24.7             | 1951 .. .. | 802          | 16.4             |
| 1938 .. .. | 783          | 24.0             | 1952 .. .. | 901          | 17.3             |
| 1939 .. .. | 814          | 23.0             | 1953 .. .. | 925          | 16.9             |
| 1940 .. .. | 719          | 20.8             | 1954 .. .. | 932          | 16.1             |
| 1941 .. .. | 816          | 23.2             | 1955 .. .. | 904          | 15.4             |
| 1942 .. .. | 467          | 16.6             | 1956 .. .. | 909          | 14.7             |
| 1943 .. .. | 599          | 18.8             | 1957 .. .. | 970          | 15.2             |
| 1944 .. .. | 610          | 18.9             | 1958 .. .. | 978          | 15.2             |

TABLE 19

## MATERNAL DEATHS AND MATERNAL MORTALITY RATE

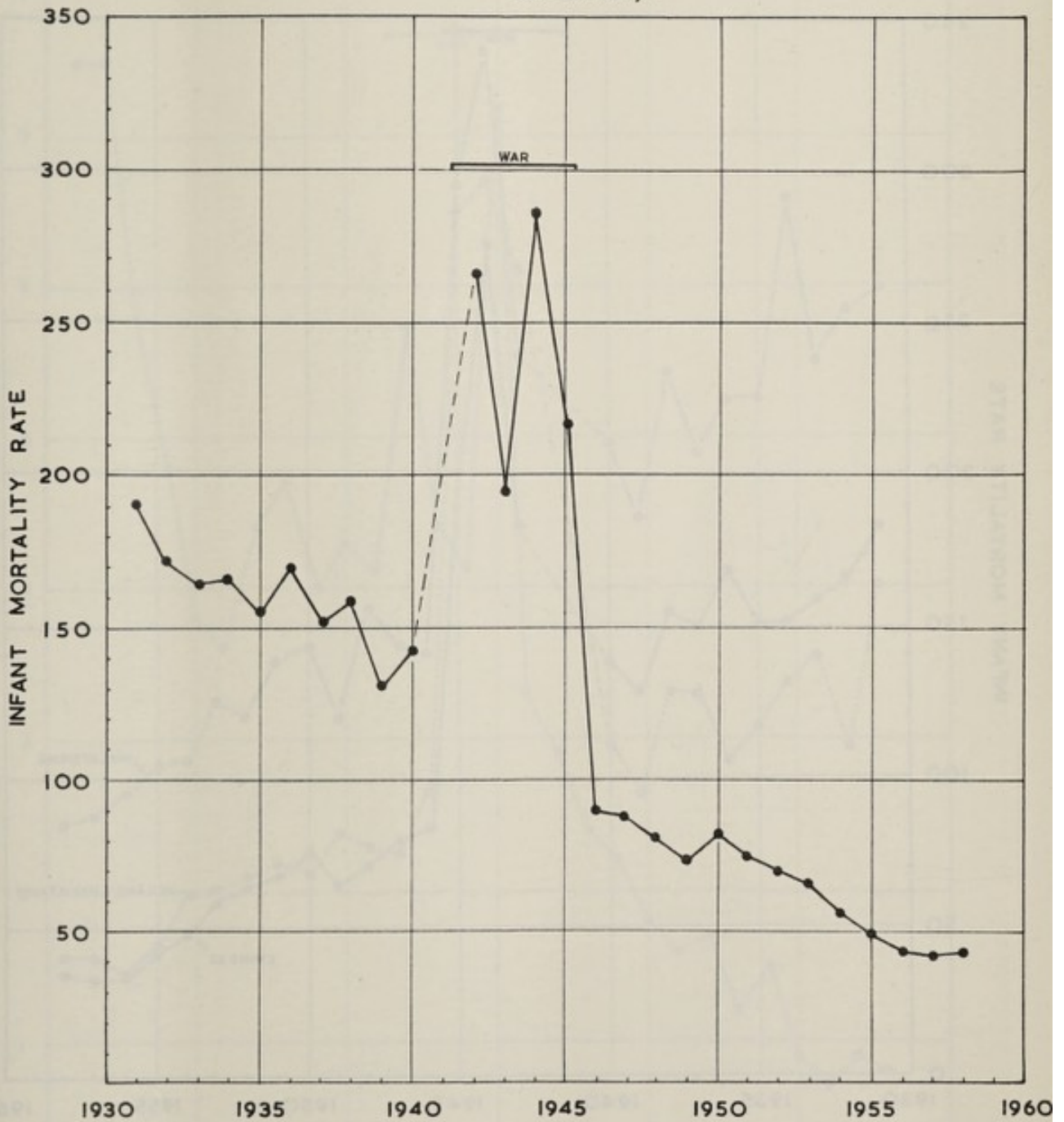
| Year       | Maternal Deaths | Maternal Mortality Rate | Year       | Maternal Deaths | Maternal Mortality Rate |
|------------|-----------------|-------------------------|------------|-----------------|-------------------------|
| 1931 .. .. | 158             | 7.5                     | 1945 .. .. | 179             | 7.2                     |
| 1932 .. .. | 160             | 7.5                     | 1946 .. .. | 128             | 3.3                     |
| 1933 .. .. | 128             | 5.8                     | 1947 .. .. | 125             | 2.9                     |
| 1934 .. .. | 111             | 4.8                     | 1948 .. .. | 108             | 2.4                     |
| 1935 .. .. | 100             | 3.8                     | 1949 .. .. | 102             | 2.2                     |
| 1936 .. .. | 103             | 3.6                     | 1950 .. .. | 86              | 1.8                     |
| 1937 .. .. | 134             | 4.4                     | 1951 .. .. | 80              | 1.6                     |
| 1938 .. .. | 154             | 4.7                     | 1952 .. .. | 87              | 1.7                     |
| 1939 .. .. | 140             | 4.0                     | 1953 .. .. | 68              | 1.2                     |
| 1940 .. .. | 148             | 4.3                     | 1954 .. .. | 88              | 1.5                     |
| 1941 .. .. | 146             | 4.1                     | 1955 .. .. | 52              | 0.9                     |
| 1942 .. .. | 160             | 5.7                     | 1956 .. .. | 45              | 0.7                     |
| 1943 .. .. | 139             | 4.4                     | 1957 .. .. | 55              | 0.9                     |
| 1944 .. .. | 131             | 4.1                     | 1958 .. .. | 50              | 0.8                     |

(Note:—Maternal deaths are taken as deaths due to deliveries and complications of pregnancy, child-birth and the puerperium.)

# SINGAPORE

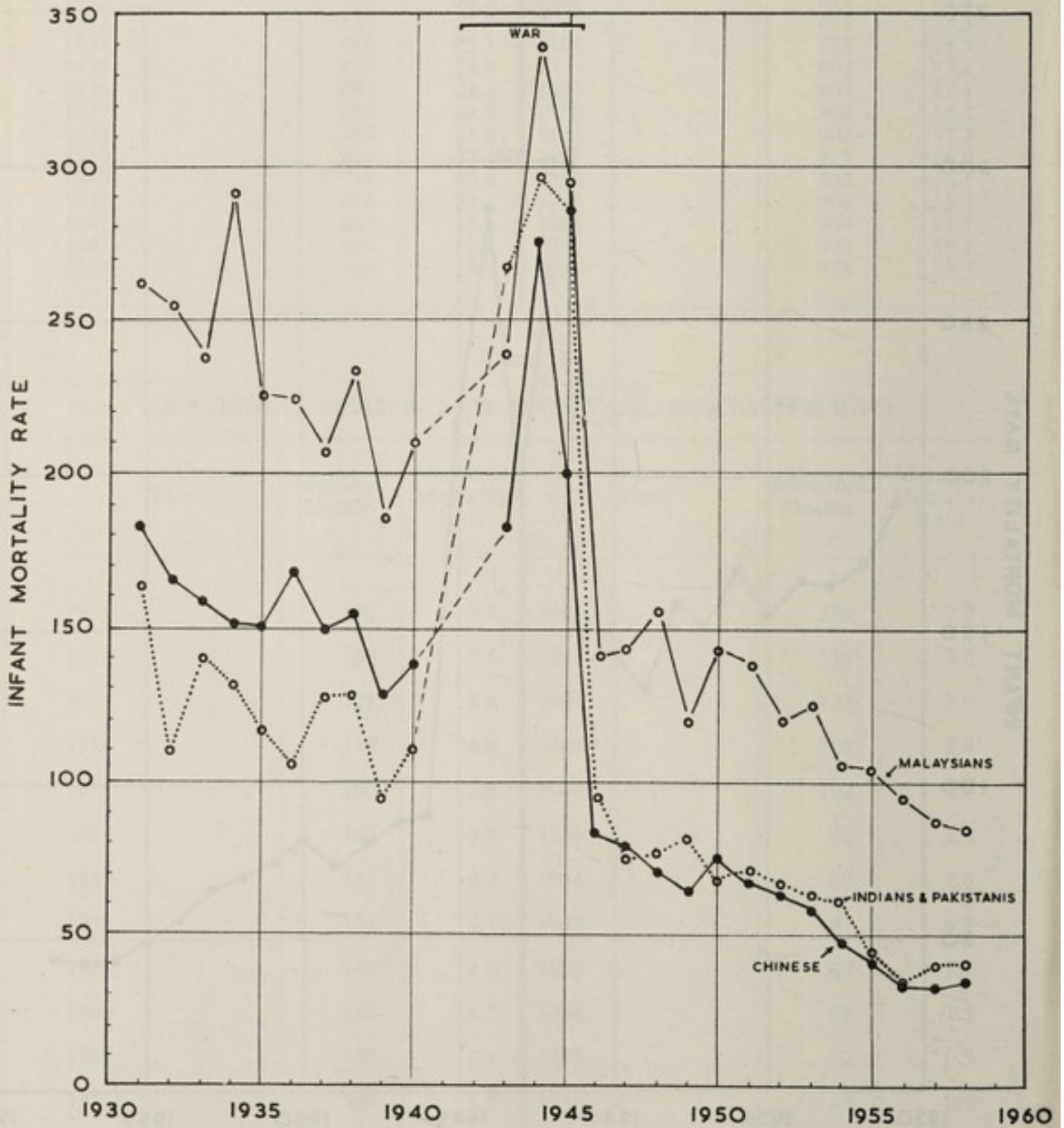
## TREND OF INFANT MORTALITY RATE: 1931 ONWARDS

(Rates are the number of deaths reported under one year of age per 1,000 live births).



## SINGAPORE INFANT MORTALITY RATES BY ETHNIC GROUP (RACE): 1931 ONWARDS

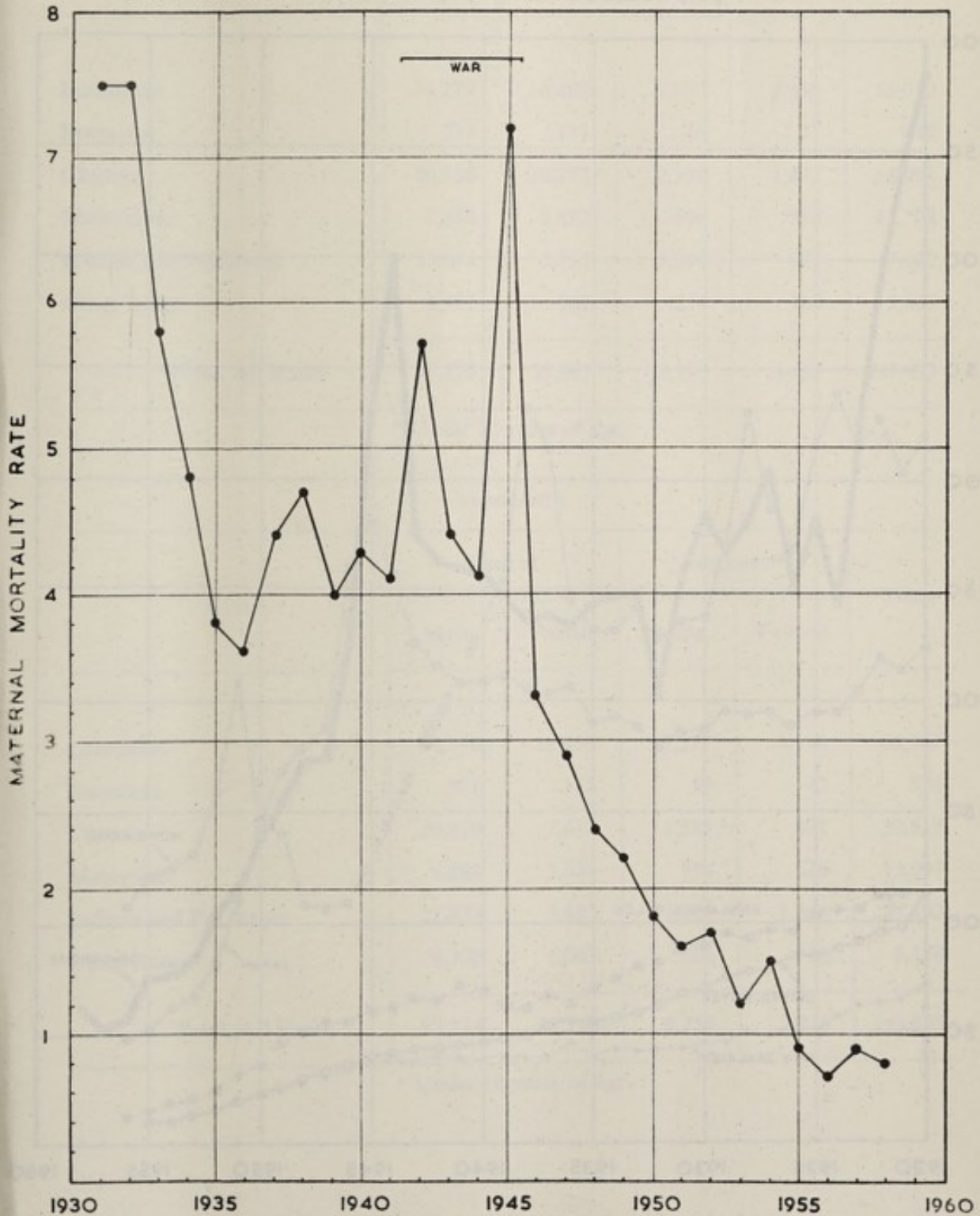
(Rates are the number of deaths reported under one year  
of age per 1,000 live births).



# SINGAPORE

## TREND OF MATERNAL MORTALITY RATE: 1931 ONWARDS

(Rates are the number of deaths due to deliveries and complications of pregnancy, child-birth and the puerperium per 1,000 total live and still births)



## TREND OF TUBERCULOSIS DEATH RATES: 1920 ONWARDS (Singapore and certain other countries)

(Rates are the number of deaths reported from tuberculosis (all forms)  
per 100,000 total population).

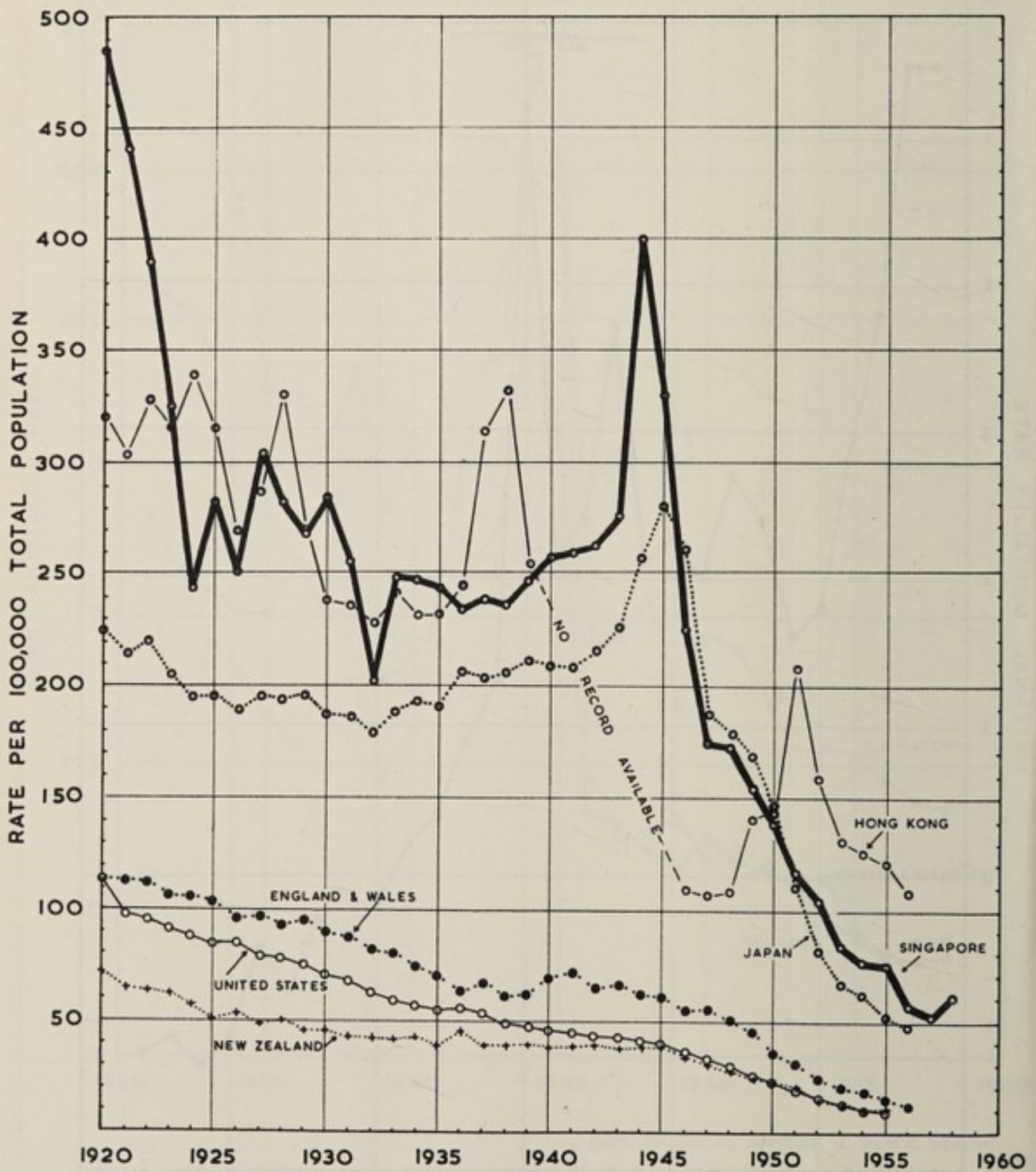


TABLE 20  
MIGRATION STATISTICS BY SEA AND AIR DURING 1958  
IMMIGRANTS

| Race                      | ADULTS |        | CHILDREN* |        | Total   |
|---------------------------|--------|--------|-----------|--------|---------|
|                           | Male   | Female | Male      | Female |         |
| Europeans .. ..           | 34,270 | 16,498 | 3,887     | 3,355  | 58,010  |
| Eurasians .. ..           | 237    | 133    | 46        | 31     | 447     |
| Chinese .. ..             | 20,386 | 10,732 | 2,311     | 1,472  | 34,901  |
| Malaysians .. ..          | 7,812  | 2,852  | 596       | 513    | 11,773  |
| Indians and Pakistanis .. | 12,074 | 2,718  | 1,316     | 921    | 17,029  |
| Other Races .. ..         | 4,497  | 962    | 214       | 160    | 5,833   |
| Total, All Races ..       | 79,276 | 33,895 | 8,370     | 6,452  | 127,993 |

\* Under 12 years of age.

EMIGRANTS

| Race                      | ADULTS |        | CHILDREN* |        | Total   |
|---------------------------|--------|--------|-----------|--------|---------|
|                           | Male   | Female | Male      | Female |         |
| Europeans .. ..           | 36,596 | 18,450 | 5,127     | 4,194  | 64,367  |
| Eurasians .. ..           | 281    | 142    | 59        | 42     | 524     |
| Chinese .. ..             | 20,810 | 7,617  | 1,288     | 802    | 30,517  |
| Malaysians .. ..          | 8,888  | 3,039  | 594       | 576    | 13,097  |
| Indians and Pakistanis .. | 21,834 | 3,885  | 1,929     | 1,544  | 29,192  |
| Other Races .. ..         | 4,705  | 1,065  | 262       | 126    | 6,158   |
| Total, All Races ..       | 93,114 | 34,198 | 9,259     | 7,284  | 143,855 |

\* Under 12 years of age.

MEDICAL REPORT 1912

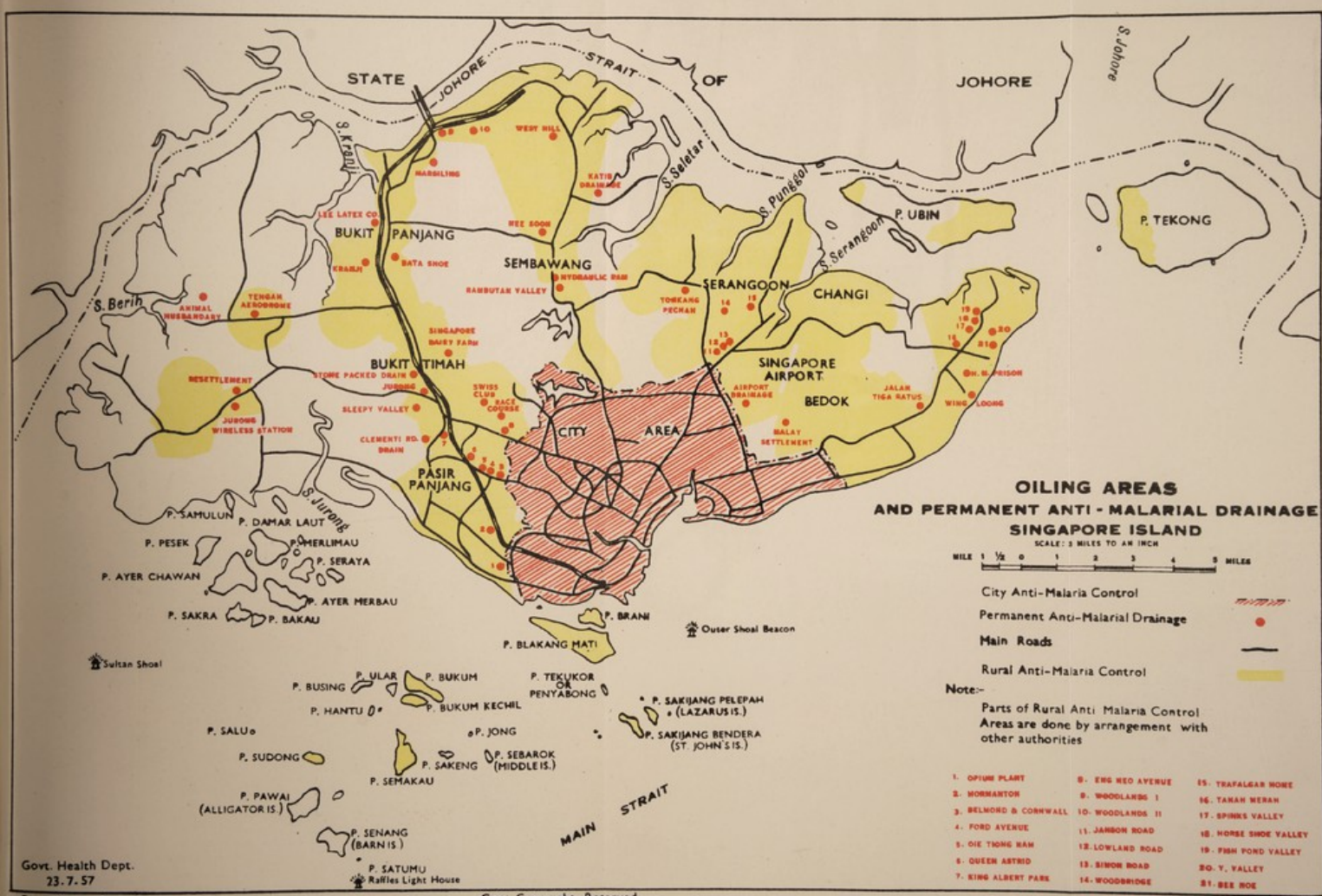
Table 20

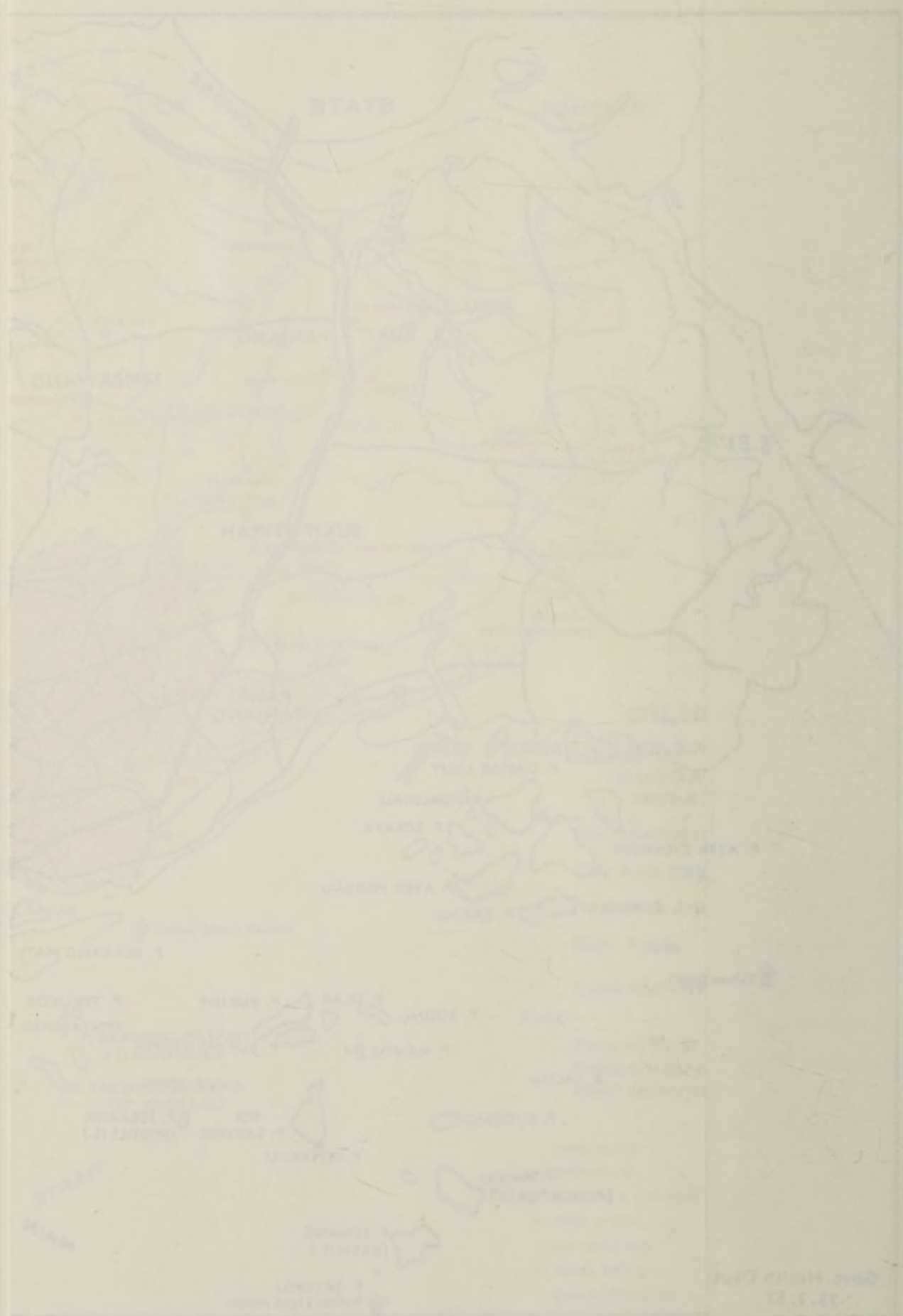
MIGRATION STATISTICS BY SEA AND AIR DURING THE

| Year  | From   | To     | Total  | Remarks |
|-------|--------|--------|--------|---------|
| 1911  | 1,200  | 1,500  | 2,700  |         |
| 1910  | 1,100  | 1,400  | 2,500  |         |
| 1909  | 1,000  | 1,300  | 2,300  |         |
| 1908  | 900    | 1,200  | 2,100  |         |
| 1907  | 800    | 1,100  | 1,900  |         |
| 1906  | 700    | 1,000  | 1,700  |         |
| 1905  | 600    | 900    | 1,500  |         |
| 1904  | 500    | 800    | 1,300  |         |
| 1903  | 400    | 700    | 1,100  |         |
| 1902  | 300    | 600    | 900    |         |
| 1901  | 200    | 500    | 700    |         |
| 1900  | 100    | 400    | 500    |         |
| Total | 12,000 | 15,000 | 27,000 |         |

| Year  | From   | To     | Total  | Remarks |
|-------|--------|--------|--------|---------|
| 1911  | 1,200  | 1,500  | 2,700  |         |
| 1910  | 1,100  | 1,400  | 2,500  |         |
| 1909  | 1,000  | 1,300  | 2,300  |         |
| 1908  | 900    | 1,200  | 2,100  |         |
| 1907  | 800    | 1,100  | 1,900  |         |
| 1906  | 700    | 1,000  | 1,700  |         |
| 1905  | 600    | 900    | 1,500  |         |
| 1904  | 500    | 800    | 1,300  |         |
| 1903  | 400    | 700    | 1,100  |         |
| 1902  | 300    | 600    | 900    |         |
| 1901  | 200    | 500    | 700    |         |
| 1900  | 100    | 400    | 500    |         |
| Total | 12,000 | 15,000 | 27,000 |         |

Notes: The above figures represent the total number of immigrants entering the United States from all countries during the period indicated. The figures are based on the reports of the Immigration Service and are subject to revision.





PART II  
THE HEALTH DIVISION

PART II  
THE HEALTH DIVISION

## CHAPTER FOUR

### INTRODUCTION

105. The Colony of Singapore comprises the main island of Singapore with several small surrounding islands including the Christmas Island. The main island is 27 miles long and 14 miles wide with a land area of 216 square miles. The area of the smaller islands is about 10 square miles.

106. There are two local authorities: the City Council and the Rural Board. The City Council administers a very thickly populated area of 31 square miles and is responsible for all environmental and some personal health services. The rest of the area is under the jurisdiction of the Rural Board, and the Government Health Division under the direction of the Director of Medical Services is responsible for all health services in this area. The School Health and Curative Services are on all-Colony basis.

107. As mentioned in the previous year's report further decentralisation of environmental health services in the area under the Rural Board took place during 1959. These rural areas will, with some changes of boundary form four District Councils under the provisions of the new Local Government Ordinance, 1957. The three Councils on the main island will be the Katong District Council, Serangoon District Council and the Bukit Panjang District Council. The islands to the south of Singapore will constitute the area of the South Islands Council from the middle of 1959. District Health Officers have been posted to the decentralised Rural District Councils. These officers have all had experience in the Rural Health Division and will take charge of the Health Departments of the new Councils.

108. A satisfactory feature of the decentralisation of health services preparatory to the formation of District Councils has been expansion of staff available for the work in the Health Departments of these future District Councils. For the first time in addition to the Public Health Engineer, there are three fully qualified Supervisors of Public Health Works with basic engineering training. The establishment of the qualified Sanitary Inspectorate has increased to 14 officers while there were another eight Probationary Sanitary Inspectors were being trained.

109. It is, however, very essential that the District Councils and their Health Department must have the full benefit of their experience and advice of senior officials of the Ministry of Health. Singapore has a small area and there must be full and effective co-ordination in all matters of environmental health. Consideration is being given to such measures as can be carried out to ensure co-ordination of health policy and programmes.

110. During an island wide epidemic of poliomyelitis which occurred during the period October–December 1958, involving over 400 cases, some 140 were from the rural areas. Of the three rural areas, Serangoon was the most affected area while Bukit Panjang and Katong were less affected although there were a fair number of cases from both these areas as well. The epidemic was a Type I Epidemic and the original cases appeared to have originated from the Serangoon area towards the end of September.

111. The Health Division was responsible for the organisation and administration of a programme of island wide immunisation against poliomyelitis. A major programme of oral vaccination with attenuated live poliomyelitis vaccine was carried out at some 23 centres in all parts of the City and

rural areas. Over 200,000 children were immunised and the results of the vaccination campaign on the course of the epidemic and on problems of immunity are now being assessed.

112. There has been no other epidemic outbreak of infectious disease than the epidemic poliomyelitis referred to earlier. Infectious diseases in the rural areas appeared to have stabilised themselves at the levels of the previous two years despite the annual increase of population. This is particularly noticeable in the case of pulmonary tuberculosis, diphtheria and enteric fever, while leprosy shows a decline, only 21 cases being reported in 1958.

#### ENVIRONMENTAL HEALTH

113. The main feature of the work during the year was the maintenance of existing health services at its high level and further extension of personal and environmental services as are necessary to meet rapid increase of population in the rural areas.

114. Routine work includes the inspection of places where food is prepared, premises used for offensive trades, house inspections, inspections on reports of nuisance, inspection of premises on behalf of various Government departments and visits in connection with the control of infectious diseases. Samples of food and drugs are taken regularly and prosecutions instituted where necessary. Samples taken under the Food and Drugs Ordinance are analysed by the Department of Chemistry.

115. This population is now over 600,000 and represents more than 40 per cent of the population of the Colony. The increasing housing development in rural areas with its steady flow of urban dwellers making their homes in the many housing developments in hand creates problems of urban sanitation complicated by the fact that these developments are sited in areas which were previously agricultural and with farmers and pig-rearers still working on land adjacent to this. Housing estate development of new resettlement areas and the construction of extensive net work of agricultural roads have further led to the expansion of health services to areas formerly not very accessible and not attended to. The programme of rural sanitation has been continued, in 54 villages have had sanitary improvement effected since the scheme was originally started, 12 of these being during current year.

#### MALARIA AND MOSQUITO CONTROL

116. No cases of malaria of indigenous origin has been reported in any part of Singapore. A review of the imported cases which were reported in Singapore is given in a later chapter. The programme of *Aedes* mosquito control around the International Airport has a principal measure of yellow fever control extends over an area of more than 6 square miles. The *A. aegypti* index has been 0 and the *A. albopictus* index was 1.7 per cent.

#### MATERNAL AND CHILD HEALTH

117. The Maternal and Child Health Service has had a very successful year. The Kettering Shield was awarded to the service by the National Baby Welfare Council in London for outstanding achievements in the field of Maternal and Child Health since 1954. This shield was won in competition for all British Colonial territories and will be held by the Rural Maternal and Child Health Service for three years until 1960.

118. During the year one new main clinic and one visiting centre were opened. There are now 20 main clinics, 8 midwives centres and 25 visiting centres in the service. The successful programme of immunisation against diphtheria, whooping cough and tetanus was interrupted by the poliomyelitis epidemic, but the work of the previous two or three years is already beginning to show results; this is shown in the stabilization of the number of diphtheria cases and the marked drop of cases of whooping cough. An island wide B.C.G. vaccination programme has been carried out during the year.

#### SCHOOL HEALTH

119. The school population increased from 260,444 in 1957, 295,481 in 1958, an increase of 35,037. There were 702 schools compared with 668 schools in the previous year. School Health Officers examined 74,058 school children; this represents a drop of some 6,000 over the previous year, but the main reason for this was that School Health Officers were diverted to work in the Poliomyelitis Vaccination Campaign during the epidemic. Out of a total of 595 Government and Government Aided schools 528 were visited either by a Health Officer or a Lady Health Officer or both.

The new Institute of Health in which the School Health Service is now accommodated was occupied in May of this year. It provides adequate accommodation for both clinic and administrative offices.

#### QUARANTINE SERVICES

120. The Quarantine Services were alerted on two occasions during the year. At the beginning of the year there continued a large population movement of persons of Dutch origin from Indonesia to Europe who passed through Singapore. In view of this abnormal population movement of persons who were travelling as evacuees or refugees, Government decided to impose additional quarantine restrictions on all such persons. All evacuees were subject to surveillance and evacuee camps on the main island were subject to control for 48 hours to permit full medical inspection of all evacuees in camps.

121. During the middle of the year a major epidemic of cholera broke out in Thailand which appeared to involve Bangkok and other provinces of the south. This called for increased surveillance against travellers from that country. Additional precautions in the way of the immunisation of frontline personnel of the port and airport of Singapore as well as the prohibition or supervision of the import of certain categories of foods was imposed. In addition all aircraft from Bangkok landing at the International Airport at Paya Lebar were checked for flies for a period of two months.

TABLE 21

#### SUMMARY OF QUARANTINE SERVICES

|   | 1955    | 1956   | 1957    | 1958    |
|---|---------|--------|---------|---------|
| Ships arriving from infected or suspected ports ... ..    | 1,783   | 1,849  | 1,519   | 2,030   |
| Sea passengers inspected ...                              | 116,275 | 95,779 | 101,182 | 136,226 |
| Aircraft arriving from infected or suspected ports ... .. | 1,315   | 1,647  | 1,707   | 2,438   |
| Air passengers and crew inspected                         | 45,976  | 71,600 | 82,166  | 94,718  |
| Passengers quarantined ...                                | 20,537  | 33,834 | 24,175  | 14,421  |

122. The year 1958 was one when the health services put to the test by additional strains imposed by the health conditions outside Singapore as well as the major epidemic of poliomyelitis in Singapore. It was also a period of considerable administrative change and re-organisation and in all these activities the Health Branch discharged its duties satisfactorily.

123. Dr. K. Sivam, L.M.S. (Singapore), D.P.H. (Liverpool), the Assistant Director of Medical Services (Health) was in charge of the Health Branch during the year.

## CHAPTER FIVE

### INFECTIOUS DISEASES IN RURAL SINGAPORE

124. No case of cholera, plague or small-pox occurred in the year under review. The number of cases of infectious diseases notified from the rural area is given in Table 22.

TABLE 22

| INFECTIOUS DISEASES IN RURAL SINGAPORE |        | 1954 | 1955 | 1956 | 1957 | 1958 |
|--|--------|------|------|------|------|------|
| Chicken-pox                            | ... .. | 359  | 414  | 447  | 350  | 175  |
| Pulmonary Tuberculosis                 | ... .. | 613  | 610  | 654  | 385  | 342  |
| Diphtheria                             | ... .. | 81   | 119  | 114  | 159  | 158  |
| Leprosy                                | ... .. | 34   | 39   | 31   | 30   | 21   |
| Puerperal Fever                        | ... .. | 60   | 24   | 24   | 4    | 5    |
| Enteric Fever                          | ... .. | 26   | 44   | 25   | 33   | 31   |
| Acute Anterior Poliomyelitis           | ... .. | 34   | 15   | 20   | 17   | 148  |

#### PULMONARY TUBERCULOSIS

125. The total number of cases of pulmonary tuberculosis reported in 1958 was less than in 1957 and nearly half the number reported in 1956; this is despite the fact that the Mass Radiographic Survey done in two selected rural areas brought out a number of cases.

#### DIPHTHERIA

126. The number of diphtheria cases has also stabilized at the previous year's level. The programme of immunisation in the Maternal and Child Health clinics, in schools and in *kampongs* continued with very satisfactory response until it was stopped in October when the poliomyelitis epidemic occurred.

#### ENTERIC FEVER

127. The occurrence of sporadic cases from isolated areas was the main feature of this disease during 1958. No localised outbreaks took place.

128. The presence of a large number of unlicensed food hawkers, particularly dealers in cold food and drinks, is a potential threat to public health. These unlicensed hawkers often have inadequate sanitary and washing facilities and are not subject to medical examination.

#### LEPROSY

129. The progressive decline in the cases of this disease over the past five years confirms the view that it is being brought under control.

POLIOMYELITIS

130. A major outbreak of poliomyelitis involving the whole island occurred in Singapore from October–December 1958. The epidemic was a Type I epidemic and the original cases appear to have originated in the Serangoon area towards the end of September. From here the disease spread to involve the City and other rural areas.

131. The Government Health Division carried out a major programme of oral vaccination with attenuated live poliomyelitis vaccine (made available by Professor Albert Sabin of the U.S.A.). Over 200,000 children were immunised at some 23 centres in all parts of the City and the rural areas during October–December. The results of the vaccination campaign on the course of the epidemic and on the problems of immunity are being assessed. A fuller report on the epidemic will be published later.

| Year                               | 1957 | 1958 | 1959 | 1960 | 1961 |
|------------------------------------|------|------|------|------|------|
| Cholera cases                      | 177  | 270  | 414  | 209  | 10   |
| Dysentery cases                    | 143  | 185  | 201  | 211  | 10   |
| Typhoid cases                      | 172  | 119  | 114  | 119  | 21   |
| Scarlet fever cases                | 51   | 30   | 21   | 26   | 24   |
| Paratyphoid fever cases            | 2    | 4    | 28   | 24   | 43   |
| Epidemic fever cases               | 31   | 22   | 22   | 24   | 26   |
| Acute anterior poliomyelitis cases | 148  | 17   | 29   | 12   | 24   |

132. The total number of cases of voluntary typhoid fever reported in 1958 was less than in 1957 and nearly half the number reported in 1956. This is despite the fact that the Mass Radiographic Survey done in two selected rural areas brought out a number of cases.

136. The number of typhoid fever cases has also stabilized in the previous year's level. The programme of immunisation in the Maternal and Child Health clinic in schools and in kindergartens continued with very satisfactory response until it was stopped in October when the poliomyelitis epidemic occurred.

137. The occurrence of epidemic cases from isolated areas was the main feature of the disease during 1958. No isolated outbreaks took place.

138. The presence of a large number of unvaccinated food handlers particularly desirable in both food and drink is a potential threat to public health. These unvaccinated handlers often have no adequate sanitary and resting facilities and are not subject to medical examination.

139. The progressive decline in the cases of this disease over the past five years confirms the view that it is being brought under control.

## CHAPTER SIX

### HYGIENE AND SANITATION IN RURAL AREAS

132. The Rural Health Division has been responsible for hygiene and sanitation in the rural areas of Singapore, including the islands around the Colony. The year 1958 was one of immense administrative changes preparatory to the establishment of Rural District Councils.

133. The area now under the Rural Board will with some changes of boundary, form four District Councils under the provisions of the new Local Government Ordinance, 1957. The three Councils on the main Island will be the Katong District Council, Serangoon District Council, and the Bukit Panjang/Jurong District Council. The islands to the south of Singapore will constitute the area of the Southern Islands Council.

134. A feature of the new set-up of local authorities will be the decentralisation of health activities to District Health Officers. Health Officers with some experience and all of them in possession of the Diploma in Public Health, will be posted to take charge of the Health Departments of the new Councils. However, it will be essential that even in the future new local authorities, the experience and advice of senior officials of the Health Ministry will be necessary and essential in matters of public health policy and programmes.

135. The staff of the Rural Health Division as on 31st December, 1958 is given in Table 23. Dr. Lai Kuen Yee, M.B., B.S., D.P.H., was in charge of the Division until May 1958. In June, the Rural Health Division was decentralised into three separate areas. The Health Officers posted to the future District Councils are Dr. Tan Kah Hong, M.B., B.S., D.P.H. (Bukit Panjang/Jurong), Dr. J. Charan Singh, M.B., B.S., D.P.H. (Katong) and Dr. W. K. Ng Cheng Hin, M.B., B.S., D.P.H. (Serangoon).

TABLE 23

#### STAFF OF THE RURAL HEALTH SECTION

|                                     | <i>Central<br/>Government</i> | <i>Bukit<br/>Panjang</i> | <i>Serangoon</i> | <i>Katong</i> | <i>Total</i> |
|-------------------------------------|-------------------------------|--------------------------|------------------|---------------|--------------|
| Rural Health Officer ...            | 1                             | 1                        | 1                | 1             | 4            |
| Public Health Engineer ...          | 1                             | —                        | —                | —             | 1            |
| Supervisor of Public Health Works   | —                             | 1                        | 1                | 1             | 3            |
| Chief Sanitary Inspector ...        | 1                             | —                        | —                | —             | 1            |
| Senior Sanitary Inspector ...       | 1                             | 1                        | 1                | 1             | 4            |
| Sanitary Inspectors, Timescale ...  | 4                             | 3                        | 4                | 3             | 14           |
| Probationer Sanitary Inspectors ... | —                             | 2                        | 3                | 3             | 8            |
| Senior Technical Subordinates ...   | 2                             | —                        | 1                | 1             | 4            |
| Technical Subordinates ...          | 6                             | 6                        | 7                | 7             | 26           |
| Market Inspector/Overseer ...       | —                             | 2                        | 4                | 1             | 7            |
| Piggery Overseer ...                | —                             | 1                        | 1                | 2             | 4            |
| Labourers ...                       | 112                           | 163                      | 152              | 190           | 454          |

136. Since May 1954 until the end of 1958, conservancy and cleansing services have been carried out by a separate Cleansing Section of the Rural Board. From 1959 onwards, the Cleansing Section will be decentralised and integrated with the Health Department under the District Council's Health Officer. During the year Mr. S. Doraisamy was the Superintendent of the Rural Cleansing Section.

TABLE 24

## STAFF OF THE RURAL CLEANSING SECTION

|                                     | <i>Central<br/>Government</i> | <i>Bukit<br/>Panjang</i> | <i>Serangoon</i> | <i>Katong</i> | <i>Total</i> |
|-------------------------------------|-------------------------------|--------------------------|------------------|---------------|--------------|
| Superintendent, Rural Cleansing ... | 1                             | —                        | —                | —             | 1            |
| Senior Cleansing Inspectors ...     | —                             | 1                        | 1                | 1             | 3            |
| Cleansing Inspectors ...            | —                             | 3                        | 3                | 3             | 9            |
| Technical Subordinates ...          | —                             | 3                        | 2                | 3             | 8            |
| Overseers ...                       | —                             | 5                        | 8                | 11            | 24           |
| Labourers ...                       | —                             | 161                      | 251              | 344           | 756          |

137. The Sanitary staff of the Rural Health Branch in the various districts has been concerned with anti-malarial control (oiling and drainage), water supplies, inspection of houses and housing sites, water-borne system of sewerage disposal, food inspection, occupational health, village sanitation and control of infectious disease. The staff of the Cleansing Section is responsible for scavenging and conservancy services in the rural areas.

## MALARIA CONTROL

138. For the sixth consecutive year Singapore had yet another year of freedom from malaria transmission. The climate and ecological conditions here are such that the country is potentially malarious. The malaria organisation must be ever vigilant because out of 2,842 different anopheline collections made in routine surveys during the year 161 were found to be *A. maculatus* and 90 were *A. sundaicus*. With the decentralisation of malaria control to the future District Councils, the overall co-ordination of malaria programmes and check surveys by the Central Malaria Laboratory are essential.

139. The Department still depends on anti-larval measures in the control. Such measures consisted of subsoil drainage, permanent surface drainage or oiling of different breeding places for *A. maculatus* and *A. sundaicus*. Residual spraying which has taken such a prominent place in malaria control in other parts of the world is considered of limited value in Singapore. Limited use, however, is made of this procedure in the surrounding islands and around Paya Lebar Airport.

140. Apart from malaria control, mosquito complaints from the public as well as from Government premises were dealt with.

141. Seventeen experiments on anti-malarial oil samples submitted for tender were tested in the laboratory for toxicity, spreading pressure, viscosity, permanency of oil films during the year.

## MALARIA SURVEYS

142. 473 rural malaria surveys were carried out and the summary total of the various mosquito specimen collected on these surveys are tabulated below:

|                 |     |     |                   |
|-----------------|-----|-----|-------------------|
| A. maculatus    | ... | ... | 161 collections   |
| A. sundaicus    | ... | ... | 85 collections    |
| A. karwari      | ... | ... | 9 collections     |
| A. baezai       | ... | ... | 51 collections    |
| A. leucosphyrus | ... | ... | 3 collections     |
| A. aitkeni      | ... | ... | 1 collection      |
| A. hyrcanus     | ... | ... | 1,429 collections |
| A. kochi        | ... | ... | 1,050 collections |
| A. vagus        | ... | ... | 41 collections    |
| A. separatus    | ... | ... | 12 collections    |
| A. barbirostris | ... | ... | —                 |
| A. letifer      | ... | ... | —                 |

## SPECIAL SURVEYS

143. Eighty special surveys were carried out during the year to investigate notifications of malaria cases, for bringing new areas under anti-malaria control because of development and in attending to mosquito, fly and other insect pest complaints. The following collections of mosquitoes were made during these surveys:

|                 |     |     |                 |
|-----------------|-----|-----|-----------------|
| A. maculatus    | ... | ... | —               |
| A. sundaicus    | ... | ... | 5 collections   |
| A. karwari      | ... | ... | 2 collections   |
| A. baezai       | ... | ... | 1 collection    |
| A. hyrcanus     | ... | ... | 23 collections  |
| A. kochi        | ... | ... | 19 collections  |
| A. vagus        | ... | ... | 3 collections   |
| A. separatus    | ... | ... | 1 collection    |
| Aedes Stegomyia | ... | ... | 149 collections |
| Culex           | ... | ... | 109 collections |

*Yellow Fever Control—Singapore Airport*

144. Aedes Stegomyia mosquito control within the Airport Proper and 880 metres from the airport perimeter fence had been carried out vigorously as in previous year and as a result not a single collection of Aedes (S)ægypti, the domiciliary yellow fever vector, was made during the year within the control areas. The Aedes Index for the year 1958 is given in Table 30.

145. In addition to weekly checking of the 122 artificial check points in the control areas quarterly surveys were made around Paya Lebar to assess the Aedes Index. Fifty-eight surveys were made and the data is given in Table 30.

## AEDES (STEGOMYIA) SURVEYS 1958

146. The usual measures practised during previous years was satisfactorily maintained during 1958. This included clearing of artificial containers, check surveys, destruction of natural breeding places and clearing of secondary vegetation.

*Residual Spraying*

147. Spraying of houses in the controlled area around the International Airport and in the Southern Island was done once in four months.

*Swing Fogging*

148. Swing fogging operations were carried out on eight occasions using 60 gallons of dieldrin emulsifiable concentrate.

TABLE 25

## WORK DONE UNDER AIRPORT DRAINAGE SCHEME

|  |        |             |
|--|--------|-------------|
| Large sized channel drains constructed | ...    | 87 yards    |
| Small sized channel drains constructed | ...    | 89 yards    |
| Subsoil pipes laid                     | ... .. | 1,495 yards |
| Tube well constructed                  | ... .. | 1           |
| Anti-malarial wells constructed        | ... .. | 2           |
| Retaining walls constructed            | ... .. | 3           |

*New Oiling Areas*

149. *Bukit Panjang*.—Routine oiling was extended to areas around the new Sewage Works at Ulu Pandan and in the West Coast area around the prawn ponds. The oiling at the new oil installation at Tanjong Penjuru is done by the Petroleum Company.

150. *Katong*.—In this district oiling was extended to the Tampenis Road 12 m.s. area where recurrent *A. sundaicus* breeding occurred; also to the ravines adjacent to Jalan Tiga Ratus.

*Malaria Cases*

151. Sixteen malaria cases were reported during the year. Every case was fully investigated as to the probable origin of the case was as follows: Johore 7 cases, Negri Sembilan 3 cases, Perak 2 cases, Penang 1 case and Indonesian islands 3 cases. Eight of the cases were subtertian malaria and the remaining cases were benign tertian malaria; of the latter eight at least five gave a history suggestive of a relapse of benign tertian malarial infection.

152. Besides checking on the patient a full malaria and mosquito survey of the area where the patient lives is done to ensure that there has been no breakdown, however minor, in the malaria control services.

TABLE 26

## SUMMARY OF ANTI-MALARIAL DRAINAGE WORK, 1958

|                                      |        |               |
|--------------------------------------|--------|---------------|
| Permanent channel drains constructed | ...    | 5,060 yards   |
| Permanent channel drains repaired    | ...    | 2,979 yards   |
| Permanent channel drains maintained  | ...    | 237,918 yards |
| Subsoil drains constructed           | ... .. | 4,154 yards   |
| Subsoil drains repaired              | ... .. | 6,418 yards   |
| Earth drains constructed             | ... .. | 10,649 yards  |
| Earth drains maintained              | ... .. | 543,882 yards |

*Anti-malarial Materials*

153. The amount of anti-malarial oil used was 116,692 gallons. 542 gallons of kerosine was used in controlling breeding in seepage wells, and 3,420 gallons of residual insecticides (B.H.C. and Dieldrex) were used in residual spraying of the Southern Islands, and around the International Airport.

## WATER SUPPLIES

154. The Rural Board continued to follow the policy of previous years in extending pipe water supplies to as much of the rural areas as possible. In furtherance of this policy Health Officers investigated and recommended sites for 112 standpipes in suitable areas. The total number of standpipes installed during 1958 was 149. Washing platforms with concrete base and drainage facilities were provided for 40 standpipes.

155. During the dry weather, it was again necessary to send water wagons to affected areas on the main island; water boats were regularly sent to the Southern Islands.

## FOOD HYGIENE

156. With the progressive urban development of the rural areas, the problems of food hygiene become more urgent and intense. The amended Food and Drug Regulations have now been in operation for over a year and give better control.

*Food Sampling*

157. Sanitary Inspectors took 127 formal samples of food, of which 62 samples were of milk. Among the articles sampled were: vinegar, sauce, canned meat, edible oil, soft drinks, soya bean milk, coffee powder. Court action was instituted against vendors of four of these samples while in some cases where the offence was technical or due to oversight, the vendors or manufacturers were warned.

*Food Factories*

158. There are now a fair number of food factories in the rural areas. Eight of these operate on a large-scale and prepare food, sauce and soft drinks for local sale as well as export.

*Control of Food Hawkers*

159. There continues to be a regular increase of food hawkers in all parts of the rural areas. These hawkers, many of them unlicensed, constitute a health menace as they ply their trade in very insanitary circumstances, completely oblivious to elementary standards of hygiene. The health personnel have during the year made vigorous efforts to deal with the problem.

*Routine Inspections*

160. Inspections of food shops, supervision of markets and food hawkers was regularly done. 9,241 inspections of food shops, 2,625 inspections of markets and 15,433 checks as food hawkers were done during the year.

## CLEANSING SERVICES

*Scavenging*

161. Since the beginning of the year the Rural Board has waived the charges for the removal of domestic refuse. Only the charges for the removal of trade refuse are in force.

162. During the year a total of 3,705,000 cubic feet of refuse was collected and disposed of.

163. Approximately 120 miles of roads, streets, lanes and by-lanes are swept daily in the rural area. Drains in public roads and back-lanes are attended to.

*Collection of Refuse*

164. In the well laid-out areas and housing estates, mechanised transport is used for collection and transportation of refuse to disposal sites from houses

and trade premises. The types of vehicles in use are: (i) refuse carriers with side shutters; (ii) dual tippers with gravity packing; (iii) specially designed Land Rovers; (iv) earth tippers and open trucks.

165. In areas where localised disposal is in vogue, removal of refuse is by means of steel handcarts which are of three main types:

- (i) the 'Penang' type which has a larger capacity for holding refuse and requires more than one labourer to handle;
- (ii) the 'Helicopter' or 'Coffin' type which has a roof-like cover with a lighter weight and
- (iii) the 'Carrier' type which has two bins attached and can be managed by a single labourer.

166. Householders are required to provide small covered-metal receptacles for domestic refuse. In the main villages the Rural Board has provided a number of bin centres with large covered metal bins for receiving village refuse until removal by lorries or handcarts to the disposal ground.

167. During the year a number of litter bins were ordered and placed near bus stops and parks for the use of the public.

#### *Disposal of Refuse*

168. The methods adopted for the disposal of refuse in the districts were: (i) controlled tipping, (ii) composting and (iii) incineration.

169. Controlled tipping if properly managed, is possibly the best and economical method available for the disposal of refuse. It also helps to reclaim low-lying swamp areas. Lack of suitable and adequate sites even in the rural areas has retarded the progress in this direction.

170. Composting is done by mixing nightsoil with refuse in definite proportions with periodical turning it is 'matured' and ready for use. The 'Calcutta' and 'Indore' systems are practised.

171. Compost is supplied free to those who require it. A nominal charge is made for transport.

#### *Revenue*

172. The revenue realised from the trade premises, the sale of compost and removal of refuse from temporary *wayang* sheds amounted to \$90,676.90.

#### *Conservancy*

173. Unlike the scavenging service which is a direct removal system, the conservancy is let out partly on contract. Only in Bukit Timah, Bukit Panjang and Serangoon Districts is a direct removal system being carried out.

174. Disposal of nightsoil was mainly by composting and trenching. Here again is the problem of scarcity of suitable land for trenching purpose crops up as more and more areas are taken up for housing and factory sites.

175. The number of labourers employed by the Rural Board for direct nightsoil removal was 65. Nine vehicles were used for the service.

176. 10,199 buckets were serviced daily; 3,993 by direct removal and 6,206 by contract removal.

#### VILLAGE SANITATION

177. The programme of village sanitation initiated in 1954 was continued during 1958. Since the inception of the scheme, 54 villages have been brought into the scheme, 12 being in 1958.

## INDUSTRIAL AND OCCUPATIONAL HEALTH

178. Routine inspection and normal supervision of hygiene aspects of industrial premises continued during the year. It is expected that with new legislation introduced this year (Factories Ordinance) there will be more effective powers to insist on improved standards of hygiene, sanitation and safety.

TABLE 27

## INDUSTRIAL CONCERNS IN THE RURAL AREAS, 1958

|  |        |     |
|--|--------|-----|
| Rubber mills, smoke houses and rubber products   | ...    | 36  |
| Woodworking, furniture making and sawmills   | ... .. | 14  |
| Humes, asbestos and drums and metal works  | ... .. | 11  |
| Granite quarries, brickworks and lime making   | ... .. | 26  |
| Gases and bitumen products   | ... .. | 3   |
| Rattan bleaching   | ... .. | 3   |
| Lead recovery and tin smelting   | ... .. | 2   |
| Sago washing   | ... .. | 6   |
| Chewing gum base manufacture   | ... .. | 3   |
| Yarn and rope manufacture  | ... .. | 1   |
| Perfume packing factory  | ... .. | 1   |
| Battery manufacture  | ... .. | 1   |
| Shoe polish factory  | ... .. | 2   |
| Shoe factory   | ... .. | 1   |
| Assembly of cars and trucks  | ... .. | 1   |
| Soap factory   | ... .. | 14  |
| Food factories, refining oil, sauce making, coffee or rice grinding,<br>food canning and vermicelli making | ... .. | 55  |
| Pineapple canning  | ... .. | 2   |
| Can making   | ... .. | 2   |
| Bakeries and cake shops  | ... .. | 39  |
| Brewing beer and stout   | ... .. | 1   |
| Creameries and milk packing  | ... .. | 2   |
| Tannery  | ... .. | 5   |
| Candle making  | ... .. | 2   |
| Paper products manufacture   | ... .. | 3   |
| Glass and lamps manufacture  | ... .. | 1   |
| Manure making  | ... .. | 1   |
| Incense making   | ... .. | 1   |
|  | Total  | 239 |

*Note:*—There are a number of small family establishments where no outside workers are employed; these are not included in the above list.

## SEPTIC TANKS AND SANITARY INSTALLATIONS

179. The tempo of building development in the rural areas continued to increase. More housing estates and individual houses were being provided with water borne systems of sewage disposal.

Most of the septic tanks constructed during the year were for small individual houses. The Rural Board type of septic tank with a soakaway system proved to be the most popular, being efficient in use and economical to construct and maintain. A number of big septic tanks serving housing estates were being constructed during the year; four of the bigger tanks having capacities of over 90,000 gallons each, and being able to treat altogether the sewage from population of over 12,000 people. A sewage pumping station was also constructed at Opera Estate, pumping sewage from a part of this estate to the City Council sewer.

180. Hitherto, the design of sewage disposal plants for housing estates in the rural areas had been based on the Imhoff pattern followed by biological filtration of the effluent, but this year saw the introduction of the activated sludge method of sewage purification in the rural areas. While the process is not new (the City Council sewage disposal plant at Kim Chuan Road being an activated sludge plant using diffused air) its application to the treatment of sewage from housing estate in the rural areas of Singapore had never been seriously considered by the estate developers until now. Chief advantages claimed for this process are that initial outlay is usually cheaper than conventional methods. Smaller areas of land are required and there is no smell or psychoda fly nuisance.

181. Two activated sludge plants were constructed (one a 'Simplex' plant, and the other an 'Infilco' plant) each capable of treating sewage from a building estate of over 3,000 people.

182. Although most developers realize the appreciation in value of their property after installation of modern sanitation, there were still a number of applications for the construction of new houses using only bucket latrines. It is believed that this is possibly due to the relatively high cost of installation of a water borne system and septic tanks.

183. Only three applications for the installation of chemical closets were received and approved.

184. A total number of 64 septic tanks having a total combined capacity of 231,434 gallons and capable of treating the sewage of approximately 9,290 people from about 1,550 houses were completed and taken over by the Rural Board for maintenance. Fifty more septic tanks were still under construction. There were altogether 544 septic tanks of various capacities in the rural areas up to the end of 1958.

TABLE 28

## SEPTIC TANKS CONSTRUCTED IN 1958 AND TAKEN OVER FOR ROUTINE MAINTENANCE

| <i>Capacity in Gallons</i> |     | <i>Septic Tanks<br/>with Filters</i> | <i>Septic Tanks<br/>with Soakaways</i> | <i>Total No.<br/>of Tanks</i> |
|----------------------------|-----|--------------------------------------|--|-------------------------------|
| Under 500                  | ... | 1                                    | 16                                     | 17                            |
| 501 — 1,000                | ... | 9                                    | 23                                     | 32                            |
| 1,001 — 2,000              | ... | 2                                    | —                                      | 2                             |
| 2,001 — 5,000              | ... | 2                                    | —                                      | 2                             |
| 5,001 — 10,000             | ... | 4                                    | —                                      | 4                             |
| Over 10,000                | ... | 7                                    | —                                      | 7                             |
| Total                      |     | 25                                   | 39                                     | 64                            |

*Note:*—The above 64 septic tanks have a total combined capacity of 231,434 gallons and will be able to treat the sewage of approximately 9,290 people from about 1,550 houses.

## HOUSING

185. The steady flow of City dwellers making their homes in the rural areas continued during the year. Among the larger housing developments in progress were: Bukit Timah Park, Changi Road 12 m.s., Eden Park, Frankel Estate, Guan Soon Estate, Hong Kong Park, Joo Yee Homes, Namly Park, Opera Estate, Seletar Hills Estate, Sembawang Hills Estate, Springs Park, Woodlands Garden.

186. The increase of development carries with it certain health risks. Many of these are situated in areas which were previously agricultural and often with farmers and pig-rearers still working and living on the land adjacent to these housing estates.

187. New resettlement areas, such as at Rifle Range, Bukit Timah and 12 m.s. Jurong, are being opened up and the problems of health and sanitation in these areas have received the attention of the Rural Health Division.

188. The construction of agricultural roads in many parts of Rural Singapore has facilitated health services including more frequent and effective inspections of outlying areas.

189. During the year health staff dealt with 279 layouts of site for development under the Singapore Improvement Ordinance; 506 plans were commented upon in respect of health requirements.

TABLE 29  
PROSECUTIONS DURING 1958

|   | Bukit Panjang | Serangoon | Katong | Total Number of Cases | Total Fines |
|---|---------------|-----------|--------|-----------------------|-------------|
| Municipal Ordinance, Chapter 133 (1936 Edition)—    |               |           |        |                       |             |
| Under Section 194 (Hawkers' Stalls) .. .. .         | 174           | 126       | 11     | 311                   | 2,645       |
| Under Section 195 (Itinerant Hawkers) .. .. .       | 47            | 140       | 8      | 195                   | 1,329       |
| Under Section 211 (Offensive Trades) .. .. .        | 5             | 12        | 8      | 25                    | 880         |
| Under Section 246 (Nuisance Notice) .. .. .         | 3             | ..        | ..     | 3                     | 71          |
| Under Section 247 (Nuisance Order) .. .. .          | ..            | ..        | ..     | ..                    | ..          |
| Under Eating House Bye-laws                         | 16            | ..        | 5      | 21                    | 336         |
| Under Piggery Bye-laws ..                           | 38            | 21        | 7      | 66                    | 565         |
| Under Perishable Food Bye-laws .. .. .              | ..            | 1         | 12     | 13                    | 605         |
| Under Market Bye-laws ..                            | ..            | 20        | 9      | 29                    | 295         |
| Food and Drugs Ordinance, Chapter 148 .. .. .       | 2             | ..        | 7      | 9                     | 630         |
| Destruction of Mosquitoes Ordinance, Chapter 139 .. | ..            | ..        | 5      | 5                     | 160         |
| Total ..  | 285           | 320       | 72     | 677                   | 7,516       |

TABLE 30  
AEDES (STEGOMYIA) SURVEYS 1958

| Month           | Number of Surveys | Number of houses checked | Number of <i>Aedes (S) aegypti</i> collections | Number of <i>Aedes (S) albopictus</i> collections | Number of <i>Aedes (S) scutellaris</i> collections | Number of <i>Aedes (A) obturban</i> collections | Number of <i>Culex</i> collection | <i>Aedes Stegomyia</i> Index |
|-----------------|-------------------|--------------------------|--|---|--|---|-----------------------------------|------------------------------|
| March .. ..     | 14                | 1,217                    | Nil  | 12  | 1  | 4   | 11                                | 1.06                         |
| June .. ..      | 14                | 1,238                    | Nil  | 19  | Nil  | 1   | 5                                 | 1.53                         |
| September .. .. | 15                | 1,214                    | Nil  | 19  | Nil  | 3   | 9                                 | 1.56                         |
| December .. ..  | 15                | 1,213                    | Nil  | 21  | Nil  | 4   | 7                                 | 1.73                         |
| Total ..        | 58                | 4,882                    | Nil  | 71  | 1  | 12  | 32                                | ..                           |

TABLE 31  
SPECIAL SURVEYS 1958

| Month     | Total No. of surveys made | <i>A. maculatus</i> | <i>A. karwari</i> | <i>A. sundaticus</i> | <i>A. baezai</i> | <i>A. leucosphyrus</i> | <i>A. aitkeni</i> | <i>A. hyrcanus</i> | <i>A. kochi</i> | <i>A. vagus</i> | <i>A. separatus</i> | <i>A. barbitrostris</i> | <i>A. letifer</i> | <i>Aedes Stegomyia</i> | <i>Culex</i> |
|-----------|---------------------------|---------------------|-------------------|----------------------|------------------|------------------------|-------------------|--------------------|-----------------|-----------------|---------------------|-------------------------|-------------------|------------------------|--------------|
| January   | 12                        | ..                  | 2                 | 5                    | ..               | ..                     | ..                | 8                  | 10              | ..              | 1                   | ..                      | ..                | 13                     | 6            |
| February  | ..                        | ..                  | ..                | ..                   | ..               | ..                     | ..                | ..                 | ..              | ..              | ..                  | ..                      | ..                | ..                     | ..           |
| March     | 1                         | ..                  | ..                | ..                   | ..               | ..                     | ..                | 2                  | 2               | ..              | ..                  | ..                      | ..                | 19                     | 22           |
| April     | 18                        | ..                  | ..                | ..                   | ..               | ..                     | ..                | ..                 | ..              | ..              | ..                  | ..                      | ..                | 36                     | 45           |
| May       | 1                         | ..                  | ..                | ..                   | ..               | ..                     | ..                | 4                  | 1               | 3               | ..                  | ..                      | ..                | ..                     | ..           |
| June      | ..                        | ..                  | ..                | ..                   | ..               | ..                     | ..                | ..                 | ..              | ..              | ..                  | ..                      | ..                | ..                     | ..           |
| July      | 15                        | ..                  | ..                | ..                   | ..               | ..                     | ..                | 1                  | ..              | ..              | ..                  | ..                      | ..                | 31                     | 15           |
| August    | 1                         | ..                  | ..                | ..                   | ..               | ..                     | ..                | ..                 | ..              | ..              | ..                  | ..                      | ..                | 12                     | 3            |
| September | 1                         | ..                  | ..                | ..                   | ..               | ..                     | ..                | 5                  | 3               | ..              | ..                  | ..                      | ..                | ..                     | ..           |
| October   | 14                        | ..                  | ..                | ..                   | ..               | ..                     | ..                | ..                 | ..              | ..              | ..                  | ..                      | ..                | 19                     | 9            |
| November  | 1                         | ..                  | ..                | ..                   | 1                | ..                     | ..                | 3                  | 3               | ..              | ..                  | ..                      | ..                | ..                     | ..           |
| December  | 16                        | ..                  | ..                | ..                   | ..               | ..                     | ..                | ..                 | ..              | ..              | ..                  | ..                      | ..                | 19                     | 9            |
| Total     | 80                        | ..                  | 2                 | 5                    | 1                | ..                     | ..                | 23                 | 19              | 3               | 1                   | ..                      | ..                | 149                    | 109          |

TABLE 32

## RURAL MALARIA SURVEYS 1958

| Month        | Total No. of surveys made | <i>A. maculatus</i> | <i>A. karwari</i> | <i>A. sundanicus</i> | <i>A. baezai</i> | <i>A. leucosphyrus</i> | <i>A. aitkeni</i> | <i>A. hyrcanus</i> | <i>A. kochi</i> | <i>A. vagus</i> | <i>A. separatus</i> | <i>A. barirostris</i> | <i>A. letifer</i> |
|--------------|---------------------------|---------------------|-------------------|----------------------|------------------|------------------------|-------------------|--------------------|-----------------|-----------------|---------------------|-----------------------|-------------------|
| January ..   | 35                        | 17                  | ..                | 3                    | 8                | ..                     | ..                | 87                 | 96              | 2               | 2                   | ..                    | ..                |
| February ..  | 33                        | 15                  | ..                | 7                    | 1                | ..                     | ..                | 101                | 95              | ..              | 2                   | ..                    | ..                |
| March ..     | 45                        | 15                  | ..                | 3                    | 6                | 1                      | 1                 | 151                | 79              | 1               | 2                   | ..                    | ..                |
| April ..     | 28                        | 13                  | 1                 | 4                    | 2                | ..                     | ..                | 99                 | 51              | 4               | ..                  | ..                    | ..                |
| May ..       | 39                        | 6                   | 1                 | 10                   | 5                | ..                     | ..                | 121                | 92              | 10              | 1                   | ..                    | ..                |
| June ..      | 34                        | 7                   | 2                 | 2                    | ..               | ..                     | ..                | 93                 | 84              | 2               | ..                  | ..                    | ..                |
| July ..      | 42                        | 13                  | ..                | 12                   | 13               | ..                     | ..                | 101                | 92              | 5               | 1                   | ..                    | ..                |
| August ..    | 41                        | 16                  | 2                 | 11                   | 4                | 1                      | ..                | 116                | 89              | 1               | ..                  | ..                    | ..                |
| September .. | 47                        | 14                  | 2                 | 10                   | 4                | 1                      | ..                | 150                | 117             | 4               | 2                   | ..                    | ..                |
| October ..   | 46                        | 16                  | 1                 | 10                   | 6                | ..                     | ..                | 138                | 99              | 6               | 1                   | ..                    | ..                |
| November ..  | 44                        | 4                   | ..                | 7                    | 2                | ..                     | ..                | 158                | 90              | 3               | 1                   | ..                    | ..                |
| December ..  | 39                        | 25                  | ..                | 6                    | ..               | ..                     | ..                | 114                | 66              | 3               | ..                  | ..                    | ..                |
| Total ..     | 473                       | 161                 | 9                 | 85                   | 51               | 3                      | 1                 | 1,429              | 1,050           | 41              | 12                  | ..                    | ..                |

## CHAPTER SEVEN

### MATERNAL AND CHILD HEALTH SERVICE IN THE RURAL AREAS

190. The year 1958 saw continued expansion of the Maternal Child Health Service in the rural areas of Singapore. The Service was crowned with two successes.

191. In the New Year Honours List, the Public Health Matron, Mrs. M. E. Perera, received the award of M.B.E. for her services to Maternal and Child Health.

192. In February, the Kettering Shield was awarded to the Maternal and Child Health Service (Rural Areas) Singapore by the National Baby Welfare Council in London for outstanding achievements in the field of Maternal and Child Health since 1954. This shield which was won in a competition for all British Colonial territories will be held by the Maternal and Child Health Service (Rural) for three years until 1960. The shield was formally presented at a ceremony at the Institute of Health on 16th October, 1958 by the Hon. Mr. A. J. Braga, the Minister for Health on behalf of the National Baby Welfare Council, London.

#### *Staff*

193. The staff of this Service consisted of 11 Medical Officers, 1 Public Health Matron, 12 Health Sisters, 39 Health Nurses and 68 Health Midwives. Dr. (Mrs.) M. Calderwood, M.B., Ch.B. (Man.), D.P.H. (Eng.) was in charge of the Service.

#### *Maternal and Child Health Clinics*

194. There are three types of Maternal and Child Health Clinics at present, i.e.

|  | 1956 | 1957 | 1958 |
|--|------|------|------|
| Main clinics (resident midwives 2-6) ... | 28   | 19   | 20   |
| Midwife centres (resident midwife) ...   | 4    | 7    | 8    |
| Visiting centres (non-residential) ...   | 24   | 25   | 25   |

The following new clinics were opened in 1958:—

|                 |     |     |                                       |
|-----------------|-----|-----|---------------------------------------|
| Main clinic     | ... | ... | 1 (Keh Hai Road)                      |
| Visiting centre | ... | ... | 1 (Marsiling Road—replaces Woodlands) |

TABLE 33

## MATERNAL AND CHILD HEALTH CENTRES AS ON 31ST DECEMBER, 1958

|                 |                      |                            |
|-----------------|----------------------|----------------------------|
| Bouna Vista.    | Bulim.               | Tanjong Penjuru.           |
| Holland Road.   | St. John's Island.   | Race Course.               |
| Bukit Timah.    | Sungei Tengah.       | Princess Elizabeth Estate. |
| Jurong 12½ m.s. | Kuala Loyang.        | Tanjong Kling.             |
| Jurong 18 m.s.  | Somapah.             | Marsiling Road.            |
| Bukit Panjang.  | Jurong 10 m.s.       | Tanjong Murai.             |
| Ama Keng.       | Lim Chu Kang 18 m.s. | Kampong Blukang.           |
| Mandai.         | Pulau Ubin.          | Kampong Bajau.             |
| Thomson Road.   |                      | Damar Laut.                |
| Yio Chu Kang.   |                      | Pulau Sudong.              |
| Lim Ah Pin.     |                      | Pulau Semakau.             |
| Kim Chuan Road. |                      | Pulau Seking.              |
| Kampong Batak.  |                      | Pulau Seraya.              |
| Bedok 9 m.s.    |                      | Pulau Bukom Kechil.        |
| Ulu Bedok.      |                      | Lazarus Island.            |
| Changi.         |                      | Pulau Ayer Merbau.         |
| Sembawang.      |                      | Pulau Samulun.             |
| Keh Hai Road.   |                      | Pulau Ayer Merlimau.       |
| Pulau Brani.    |                      | Sembawang 15 m.s.          |
| Pulau Tekong.   |                      | Chia Keng Village.         |
|                 |                      | Ayer Gemuroh.              |
|                 |                      | Pulau Ubin.                |
|                 |                      | Ponggol.                   |
|                 |                      | Kampong Loyang.            |
|                 |                      | Pulau Sebarok.             |

TABLE 34

## SUMMARY OF WORK DONE IN MATERNAL AND CHILD HEALTH CENTRES

|   | 1956    | 1957    | 1958    |
|---|---------|---------|---------|
| Home visits by (a) Health Nurse ... ..          | 66,821  | 50,847  | 33,106  |
| (a) Health Midwife ... ..                       | 61,836  | 58,211  | 54,141  |
| Nursing visits by Midwives ... ..               | 45,637  | 45,333  | 40,203  |
| Confinements attended ... ..                    | 8,553   | 7,961   | 7,750   |
| Mothers in labour to hospitals ... ..           | 671     | 551     | 486     |
| <i>Clinic attendances</i>                       |         |         |         |
| Infants (0-1 year) ... ..                       | 121,756 | 134,481 | 131,302 |
| Children (over 1 year) ... ..                   | 79,317  | 76,325  | 75,556  |
| Antenatal ... ..                                | 62,035  | 65,602  | 77,391  |
| Postnatal ... ..                                | 6,708   | 4,215   | 3,186   |
| Family Planning (new cases) ... ..              | 949     | 917     | 1,187   |
| Family Planning (repeat cases) ... ..           | 2,440   | 2,925   | 4,411   |
| Primary vaccinations ... ..                     | 13,428  | 13,253  | 16,135  |
| <i>Diphtheria Immunisation</i>                  |         |         |         |
| P.T.A.P. 1st dose ... ..                        | 13,524  | 9,405   | 2,604   |
| 2nd dose ... ..                                 | 10,665  | 8,974   | 2,795   |
| Booster ... ..                                  | 641     | 5,354   | 6,062   |
| <i>Kampong Diphtheria Immunisation Campaign</i> |         |         |         |
| P.T.A.P. 1st dose ... ..                        | 6,126   | 4,476   | 2,445   |
| 2nd dose ... ..                                 | 3,665   | 3,578   | 1,800   |
| Booster ... ..                                  | —       | 1,099   | 1,411   |
| <i>Triple Antigen Immunisation</i>              |         |         |         |
| Diphtheria' Whooping Cough and Tetanus          |         |         |         |
| 1st dose ... ..                                 | 851     | 15,507  | 25,717  |
| 2nd dose ... ..                                 | 575     | 12,882  | 12,968  |
| 3rd dose ... ..                                 | 407     | 10,135  | 12,265  |
| Booster ... ..                                  | —       | 488     | 1,751   |

TABLE 34—continued

|   | 1956               | 1957          | 1958    |
|---|--------------------|---------------|---------|
| <i>B.C.G. Vaccination (Island wide from May 1958)</i> | 221<br>(2 clinics) | 517<br>(only) | 2,994   |
| Tuberculin Tests—Negative                             | 1                  | 188           | 134     |
| Positive  | 2                  | 163           | 75      |
| <i>Non-notifiable Infectious Diseases</i>             |                    |               |         |
| Whooping Cough  | n.a.               | 507           | 198     |
| Measles   | n.a.               | 116           | 256     |
| Mumps   | n.a.               | 7             | 10      |
| <i>Free Milk Distribution</i>                         |                    |               |         |
| 1. Milk to ante-natal mothers (in lb.)                | 10,186             | 10882.5       | 17,667  |
| Number of mothers                                     | 11,787             | 11,211        | 17,667  |
| 2. Milk to children (in lb.)                          | 27,487             | 21,089        | 21544.5 |
| Number of children                                    | 31,363             | 22,344        | 23,266  |
| 3. Total amount of powdered milk (in lb.)             | 37,673             | 31871.5       | 39211.5 |

*Maternity Services*

195. *Ante-natal Care.*—The standard of ante-natal care remained high throughout the year. Complete medical cover was possible at all times because of adequate numbers of Clinic Medical Officers.

196. The weekly midwife ante-natal sessions in the main clinics and the daily midwife ante-natal sessions in the kampong midwife centres proved to be of great value in maintaining the 'umbrella' of ante-natal care in the rural areas.

197. There were 5,831 babies born to rural mothers in 1958, an increase of 276 over 1957.

198. The high incidence of anæmia amongst the ante-natal mothers persisted in spite of constant teaching in the clinics and in the homes. The response to modern treatment in all clinics was good.

199. *Post-natal Care.*—The attendances of the mothers at the post-natal clinic remained disappointing. Shortage of Health Nurses prevented adequate health education and advice in the homes.

200. *Domiciliary Midwifery.*—The Health midwives from the main clinics and kampong midwives centres attended 8,043 births in the rural area which was 31.2 per cent of all the rural births.

201. The Class 'C' *bidans* were still closely supervised to maintain a high standard of work.

TABLE 35

DOMICILIARY MIDWIFERY STATISTICS—RURAL AREA

|   | 1955   | 1956   | 1957   | 1958   |
|---|--------|--------|--------|--------|
| Total number of live and still births in the rural area | 15,589 | 16,749 | 16,462 | 25,768 |
| Confinements in Kandang Kerbau Hospital                 | 1,883  | 3,356  | 5,556  | 5,831  |
| Confinements attended by Government midwives            | 7,852  | 8,553  | 7,961  | 8,043  |
| Confinements attended by private midwives Class B       | 4,766  | 4,560  | 5,483  | 6,452  |

202. There were 68 Health midwives working in the rural areas in 1958 and they were responsible for 31.2 per cent of the deliveries in the area.

#### *Supervision of Midwives*

203. A Health Sister trained in Britain with the Health Visitor and District Nursing certificates continued to supervise the work of the Health midwives, private midwives and Class 'C' *bidans* in the rural areas. This maintained the liaison and co-ordination between all the three types of midwives in the rural areas.

#### *Child Health Clinics*

204. The attendances at the Infant Welfare clinics (0-1 year age) were only slightly less than for the previous year. The anterior poliomyelitis epidemic from September to December was responsible for keeping the babies away from the clinics as the public had been advised to avoid crowds.

205. The drop in attendances of the pre-school children also could be accounted for by the anterior poliomyelitis epidemic.

206. Since all the main clinics had a medical officer in 1958, there was more adequate medical cover in all the children's clinic sessions than ever before.

#### *Immunisation*

207. *B.C.G. Vaccination.*—The pilot experiment for B.C.G. vaccination in two rural clinics which was started in July 1956, became island wide in May 1958. A vaccination team based on Tan Tock Seng's Hospital visited every main clinic in the rural area on a monthly roster and the response from the parents was most encouraging. Fortunately it was not deemed necessary to cancel the B.C.G. vaccination during the anterior poliomyelitis epidemic and so the figures for vaccinations remained steady and very satisfactory.

208. *Diphtheria, Whooping Cough and Tetanus.*—The immunisation against diphtheria, whooping cough and tetanus in all the rural clinics was most satisfactory, but it was cancelled for the duration of the anterior poliomyelitis epidemic. The figures for the year 1958 are therefore not as high as they would have been if there had been no interruption in the service.

209. There was a marked drop in the number of cases of whooping cough which was most gratifying. The incidence of diphtheria for 1958 was 144 as compared with 159 in 1957.

#### *Supervision of Transferred Children*

210. This supervision continued throughout 1958 by the original Health Sister who was made responsible in 1957, and she worked in close co-operation with the Protector of Children and Young Persons in the Department of Social Welfare.

#### *Foster Children*

211. The pilot experiment of 1956, grew into an established procedure in 1958 and 50 foster mothers were available for needy babies.

#### *Maternal and Child Health—Islands of Singapore*

212. The standard of Maternal and Child care was the same as that in the clinics of the main Island of Singapore. A team consisting of a Lady Medical Officer, Health nurse and Health midwife, together with a Hospital

Assistant, visited the islands weekly in the Floating Dispensary *Seraya* throughout the year. Bi-weekly out-patient sessions on the islands appeared to be much appreciated by the islanders.

### Teaching

213. The Lady Medical Officer, Maternal and Child Health Service and Senior Nursing staff assisted in the Public Health Nursing Course.

TABLE 36

## VITAL STATISTICS—RURAL AREA

|   | 1954   | 1955   | 1956   | 1957   | 1958*                             |
|---|--------|--------|--------|--------|-----------------------------------|
| Maternal deaths .. .. .   | 33     | 12     | 15     | 11     | 22                                |
| Live births .. .. .   | 15,867 | 15,589 | 16,576 | 16,286 | 25,348                            |
| Still births .. .. .  | 171    | 171    | 173    | 176    | 420                               |
| Total births .. .. .  | 16,038 | 15,760 | 16,749 | 16,462 | 25,768                            |
| Perinatal deaths (first 7 days of life) .. .. .                           | n.a.   | n.a.   | n.a.   | n.a.   | 298                               |
| Neonatal deaths (first 4 weeks of life) .. .. .                           | 243    | 240    | 203    | 180    | 413                               |
| Infant deaths (from 4 weeks to 1 year old) .. .. .                        | 752    | 697    | 647    | 570    | 1,077                             |
| Maternal mortality (deaths per 1,000 live and still births) ..            | 2.05   | .76    | .89    | .66    | .85                               |
| Perinatal mortality (Still births and deaths in 1st week of life) .. .. . | n.a.   | n.a.   | n.a.   | n.a.   | 27.8<br>per 1,000<br>total births |
| Neonatal mortality (number of deaths per 1,000 live births)               | 15.3   | 15.4   | 12.3   | 11.0   | 16.2                              |
| Infant mortality (number of deaths per 1,000 live births)                 | 47.3   | 44.7   | 39.0   | 34.9   | 42.4                              |
| Still birth rate (number of still births per 1,000 total births)          | 10.7   | 10.8   | 10.3   | 10.6   | 16.2                              |
| Total number of babies under 1 year attending clinics ..                  | n.a.   | n.a.   | 15,609 | 16,295 | 17,026                            |

### Note:—

\* In the registration of vital data, all information is corrected to place of usual residence and not by registration area in 1958.

CHAPTER EIGHT

QUARANTINE SERVICE

214. The Quarantine Service comprises three closely related sections—the Marine Port Health Service, the Airport Health Service and the Quarantine Station.

*Staff*

215. Staff position at the end of the year is given in Table 37.

TABLE 37

STAFF OF THE QUARANTINE SERVICE AS ON 31ST DECEMBER, 1958

|                                    | Health Officers | Lay Superintendent | Sanitary Inspectors | Technical Subordinates | Hospital Assistants | Midwife |
|------------------------------------|-----------------|--------------------|---------------------|------------------------|---------------------|---------|
| Marine Port Health Service .. .. . | 3               | ..                 | 2                   | 1                      | 1                   | ..      |
| Airport Health Service .. .. .     | 1               | ..                 | 1                   | ..                     | 4                   | ..      |
| Quarantine Station .. .. .         | ..              | 1                  | ..                  | 2                      | 2                   | 1       |
| Total .. .. .                      | 4               | 1                  | 3                   | 3                      | 7                   | 1       |

216. The occurrence of epidemic cholera in Thailand and disturbed conditions in Indonesia with outbursts of epidemic small-pox in its outer provinces called for intensifications of quarantine measures during 1958.

217. During the first two months of the year there was a large population movement of persons of Dutch origin from Indonesia to Europe through Singapore. Additional quarantine restrictions, in view of this population movement, were imposed. All evacuees were subject to surveillance. Dutch evacuee camps on the main island were subject to control for 48 hours to permit full medical inspection of all evacuees in camps.

218. During the middle of the year the cholera epidemic in Thailand called for increased surveillance against travellers from that country. Additional precautions taken included the immunisation of Port and Airport personnel, the prohibition or supervision of certain categories of food imports, in particular raw vegetables, etc. and strict surveillance of passengers.

219. All aircrafts from Bangkok landing at the International Airport at Paya Lebar were checked for flies to assess the danger of transmission of cholera by this route from 13th June to 16th August, 1958. A total of 74 aircrafts were checked and 146 collections of common house flies, mostly alive, were made. The following insects were caught in the planes checked:

|                                    |     |                 |
|------------------------------------|-----|-----------------|
| Musca domestica—common house flies | ... | 146 collections |
| Lucilia Caesar—green bottles       | ... | 3 collections   |
| Phlebotomus papatasii—sand flies   | ... | 3 collections   |
| Periplaneta orientalis—cockroach   | ... | 1 collection    |
| Culex fatigans                     | ... | 1 collection    |
| Culex sitiens                      | ... | 1 collection    |

*New Launch*

220. In May 1958 a fast and manœuvrable launch, the *Sudong*, was put into commission. The Port Health Service now has two launches available for the inspection and clearance of ships and this facilitates expeditious clearance.

*Inspection and Clearance of Small Craft*

221. There is further improvement in the arrangements for health clearance for small craft from neighbouring islands; this work is now done at all times that immigration clearance is done, including Sundays and holidays.

*Radiomedical Service*

222. The Government operates a round-the-clock radiomedical service. This is often availed of by merchant ships and requests for radiomedical advice has been received from Masters of ships as far away as Persian Gulf and the Philippine Sea. During 1950 over 50 radiomedical requests were received and promptly attended to by the Port Health Officer on duty.

TABLE 38

SUMMARY OF WORK DONE BY THE PORT HEALTH SERVICE

|   | 1954   | 1955    | 1956   | 1957    | 1958    |
|---|--------|---------|--------|---------|---------|
| <b>INSPECTIONS AND CLEARANCE OF SHIPS</b>                                     |        |         |        |         |         |
| Ships inspected and cleared ..  | 1,587  | 1,783   | 1,849  | 1,519   | 2,030   |
| Passengers inspected on ships at the Quarantine Anchorage .. ..               | 98,994 | 116,275 | 95,779 | 101,182 | 136,226 |
| Corpses inspected .. ..   | 4      | 14      | 14     | 10      | 11      |
| Pilgrim Ships .. ..   | 5      | 3       | 4      | 4       | 4       |
| Pilgrims .. ..  | 1,537  | 2,619   | 2,518  | 2,214   | 1,891   |
| Disinfection of infected vessels ..   | 1      | Nil     | Nil    | Nil     | Nil     |
| Small Crafts from neighbouring islands inspected and cleared .. ..            | 1,926  | 3,871   | 4,788  | 4,821   | 6,750   |
| Passengers from small craft inspected ..                                      | 12,836 | 22,324  | 23,611 | 35,129  | 55,735  |
| Inspection of Bum Boats .. ..   | 101    | 106     | 103    | 102     | 98      |
| Inspection of Water Boats .. ..   | 8      | 6       | 8      | 8       | 9       |
| <b>RODENT CONTROL</b>   |        |         |        |         |         |
| Ships inspected for evidence of rodent life                                   | 378    | 399     | 401    | 418     | 472     |
| Ships issued with Deratization Certificate                                    | 117    | 104     | 119    | 109     | 119     |
| Ships issued with Deratization Exemption Certificate .. ..                    | 261    | 295     | 282    | 309     | 353     |
| Rats destroyed during fumigation ..   | 1,083  | 1,192   | 782    | 462     | 1,170   |
| Rats examined bacteriologically* ..   | 183    | 191     | 193    | 129     | 680     |
| <b>VACCINATION AND INOCULATION</b>  |        |         |        |         |         |
| Small-pox vaccination .. ..   | 10,351 | 10,157  | 10,042 | 9,819   | 8,668   |
| Cholera inoculation .. ..   | 10,560 | 10,277  | 10,051 | 10,321  | 10,838  |
| T.A.B. inoculation .. ..  | 38     | 52      | 58     | 75      | 34      |
| <b>SANITARY DOCUMENTS</b>   |        |         |        |         |         |
| Bills of Health .. ..   | 3,836  | 598     | 500    | 575     | 616     |
| Permits issued to import, export or tranship coffins containing human remains | 45     | 81      | 88     | 71      | 54      |
| Certificates to accompany goods ..  | 127    | 118     | 93     | 94      | 175     |
| Certificates issued for articles disinfected by steam .. ..                   | 2      | 1       | ..     | ..      | ..      |

\* Rats are examined bacteriologically by the City Health Department.



Future Developments

227. A major problem facing many international airports is the re-organisation of passenger handling facilities to handle jet aircraft services. The Comet IV has accommodation for 80 passengers and the Boeing 707 a capacity of 120 passengers. The stop-over in Singapore will only be 45 minutes. This problem is being studied in relation to the health clearance of passengers, especially transit passengers. The first jet service to Singapore will come into operation in April 1959.

## CHAPTER NINE

### SCHOOL HEALTH

228. The School Health Service is centrally administered in Singapore. At the end of 1958 there were 702 schools in the Colony; this excludes the miscellaneous schools (e.g. religious, commercial, sewing, etc.).

229. In 1958, 34 new schools were opened. There were 57,000 new entrants compared with 53,000 in 1957. The total school population is 295,481 compared with 260,444 in 1957 which is an increase of 35,037.

230. A classification of Government, Government Aided, and private schools, together with the enrolments for 1957 and 1958 is shown in Table 41.

TABLE 41  
SUMMARY OF SCHOOLS AND SCHOOL POPULATION

| Type of Schools            | Number of Schools |      | Enrolment |         |
|----------------------------|-------------------|------|-----------|---------|
|                            | 1957              | 1958 | 1957      | 1958    |
| <b>Government Schools:</b> |                   |      |           |         |
| (a) English .. ..          | 183               | 202  | 84,951    | 100,898 |
| (b) Malay .. ..            | 65                | 66   | 13,312    | 14,240  |
| (c) Chinese .. ..          | 9                 | 11   | 3,647     | 4,648   |
| <b>Aided Schools:</b>      |                   |      |           |         |
| (a) English .. ..          | 62                | 66   | 32,136    | 33,791  |
| (b) Chinese .. ..          | 233               | 233  | 110,329   | 122,830 |
| (c) Malay .. ..            | 1                 | ..   | 107       | ..      |
| (d) Tamil .. ..            | 17                | 17   | 1,351     | 1,463   |
| <b>Non-aided Schools:</b>  |                   |      |           |         |
| (a) English .. ..          | 70                | 67   | 11,112    | 11,295  |
| (b) Chinese .. ..          | 28                | 40   | 3,499     | 6,316   |
| Total ..                   | 668               | 702  | 260,444   | 295,481 |

49.4 per cent of all the pupils attended English Schools.

45.3 per cent of all the pupils attended Chinese Schools.

4.8 per cent of all the pupils attended Malay Schools.

0.5 per cent of all the pupils attended Tamil Schools.

TABLE 42

## GEOGRAPHICAL DISTRIBUTION OF SCHOOLS

|  | <i>City</i> | <i>Rural</i> | <i>Islands</i> | <i>Total</i> |
|--|-------------|--------------|----------------|--------------|
| Government and Government Aided Schools ... .. | 360         | 213          | 22             | 595          |
| Private Schools ... ..                         | 97          | 9            | 1              | 107          |

TABLE 43

## DISTRIBUTION OF SCHOOL POPULATION

| <i>Government and Government Aided Schools</i> | <i>Private Schools</i> | <i>Total</i> |
|--|------------------------|--------------|
| 277,870  | 17,611                 | 295,481      |

*Staff*

231. At the end of 1958 the staff of the School Health Section consisted of one Health Officer-in-charge of Schools, six Health Officers, seven Lady Health Officers, one Matron, three Health Sisters, ten Health Nurses, four Assistant Health Nurses, two Assistant Nurses, one Senior Hospital Assistant, three Hospital Assistants, one Laboratory Assistant and one Public Health Inspector Schools. Dr. Lai Kuen Yee, L.M.S. (Singapore), D.P.H. (Malaya) was the Acting Health Officer-in-charge Schools.

232. The School Tuberculosis Section, consisting of two School Tuberculosis Officers and the B.C.G. Teams, was transferred to the charge of the A.D.M.S. (Tuberculosis) in 1958. This was considered necessary in order that all tuberculosis work, both curation and prevention were co-ordinated.

TABLE 44

## SUMMARY OF SCHOOLS, SCHOOL POPULATION, CHILDREN EXAMINED AND HEALTH OFFICERS 1954-58

|                          | 1954    | 1955    | 1956    | 1957    | 1958*    |
|--------------------------|---------|---------|---------|---------|----------|
| Registered Schools .. .. | 585     | 595     | 624     | 668     | 702*     |
| Students .. ..           | 184,148 | 204,154 | 235,079 | 260,444 | 295,481* |
| Students examined .. ..  | 46,943  | 63,424  | 69,644  | 80,991  | 74,058   |
| Health Officers .. ..    | 8       | 12      | 13      | 11      | 13       |

233. Number of students examined in 1958 shows a drop because many School Health Officers were diverted to work in the anti-poliomyelitis campaign during the poliomyelitis epidemic that occurred towards the end of the year.

## ROUTINE MEDICAL EXAMINATION

234. Medical examinations of children were carried out by the School Health Officers in Government and Government Aided Schools only. There

were no medical examinations undertaken in private schools although the children from these schools attended the school clinics which are open to all school children.

235. As a routine the Health Officers examined (a) new entrants, (b) primary and secondary school leavers and (c) defectives found at previous examinations. A child is examined therefore at least twice in his school career. These examinations are listed as 'New Entrants', 'Leavers' and 'Re-examinations' respectively. During the visit to a school the staff are encouraged to refer any children who were not due for routine periodic examination but whose physical or mental progress appeared to be below normal, for a medical check; these children have been listed as 'Others'.

236. An invitation to be present at the medical examination was issued to all parents of children in the Primary I classes; it is quite impossible to obtain an accurate history of past illnesses, previous inoculations, etc. from children aged 7-8 years, and it also affords an excellent opportunity for the Health Officers to advise the parents on hygiene and diet.

237. Out of a total of 595 Government and Government Aided schools, 528 were visited by either a Health Officer or a Lady Health Officer or both. The Health Officers examined the boys in 317 schools and the Lady Health Officers examined the girls in 496 schools. The total number of children examined were 74,058. It was considered particularly important to examine the new entrants in order to diagnose and treat defects as early as possible and, where time was limited, the Health Officers concentrated on this group. According to the Ministry of Education 57,000 children entered school for the first time in 1958; of these, 36,974 children were examined during the year by School Health Officers.

TABLE 45

## CLASSIFICATION OF SCHOOLS INSPECTED BY SCHOOL HEALTH OFFICERS

| <i>Schools</i>         | <i>City</i> | <i>Rural</i> | <i>Islands</i> | <i>Total</i> |
|------------------------|-------------|--------------|----------------|--------------|
| Government English ... | 121         | 49           | 2              | 172          |
| Aided English ...      | 54          | 12           | —              | 66           |
| Government Chinese ... | 6           | 1            | —              | 7            |
| Aided Chinese ...      | 119         | 97           | 2              | 218          |
| Malay ...              | 18          | 23           | 7              | 48           |
| Tamil ...              | 10          | 7            | —              | 17           |
| <b>Total ...</b>       | <b>328</b>  | <b>189</b>   | <b>11</b>      | <b>528</b>   |

TABLE 46

## CLASSIFICATION OF CHILDREN EXAMINED

| <i>Schools</i>         | <i>Boys</i>   | <i>Girls</i>  | <i>Total</i>  |
|------------------------|---------------|---------------|---------------|
| Government English ... | 14,646        | 18,584        | 33,230        |
| Aided English ...      | 2,962         | 5,345         | 8,307         |
| Government Chinese ... | 182           | 527           | 709           |
| Aided Chinese ...      | 10,870        | 15,578        | 26,448        |
| Malay ...              | 2,015         | 2,770         | 4,785         |
| Tamil ...              | 130           | 449           | 579           |
| <b>Total ...</b>       | <b>30,805</b> | <b>43,253</b> | <b>74,058</b> |

TABLE 47

## CLASSIFICATION OF EXAMINATION DONE

|                        | Boys          | Girls         | Total         |
|------------------------|---------------|---------------|---------------|
| New Entrants ... ..    | 16,878        | 20,096        | 36,974        |
| School Leavers ... ..  | 9,660         | 8,963         | 18,623        |
| Re-examinations ... .. | 1,679         | 11,460        | 13,139        |
| Others ... ..          | 2,588         | 2,734         | 5,322         |
| <b>Total ... ..</b>    | <b>30,805</b> | <b>43,253</b> | <b>74,058</b> |

## GENERAL HEALTH

238. On the whole, the general standard of health of the school population in Singapore is satisfactory. There is more under-nutrition among the new entrants than among school leavers. As the child grows older this condition tends to improve. The children in the vernacular schools are comparatively of poorer level of health. Anæmia and worm infestation is more common in the rural schools.

*Defects found during Medical Examinations and Re-examination of Defectives*

239. Dental Caries is exceedingly prevalent and it is estimated that about 90 per cent of new entrants are affected. The majority cannot afford private dental treatment, especially those from the rural areas. Such facilities provided by the Government School Dental Service is inadequate.

240. Skin infections, scabies, tinea, impetigo, eczema are the common skin infections found, while head louse infestation is still found among certain Indian and Malay children.

241. *Eyes.*—Conjunctivitis is the most common eye infection encountered. Trachoma is rare and when suspected is always referred to the Ophthalmic Surgeon at General Hospital for confirmation. Defective vision occurs more often in the older age groups. Children from poor families are recommended for free glasses which are paid for by the Ministry of Education.

242. *Ear, Nose and Throat.*—Only cases of enlarged tonsils with a history of repeated sore throats or where the general health could be improved with removal of focal point of sepsis, were referred to the E.N.T. Unit at the General Hospital. Sinus infection was not common. Infections of the middle ear were usually chronic. Eleven cases of deafness were reported.

243. *Organic Vascular Heart Disease.*—Mitral stenosis, auricular and ventricular septal defects, and patent ductus arteriosus are the most common heart defects found. In a number of cases of mitral stenosis, the children must have suffered from 'silent' rheumatic infection as a previous history of rheumatic fever was very difficult to obtain.

244. *Respiratory Infections.*—Infections, mainly bronchitis, were found more often among children living in the urban area where overcrowded living conditions and poor ventilation are common. Children with a history of chronic cough or whose general health was poor were mantoux tested and radiologically examined.

245. *Genito-urinary.*—A number of 'pin-point' phimosis were found and referred to the General Hospital for surgical treatment. Hydrocele and inguinal

hernia were the more common defects found among the boys, and all cases were referred to the Surgical Units, General Hospital, for opinion and where necessary, treatment.

246. Anæmia with less than 60 per cent hæmoglobin (Sahli) is rare. Cases of anæmia were found more in the rural areas where worm infestation is prevalent. A certain number were due to nutritional causes in both urban and rural areas.

247. *Worm Infestation.*—Inadequate sanitation, the use of night-soil as market-gardening manure and the fact that most school children go about bare-foot at home, account for the much higher incidence of worm infestation in the rural schools.

TABLE 48

INCIDENCE OF DEFECTS DETECTED IN ROUTINE SCHOOL MEDICAL EXAMINATION

(Figures for incidence of defects expressed as percentages)

|   |       |  | 1954   | 1955   | 1956   | 1957   | 1958   |
|---|-------|--|--------|--------|--------|--------|--------|
| Dental Caries .. ..   | Boys  |  | 36.84  | 50.09  | 51.67  | 46.16  | 45.91  |
|   | Girls |  | 45.88  | 54.83  | 51.78  | 55.52  | 49.7   |
| Skin Infection .. ..  | Boys  |  | 9.18   | 8.72   | 7.51   | 10.74  | 13.63  |
|   | Girls |  | 35.72  | 41.3   | 22.08  | 18.11  | 12.79  |
| Eyes: Infection .. ..   | Boys  |  | 2.75   | 2.26   | 1.73   | 1.36   | 1.81   |
|   | Girls |  | 2.27   | 1.5    | 1.03   | 1.42   | 1.18   |
| Defection vision .. ..  | Boys  |  | 4.30   | 3.09   | 3.46   | 3.31   | 4.1    |
|   | Girls |  | 8.19   | 3.6    | 2.54   | 4.13   | 6.42   |
| E.N.T.: Enlarged tonsils .. ..  | Boys  |  | 4.55   | 4.16   | 4.21   | 2.99   | 2.11   |
|   | Girls |  | 1.94   | 0.93   | 0.75   | 1%     | .46    |
| Ear infections .. ..  | Boys  |  | 0.24   | 0.45   | 0.67   | .51    | .64    |
|   | Girls |  | 0.15   | 0.19   | 0.29   | .25    | .25    |
| Cardiac Disease .. ..   | Boys  |  | 0.13   | 0.16   | 0.34   | .89    | 1.16   |
|   | Girls |  | 0.74   | 1.46   | 0.82   | 1.14   | 1.18   |
| Respiratory Infection .. ..   | Boys  |  | 0.93   | 2.17   | 2.92   | 3.93   | 4.02   |
|   | Girls |  | 8.48   | 10.87  | 6.62   | 4.48   | 3.62   |
| Genito-Urinary .. ..  | Boys  |  | 1.9    | 2.13   | 2.33   | 3.41   | 2.71   |
|   | Girls |  | 0.09   | 0.14   | 0.08   | .25    | .33    |
| Anæmia (under 60% Hb.) .. ..  | Boys  |  | 1.6    | 1.36   | 1.61   | .65    | .71    |
|   | Girls |  | 2.41   | 3.5    | 4.31   | 3.64   | .69    |
| Worm Infestation .. ..  | Boys  |  | 2.1    | 6.42   | 8.84   | 8.34   | 2.8    |
|   | Girls |  | 19.45  | 28.63  | 22.64  | 19.33  | 17.47  |
| Other abnormalities including postural defects, Cleft Palate, Chest deformities .. .. | Boys  |  | 0.2    | 0.56   | 0.68   | 1.17   | 1.19   |
|   | Girls |  | 8.21   | 9.42   | 8.55   | 18.09  | 8.88   |
| Children Examined .. ..   | Boys  |  | 21,674 | 36,232 | 37,553 | 41,221 | 30,805 |
|   | Girls |  | 25,269 | 27,192 | 32,091 | 39,770 | 43,253 |

*Personal Hygiene*

248. There has been some improvement in general cleanliness among school children. School Health Officers have been able to get the co-operation of teachers in most cases to improve the hygiene habits of the children. More attention, however, should still be paid to the care of teeth and finger nails, and the wearing of shoes in the rural schools.

## SCHOOL GENERAL CLINICS

249. The main School Health Clinic originally functioning at North Canal Road, moved into its new premises at the Institute of Health at Outram Road in April 1958. The School Tuberculosis Service, School Dental Service, and the School Health Administrative Centre also occupy the same building. Three subsidiary clinics are in the outer urban and rural areas and they function on certain afternoons only.

TABLE 49

## ATTENDANCES AT SCHOOL CLINICS

|                         | 1954   | 1955   | 1956   | 1957    | 1958   |
|-------------------------|--------|--------|--------|---------|--------|
| Number of new cases ... | 19,266 | 29,283 | 39,012 | 45,524  | 44,469 |
| Number of re-visits ... | 29,148 | 40,804 | 50,337 | 56,793  | 50,637 |
| Total ...               | 48,414 | 70,087 | 89,349 | 102,317 | 95,106 |

250. The School Health Officers each have a regular morning and afternoon session at the main clinic in order to follow up their own cases. In the subsidiary clinics the Health Officers responsible for the schools in the area served by the particular clinic are in attendance at each clinic session.

*Institute of Health Clinic*

251. The main School Clinic is situated on the ground floor of the Government Wing of the Institute of Health, and comprise of a reception hall, waiting rooms, dispensary, laboratory, minor treatment room, Sister's room, and three doctors' examination rooms.

*Paya Lebar Clinic*

252. Two afternoon sessions per week were held at the Paya Lebar Outdoor Dispensary in Upper Serangoon Road. This clinic catered for school children in the northern and central part of the Island and was well attended.

*Kallang Clinic*

253. One afternoon session a week was held at the Kallang Outdoor Dispensary. This replaced the clinic formerly held at the Telok Kurau English School, and catered for children in the crowded Geylang area. Two doctors were in attendance at each session.

*Bukit Timah Clinic*

254. One weekly session was held at the Bukit Timah Outdoor Dispensary with two doctors in attendance.

*Laboratory Investigation*

255. The Laboratory at the main clinic was equipped for simple routine examination of stool, blood, etc. 5,138 investigations were done in 1958.

*School Travelling Dispensaries*

256. One more School Travelling Dispensary was added towards the end of 1958 making a total of two mobile dispensaries visiting rural schools for treatment of minor ailments and for follow up of cases referred by School Health Officers; they also vaccinated new entrants in both rural and city schools. Each dispensary was in charge of a Health Sister. 435 visits were made to schools and 17,612 treatments were given.

*Cases referred from School Clinics*

257. 1,374 cases were referred to specialists and 5,850 cases were referred to various institutions.

## INFECTIOUS DISEASES

258. Infectious diseases in school children were reported to the School Health Service by the City Health Officer, Rural Health Officer, General Practitioners and by Principals of Schools. Cases were detected during visits of children to clinics or by school nurses visiting homes of absent children. The number of cases of infectious diseases reported among school children during the last five years is shown in the following table.

TABLE 50

## INFECTIOUS DISEASES IN SCHOOLS

|                | 1954 | 1955  | 1956 | 1957 | 1958 |
|----------------|------|-------|------|------|------|
| Chickenpox     | 683  | 1,567 | 726  | 376  | 202  |
| Diphtheria     | 68   | 43    | 61   | 118  | 124  |
| Dysentery      | 4    | 2     | 18   | —    | 6    |
| Leprosy        | 18   | 13    | 7    | 4    | 4    |
| Malaria        | 6    | —     | 1    | —    | 1    |
| Measles        | 433  | 335   | 349  | 265  | 140  |
| Mumps          | 488  | 588   | 306  | 218  | 207  |
| Poliomyelitis  | 4    | 2     | —    | 1    | 14   |
| Typhoid fever  | 13   | 3     | 2    | 4    | 6    |
| Whooping cough | 4    | 35    | 11   | 28   | 34   |

259. During the epidemic of poliomyelitis in the latter part of 1958 14 cases occurred among school children.

260. In the poliomyelitis vaccination campaign in November to December 1958, all the male School Health Officers were diverted to this emergency work together with the majority of the ancillary clerical and nursing personnel.

*Home and School Visiting*

261. Homes and schools were visited by the Health nurses of the travelling dispensaries and the Institute of Health School Clinic—

- (1) to investigate and follow up cases of tuberculosis.
- (2) to investigate cases of infectious diseases reported by the City Health Officer, the Rural Health Officer, and by School Principals.
- (3) to take throat swabs of all indirect class contacts of cases of diphtheria reported by the City Health Officer and the Rural Health Officer. (4,504 throat swabs were taken in 1958 as compared with 3,952 in 1957).
- (4) to vaccinate new entrants (29,175 new entrants were vaccinated in 1958, and 34,130 in 1957).

## ENVIRONMENTAL HYGIENE IN SCHOOLS

262. Further progress was made in the field of environmental hygiene and sanitation of schools during 1958.

263. It is gratifying to note that the recommendations of the Ministry of Health are being readily accepted and promptly implemented by most of the schools.

*Inspection of Schools*

264. Inspection of schools carried out in the Colony may be classified into two main groups:

- (i) routine school inspection;
- (ii) special inspection.

265. The first type is confined to yearly inspection of existing schools for the purpose of ascertaining whether the provisions of the Schools Ordinance and Regulations made thereunder are being complied with. The second type embraces all other inspections arising from complaints, nuisances, new schools applying for registration, proposed new schools, additions and alterations to existing schools, etc.

266. 632 sanitary inspections were made in 1958, and 521 reports were transmitted to the Ministry of Education, other relevant departments and to Principals of Schools.

*Building Plans*

267. 68 building plans for proposed new schools were received. Site inspections were made in all cases; 47 plans were recommended, 3 were disapproved, while 18 are still under consideration.

*Overcrowding*

268. Overcrowding in the smaller schools still exist particularly in the vernacular schools.

*Accommodation Certificates*

269. After the necessary inspection, 256 Certificates of Accommodation were issued for new classrooms and as replacement for lost certificates.

*Registration of New Schools*

270. Eighteen applications for registration were received; of these six were recommended, six are under consideration, while the rest were not recommended.

*Food Hygiene*

271. Regular inspection of school canteens was carried out to ensure that the food was wholesome and prepared in a hygienic manner. In 1958 more than a dozen schools have been asked to provide proper canteens.

272. Improvement in canteen arrangements has been observed, particularly in the larger schools. Additional washing facilities have been installed, the tables have been lined with aluminium tops and fly-proof covers have been provided for the protection of food in many schools.

*School Milk Scheme*

273. The Social Welfare Department continued to distribute skimmed milk powder to undernourished children in schools. 42,372 lb. were distributed

in 1958; 13,284 children were recommended by the Health Officers for free milk. More Principals have shown interest in the scheme. It was considered that only those Principals who were sufficiently interested to see that the children were given the milk daily should participate in the scheme.

#### *New Building*

274. The Institute of Health was completed and was opened on the 14th May, 1958, by the Honourable Mr. A. J. Braga, Minister for Health. In April the main School Health Clinic previously situated in very cramped premises in North Canal Road moved into the Institute together with the main administrative offices originally at Maxwell Road.

#### SCHOOL HEALTH SERVICE

275. The school population increased in 1958 to 295,481 compared with 260,444 in 1957, an increase of 35,037. The number of new entrants was 57,000. 528 out of 595 Government or Government Aided schools were inspected. 74,058 students were examined, 36,974 of these being new entrants.

276. The general standard of health of the school population in Singapore is satisfactory. Attendances at school clinics for the treatment of minor ailments dropped by 6 per cent from 102,317 in 1957 to 95,106 in 1958; this is partly accounted for by the fact that the main clinic at the Institute of Health was closed during November and December for use as a Poliomyelitis Vaccination Centre.

## CHAPTER TEN

### DENTAL HEALTH

277. The Dental Section continued to consolidate the expansion of its work during 1958. The establishment was increased to 42 Dental Officers of which 35 have been filled. Mr. Wong Mook Qui, L.D.S., D.P.D. continued to act as the Chief Dental Officer throughout the year.

#### CLINICAL DENTISTRY

##### *Schools Division*

278. The school population is increasing every year and the problem of providing dental treatment to children of school-going age can only be met by increased staff and facilities. A feature of the expansion in this field was the opening of a large clinic at the Institute of Health in May. Plans too were submitted for the erection of two Dental Huts in the grounds of Tanjong Katong School to attend to the dental needs of the school population in the eastern part of the Island.

##### *School Dental Clinic, Tan Tock Seng's Hospital*

279. The School Dental Clinic at Tan Tock Seng's Hospital continued to give complete systematic treatment for selected groups of children and emergency treatment for all school children. The present building and site are not satisfactory and a site at Pegu Road might be available for a new clinic next year. This clinic provided treatment to inmates of certain Homes and Institutions during the school holidays.

##### *School Dental Clinic, Institute of Health*

280. This clinic occupies the fourth floor of the Government Wing of the Institute of Health. It is set up on modern lines with accommodation of five chairs in the General Surgery. In addition, it has a General Anæsthetic Room, an Orthodontic Surgery with two chairs and a laboratory.

281. Apart from the routine treatment of school children, this clinic would provide specialised treatment in the field of orthodontics to all children referred from all the other school clinics. It is planned that all prosthetic work from the various school clinics would be carried out at this clinic. Four Dental Officers are attached to this clinic. The general treatment of school children is along the same lines as those of the main school clinic at Tan Tock Seng's Hospital.

##### *Dental Huts*

282. The dental huts staffed by dental nurses under the supervision of dental officers continued to operate at the following schools: Pearl's Hill School, McNair Road School, Rangoon Road School and Anthony Road School. Considerable conservative work was done at these huts. Work beyond the scope of treatment by dental nurses was attended to by dental officers.

*Mobile Clinics*

283. The three mobile clinics attended to 30 schools in the rural areas and continued to provide treatment both systematic and emergency to each school one session per week. The mobile clinics also visited institutions such as the School for the Blind, Boys Town, St. Andrew's Orthopædic Hospital, Children's Red Cross Hospital, etc. on Saturdays and during school holidays.

*Clinics at Social Welfare Centres*

284. These clinics continued to operate at three centres namely: Siglap Centre, Sims Avenue Centre and Bouna Vista Centre. Dental treatment was provided to under-privileged children attending classes in 15 Social Welfare Centres. Transport was provided or arranged by the Social Welfare Department to bring these children to the respective clinics for treatment. During the middle of the year, admission of new children was stopped by Social Welfare Department at all the centres. Arrangements were made as a temporary measure with the agreement of Social Welfare Department to treat children from Bedok School at the Siglap clinic. At Sims Avenue, the Dental Officer was put on a part-time basis and he was detailed to work at Royal Malayan Navy at other times. At Bouna Vista, the patients attending the Maternity and Child Welfare Centre in the same compound were covered by the clinic.

*Christmas Island*

285. Dental treatment was given to school children living on Christmas Island this year during the period May/June only. This service was terminated in the latter half of the year when Australia formally took over the administration of the island.

## HOSPITALS DIVISION

286. The Dental Clinic at General Hospital is the only out-patient dental clinic attending mainly to the needs of the poorer sectors of the population in the whole of Singapore.

287. The Dental Clinic at General Hospital has been an out-patient clinic as well as a teaching centre since its inception. During the year the clinic was staffed by seven Government Dental Officers and one Houseman in conjunction with the University staff of twelve. The major bulk of the routine work was done by the Government staff while the more specialised cases plus suitably selected cases for teaching purposes were attended to by University staff and students. Mention must also be made of the fact that four Dental Officers assisted in University teaching in addition to their clinical duties. In particular, one Dental Officer was engaged full time both in teaching and in assisting the Professor of Dental Surgery in administrative work.

288. This year there has been a decrease in the total number of out-patients visits to this clinic, 87,293 as against 107,700 last year. This was caused by the sharp decrease in the number of dental officers and housemen and by the fact that the admissions to the clinic had to be restricted during the recent poliomyelitis epidemic. As a result of the latter following a directive from the Ministry of Health there was a considerable decrease in the number of children admitted. With adults the total number of new cases, the number of repeats and extractions has also decreased. There has, however, been some increase in certain types of Conservative Dentistry which formed part of the students requirements.

*Chronic Sick*

289. Dental treatment for the inmates of Trafalgar Home, Woodbridge Hospital, and Tan Tock Seng's Hospital were attended to by one Dental Officer who continued to divide his time between the three Institutions.

*Maternity and Child Health Division*

290. An addition of one more clinic was effected this year with the opening of a dental clinic at Prinsep Street in January. This new clinic was the first one established in the city areas and was accommodated in the Maternity and Child Welfare Clinic run by the Singapore City Council.

291. Nursing mothers and pre-school children at the other existing clinics, namely Mandai, Bukit Timah, Yio Chu Kang, Ama Keng, Kampong Batak continued to receive full dental treatment.

## MISCELLANEOUS DENTAL CARE

*Police Dental Clinic*

292. During the year a majority of the Police Force were rendered dentally fit by the Dental Officer attached to this clinic. Periodical check-ups were carried out from time to time to ensure dental fitness. Recruits at Police Training School were examined for dental fitness before being accepted into the Force. Considerable replacement for loss of teeth was provided resulting in the issue of 144 dentures. Lectures on dental health were delivered to the force at quarterly intervals at the Police Training School and these have a marked effect on the attitude of the force as a whole towards better oral hygiene.

293. Once a week, the Dental Officer attached to the clinic visited Changi Prison to provide treatment for the relief of pain and other emergencies.

*Dental Clinic, Royal Malayan Navy*

294. During the year the majority of the Force were rendered dentally fit. In the latter half of the year, work was confined mainly to treatment of new recruits and emergencies with periodical check-ups.

*Dental Treatment at St. John's Island*

295. A dental service once a week came into effect in January this year providing treatment on the spot to inmates of the Opium Treatment Centre. This saves time and inconvenience as previously inmates were being brought to General Hospital under escort whenever dental treatment was required.

## PREVENTIVE DENTISTRY

*Fluoridation Scheme*

296. In connection with the fluoridation scheme, a fourth annual dental survey of school children was carried out in Singapore and Malacca soon after the start of the school year. This series of annual surveys are essential for assessing the efficacy of the fluoridation scheme and they should produce much valuable information in addition.

297. In the study undertaken in connection with the Singapore fluoridation programme, two age groups only are dealt with, that is children aged 7 years to 7 years 11 months and children aged 8 years and 8 years 11 months. It is anticipated that after 6 years of fluoridation, there will be a reduction

in dental caries experience of about 45 per cent in the age groups of 7 years to 7 years and 11 months and a reduction of about 40 per cent in the age group of 8 years to 8 years and 11 months by comparison with the base line caries rate of these two age groups in the city. Such reductions are expected on the basis of the results which have been achieved already by similar fluoridation projects elsewhere notably the Grand Rapids project in the United States and the Brantford project in Canada. It is not unreasonable to expect that after a sufficiently long period of fluoridation, Singapore will obtain results largely similar to those which have been achieved so far by the projects at Brantford and Grand Rapids. It is possible that in the course of time, the beneficial effect of fluoridation will be felt not only among the children but among adults up to the age of about 45 years.

#### *Dental Health Education*

298. The Dental Section continued to distribute a number of posters and pamphlets to schools, Maternity and Child Welfare Centres, Children Social Welfare Centres and dental clinics. Talks on oral hygiene were delivered by dental nurses at the schools where they are stationed. The Police Dental Officer gave quarterly lectures with demonstrations and films to Rank and File of the Singapore Police Force at the Police Training School. At the new school clinic at the Institute of Health, simple nursery rhymes with dental implications plus short talks on oral hygiene with instructions on brushing the teeth were tape recorded and played regularly to an audience of school children attending the clinic.

#### DENTAL BOARD

299. The Inspecting Officer, Dental Board reports as follows:

The total number of routine inspections carried out in 1958 on Division II Dentists was 482. Twelve warning notices were issued for Suspected Covering (4), No name-plate (2), Wrong Vocation in name-plates (4) and Wrong Vocation in Signboards (2).

During 1958 a number of Division II Dentists bought Japanese made dental units to replace their old clumsy foot-engines. Many realised the importance of cleanliness, and had taken advice not to display instruments on trays until they were actually required.

During the year 1958 there were 11 new registrations and 3 removals of Division I Dentists. This resulted an overall increase of 8 Division I Dentists in the Register. During the year 1958 there were one death, one new registration and two restorations among Division II Dentists.

TABLE 51

#### DENTISTS IN SINGAPORE, 1958

| <i>Division I</i>      | <i>Beginning of 1958</i> | <i>End of 1958</i> |
|------------------------|--------------------------|--------------------|
| Private Practice ...   | 35                       | 42                 |
| Government Service ... | 36                       | 35                 |
| University of Malaya   | 12                       | 13                 |
|                        | 83                       | 90                 |
| <i>Division II</i>     |                          |                    |
| Private Practice ...   | 239                      | 241                |

TABLE 52  
DENTAL SERVICES, SINGAPORE  
RETURN OF WORK 1958

|  | PATIENTS SEEN |                     |              |                   | TREATMENT GIVEN    |                |              |              |                      |                       | PATIENTS           |                 |                     |                 |
|--|---------------|---------------------|--------------|-------------------|--------------------|----------------|--------------|--------------|----------------------|-----------------------|--------------------|-----------------|---------------------|-----------------|
|  | NEW CASES     |                     | Re-examined  | Total attendances | FILLINGS           |                | EXTRACTIONS  |              | Scalings (per visit) | Dressings (per visit) | Dentures inserted) | Other treatment | Treatment completed |                 |
|  | Examined      | Requiring treatment |              |                   | Refusing treatment | Silver Amalgam | Silicate     | Other        |                      |                       |                    |                 |                     | Deciduous teeth |
| <b>SCHOOLS DIVISION:</b>                     |               |                     |              |                   |                    |                |              |              |                      |                       |                    |                 |                     |                 |
| School Dental Clinic, T.T.S.H.               | 5,548         | 5,251               | 409          | 1,131             | 28,032             | 10,955         | 2,718        | 13           | 4,933                | 1,065                 | 7,061              | 63              | 2,174               | 894             |
| S.D.C. Institute of Health                   | 708           | 673                 | 19           | 3                 | 6,233              | 3,179          | 369          | 65           | 816                  | 261                   | 1,354              | 2               | 372                 | 146             |
| Dental Nurses Clinics                        | 1,159         | 604                 | 292          | 1,515             | 9,293              | 4,263          | 1,428        | 134          | 795                  | 1,917                 | 2,287              | 13              | 1,017               | 411             |
| Mobile Dental Clinics                        | 1,917         | 1,784               | 345          | 1,898             | 11,513             | 7,738          | 738          | 1,586        | 1,200                | 2,252                 | 2,152              | 4               | 157                 | 475             |
| Sims Avenue Community Centre                 | 399           | 399                 | ..           | 2,005             | 2,404              | 1,072          | 110          | 9            | 998                  | 57                    | 509                | 9               | 132                 | 210             |
| Siglap Social Welfare Centre                 | 511           | 475                 | ..           | 100               | 3,793              | 1,121          | 239          | 68           | 514                  | 61                    | 1,131              | 5               | ..                  | 102             |
| Buona Vista Community Centre                 | 351           | 351                 | 142          | 88                | 3,086              | 724            | 88           | 13           | 837                  | 62                    | 125                | 26              | 290                 | 46              |
| <b>HOSPITALS DIVISION:</b>                   |               |                     |              |                   |                    |                |              |              |                      |                       |                    |                 |                     |                 |
| Dental Clinic, General Hospital              | 25,770        | ..                  | ..           | 61,523            | 113,063            | 2,956          | 601          | 1,820        | 26,001               | ..                    | 23,315             | 2,025           | 2,373               | ..              |
| Dental Officer, Chronic Sick                 | 869           | 869                 | ..           | 4,640             | 5,449              | 535            | 199          | 257          | 3,463                | 156                   | 139                | 102             | 237                 | 348             |
| <b>MATERNITY AND CHILD WELFARE DIVISION:</b> |               |                     |              |                   |                    |                |              |              |                      |                       |                    |                 |                     |                 |
| Bukit Timah and Ama Keng                     | 1,173         | 1,173               | ..           | ..                | 5,880              | 1,057          | 231          | 5            | 4,859                | 180                   | 1,016              | 268             | 598                 | 205             |
| Mandai and Yio Chu Kang                      | 996           | 996                 | ..           | 34                | 4,286              | 249            | 49           | 181          | 3,090                | 69                    | 145                | 104             | ..                  | 52              |
| Kampong Batak                                | 1,140         | 1,140               | 38           | 4,586             | 5,688              | 1,430          | 326          | 3            | 4,328                | 415                   | 620                | 103             | 615                 | 394             |
| Prinsep Street                               | 506           | 506                 | ..           | ..                | 2,161              | 438            | 207          | 26           | 1,255                | 253                   | 539                | 33              | 311                 | 51              |
| <b>MISCELLANEOUS:</b>                        |               |                     |              |                   |                    |                |              |              |                      |                       |                    |                 |                     |                 |
| Police Dental Clinic                         | 418           | 406                 | 38           | 309               | 4,077              | 1,374          | 153          | 30           | 1,253                | 404                   | 572                | 144             | 856                 | 110             |
| Royal Malayan Navy                           | 86            | 86                  | ..           | 493               | 1,861              | 541            | 152          | 27           | 162                  | 453                   | 177                | 35              | 277                 | 346             |
| St. John's Island                            | 300           | 294                 | ..           | 110               | 500                | ..             | ..           | ..           | 960                  | 5                     | 20                 | ..              | 45                  | 180             |
| <b>Total</b>                                 | <b>41,851</b> | <b>15,007</b>       | <b>1,424</b> | <b>78,435</b>     | <b>207,319</b>     | <b>37,632</b>  | <b>7,608</b> | <b>4,237</b> | <b>54,876</b>        | <b>5,610</b>          | <b>41,162</b>      | <b>2,936</b>    | <b>9,454</b>        | <b>3,970</b>    |

## CHAPTER ELEVEN

### HEALTH EDUCATION

300. The Health Education Section performs two functions which are closely related. It serves the Health Branch of the Ministry of Health and is also the executive arm of the Singapore Health Education Council.

#### *Staff*

301. The staff of this Section are the Health Education Officer, two Health Education Assistants and one Technician. Mrs. M. Knight, DIP. SC., B.S.C. (Hon.) was in charge of the Section.

#### *World Health Day, 1958*

302. The World Health Day celebrations have now become part of our annual time table. This year a Special Committee convened by the Director of Medical Services was responsible for exhibitions held throughout the island on the theme "Ten Years of Health Progress". The management of these exhibitions was a major task and gave considerable opportunity to develop this medium of health education. Exhibitions were held at nine centres and it is estimated that at least 50,000 persons attended the Exhibitions.

#### *Exhibitions*

- |      |    |   |                                     |
|------|----|---|-------------------------------------|
| 303. | 1. | World Health Day—Theme:<br>Ten Years of Health<br>Progress ... .. | 9 exhibitions in community centres. |
|      | 2. | Anti-Spitting ... ..  | 1 stall in City Council Exhibition. |
|      | 3. | Anti-Litter Theme: The authorities and you can co-operate         | 1 stall in City Council Exhibition. |
|      | 4. | Anti-Pest Theme: Protect your home ... ..                         | 1 stall in City Council Exhibition. |
|      | 5. | Our Singapore ... ..  | 2 panels.<br>Ministry of Health.    |

#### *Teacher-Training Programme*

304. One of the long-term projects inaugurated during the year which was successful was the course of lectures sponsored by the Singapore Health Education Council. These were lectures on various aspects of health related to school children for teachers in Government schools. The Ministry of Education co-operated to make it a success and the enthusiasm and the standard of lectures from the expert panel of lecturers was encouraging.

#### *Lectures for Teachers*

- |      |     |   |                          |
|------|-----|---|--------------------------|
| 305. | 1.  | The Organisation of the Medical Services ...                                | Dr. M. Doraisingham.     |
|      | 2.  | Normal and abnormal rates of growth and development. Inheritance ... ..     | Dr. W. Danaraj.          |
|      | 3.  | Controlling the spread of infectious Diseases ... ..                        | Dr. K. Kanagaratnam.     |
|      | 4.  | Immunity and Immunisation ... ..  | Dr. Leong Kwok Wah.      |
|      | 5.  | Dental Health ... ..  | Mr. Wong Mook Qui.       |
|      | 6.  | Nutrition ... ..  | Dr. J. Millis.           |
|      | 7.  | Helping teachers to handle problem Children ... ..                          | Mrs B. Kinna.            |
|      | 8.  | The role of the psychologist in helping teachers with their children ... .. | Mr. V. W. Wilson.        |
|      | 9.  | The Medical Social Services ... ..  | Miss D. K. Vaithilingam. |
|      | 10. | Accidents ... ..  | Dr. C. Marcus.           |
|      | 11. | Tuberculosis ... ..   | Dr. C. E. Smith.         |
|      | 12. | Principles and Methods of Health Education ... ..                           | Mrs. M. Knight.          |

*Papers in 'Young Malayans'*

306. Throughout the year a steady flow of articles was maintained in the *Young Malayans*, a bi-monthly paper for school children. This experience was of value in selecting material of interest and value for school children.

307. Production of health education materials, particularly posters and pamphlets still engage the attention of the Section.

*Posters Prepared*

308. 1. Seven basic food groups. (Nutrition).
2. Complete welfare service. (Maternal and Child health).
3. Save a life. (Blood Transfusion).
4. Break this vicious circle. (Worm infestation).
5. Leprosy can be cured.

*Models Produced*

309. 1. A typical Maternal and Child Health clinic.
2. St. John's Island showing lay out of quarantine services.
3. Institute of Health.

*Health Education Council*

310. Sir Percy McNeice, O.B.E., was elected Chairman and Dr. C.E. Smith, O.B.E., Vice-Chairman of the Council for the year 1958-59.

*Teaching*

311. The Health Education Officer gave formal lectures to five post-graduate D.P.H. students, 12 student nurses and 31 Public Health Inspectors.

Report in Public Hygiene

308. Throughout the year a steady flow of articles was maintained in the Journal, illustrating a progressive trend in school children. The expansion was of value in securing material for general and value for school children.

309. Extension of health education activities, particularly in the area of nutrition, will require the attention of the nation.

Public health education is a broad field, and it is necessary to have a wide range of activities in order to reach the general public.

1. Complete health service (physical and mental health).

2. Health education for the general public.

3. Health education for the school children.

4. Health education for the community.

5. Health education for the individual.

6. Health education for the family.

7. Health education for the neighborhood.

8. Health education for the city.

9. Health education for the state.

10. Health education for the nation.

11. Health education for the world.

12. Health education for the future.

13. Health education for the past.

14. Health education for the present.

15. Health education for the future.

16. Health education for the past.

17. Health education for the present.

18. Health education for the future.

19. Health education for the past.

20. Health education for the present.

21. Health education for the future.

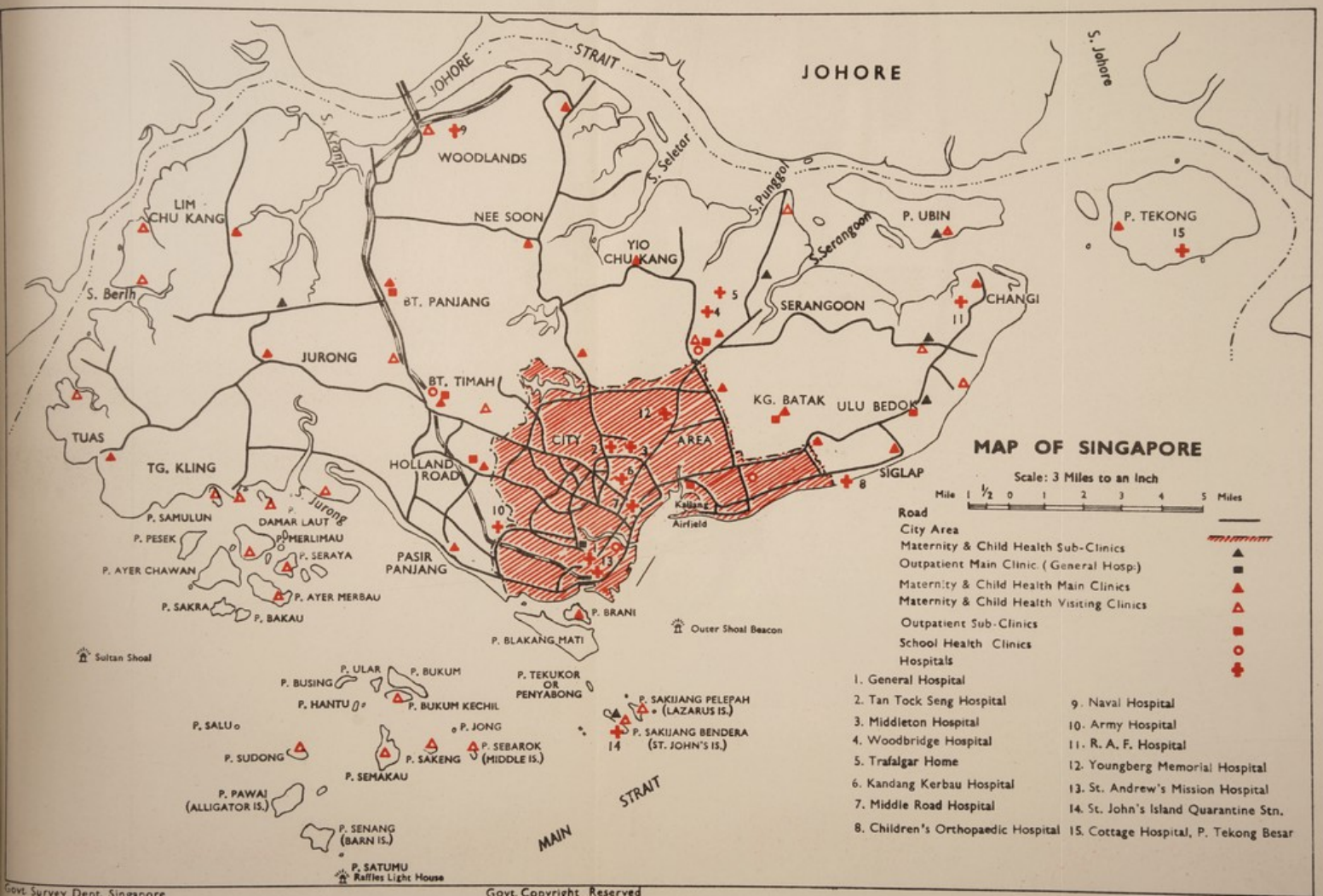
22. Health education for the past.

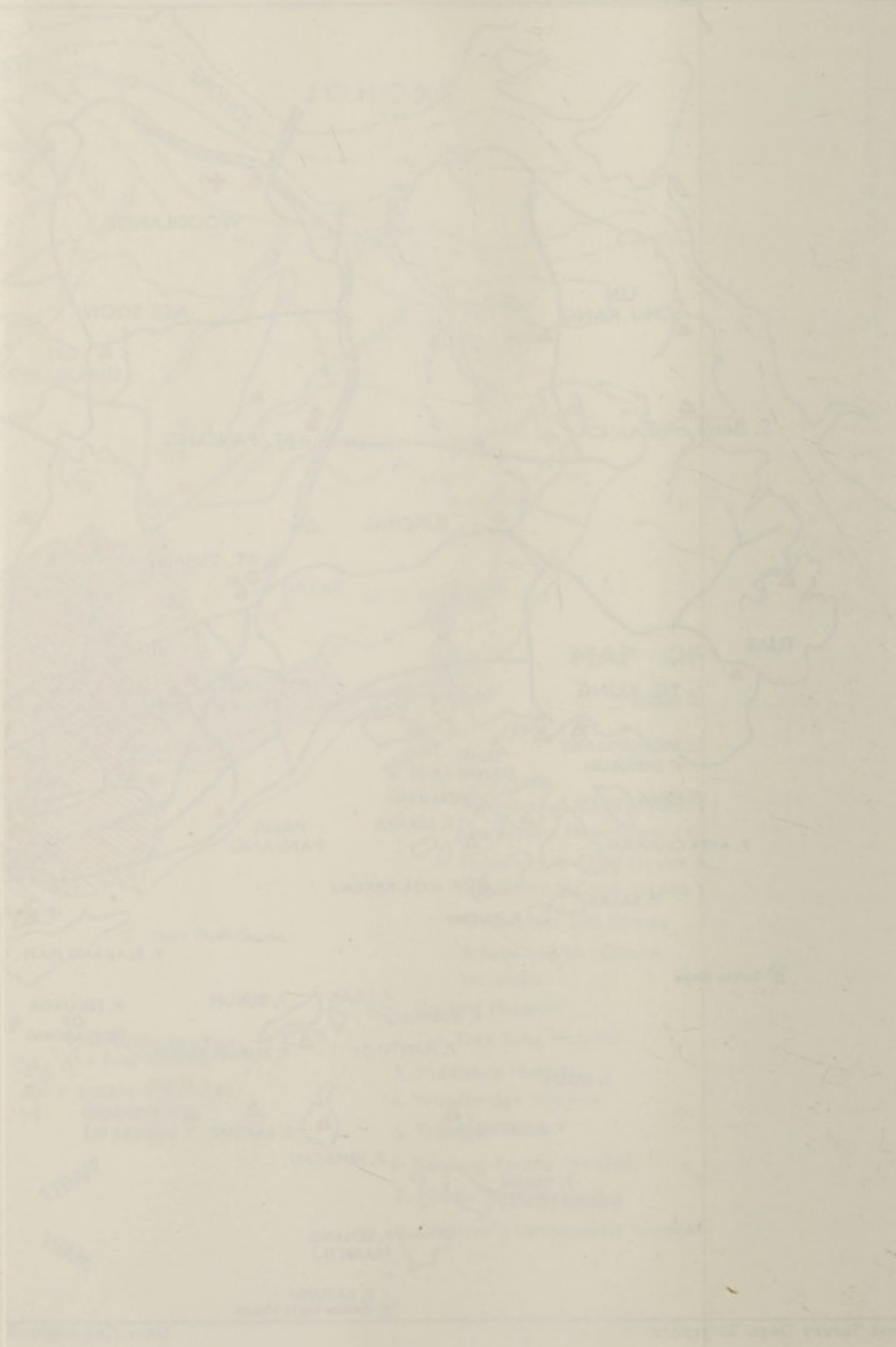
23. Health education for the present.

24. Health education for the future.

25. Health education for the past.

26. Health education for the present.







PART III  
THE HOSPITALS DIVISION

## CHAPTER TWELVE

### THE HOSPITALS DIVISION

#### PHYSICAL DEVELOPMENT

312. The expansion of the hospital and curator services showed further progress in 1958.

313. At the General Hospital the Division of Physiotherapy was completed incorporating the most modern methods of physical therapy. It occupies three floors of the rear wing of Stanley Block. Work commenced during the year, and was fairly well near completion at the end of the year, of the Burns Unit for the Department of Orthopædic and Traumatic Surgery. The new Sisters' Quarters which will accommodate six matrons and 72 nursing sisters was completed in December. The Housemen's Flats, consisting of 60 units, was also under construction at General Hospital.

314. At Kandang Kerbau Hospital the construction of the Central Service Block and the work on the modernisation of the old blocks into Gynæcological Units was in progress.

315. Two further modern wards blocks were completed at Tan Tock Seng's Hospital.

316. The Mental Defective Home was under construction at Woodbridge Hospital.

317. Two standard type out-patient dispensaries were completed during the year at Pegu Road and Bukit Panjang.

318. The construction of the Hospital for Chronic Sick commenced in May 1958 and is expected to be ready by the middle of 1959. It will accommodate 400 persons and relieve the acute hospitals of valuable beds.

319. The new Institute of Pathology was completed and occupied in May 1958. It houses the Government Bacteriology and Pathology Units and the University Department of Pathology.

320. During the course of the year the beds available in Government Hospitals in Singapore increased from 6,134 beds to 6,529 beds, an increase of 395 beds.

321. Although this figure is encouraging, it is still short of the needs of Singapore.

322. The steady increase in the number of patients treated in all Singapore hospitals which has been recorded every year has been maintained. Table 53 shows the total number treated in the four main hospitals. (General Hospital, Kandang Kerbau, Tan Tock Seng and Middle Road) over the past years.

TABLE 53

## PATIENT ATTENDANCES AT MAIN HOSPITALS, SINGAPORE

| Year | In-Patients | Out-Patients |
|------|-------------|--------------|
| 1938 | 25,913      | 87,447       |
| 1947 | 27,514      | 305,138      |
| 1948 | 27,367      | 332,427      |
| 1949 | 32,998      | 380,599      |
| 1950 | 40,164      | 433,420      |
| 1951 | 40,833      | 612,095      |
| 1952 | 48,550      | 726,310      |
| 1953 | 55,420      | 957,481      |
| 1954 | 58,859      | 1,169,689    |
| 1955 | 62,024      | 1,271,165    |
| 1956 | 67,023      | 1,597,930    |
| 1957 | 75,253      | 1,980,929    |
| 1958 | 81,698      | 2,162,274    |

323. If these figures are examined in conjunction with the graphs, on pages 91 and 92, it will be seen that the increase of patients was progressively increasing.

324. Table 54 indicates the number of beds available at various Government hospitals.

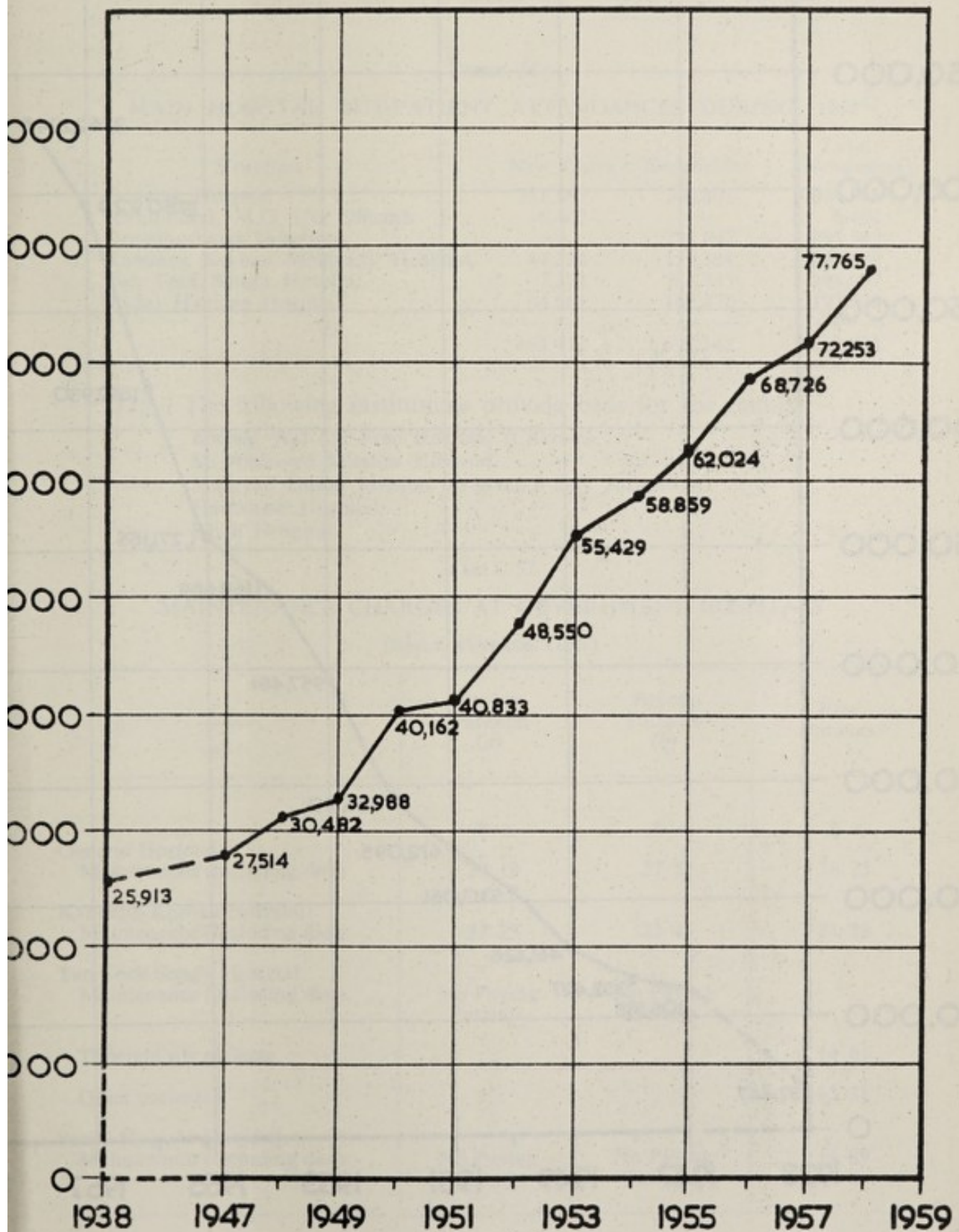
TABLE 54

## BEDS AVAILABLE AT VARIOUS GOVERNMENT HOSPITALS

|   | Pre-war         | 1946  | 1947  | 1948  | 1949  | 1950  | 1951  | 1952  | 1953  | 1954  | 1955  | 1956  | 1957  | 1958  |
|---|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| General ..                                  | 750             | 550   | 550   | 600   | 700   | 700   | 750   | 800   | 800   | 800   | 957   | 1,205 | 1,182 | 1,191 |
| Kandang Kerbau (excluding cots) ..          | 180             | 200   | 220   | 240   | 240   | 240   | 240   | 240   | 240   | 240   | 316   | 316   | 316   | 316   |
| Tan Tock Seng                               | 600             | 400   | 400   | 550   | 572   | 600   | 540   | 565   | 565   | 564   | 564   | 972   | 938   | 1,142 |
| Orthopaedic ..                              | ..              | 60    | 60    | 60    | 65    | 70    | 70    | 78    | 120   | 120   | 120   | 120   | 120   | 120   |
| Prisons ..                                  | 140             | 50    | 50    | 118   | 118   | 140   | 140   | 160   | 160   | 160   | 160   | 160   | 160   | 160   |
| Social Hygiene (excluding cots) ..          | Part of General | 60    | 60    | 60    | 68    | 70    | 70    | 70    | 70    | 60    | 65    | 65    | 65    | 65    |
| Infectious Disease ..                       | 250             | 250   | 250   | 250   | 250   | 250   | 250   | 250   | 250   | 200   | 200   | 250   | 250   | 250   |
| Leprosy Settlement                          | 200             | 260   | 347   | 382   | 451   | 536   | 640   | 725   | 790   | 642   | 954   | 973   | 973   | 1,023 |
| Police Training School ..                   | 20              | 20    | 20    | 20    | 20    | 20    | 20    | 20    | 20    | 20    | 20    | 20    | 20    | 20    |
| Mental ..                                   | 2,000           | 440   | 700   | 1,000 | 1,200 | 1,600 | 1,800 | 1,800 | 1,800 | 1,800 | 1,800 | 1,800 | 2,040 | 2,222 |
| Opium Treatment Centre St. John's Island .. | ..              | ..    | ..    | ..    | ..    | ..    | ..    | ..    | ..    | ..    | ..    | 20    | 20    | 20    |
| Total ..                                    | 4,140           | 2,290 | 2,657 | 3,280 | 3,684 | 4,226 | 4,520 | 4,708 | 4,815 | 4,606 | 5,156 | 5,901 | 6,084 | 6,529 |

# SINGAPORE MAIN HOSPITALS

## TOTAL NUMBER OF IN-PATIENTS TREATED



# SINGAPORE MAIN HOSPITALS

## TOTAL NUMBER OF OUT-PATIENTS TREATED

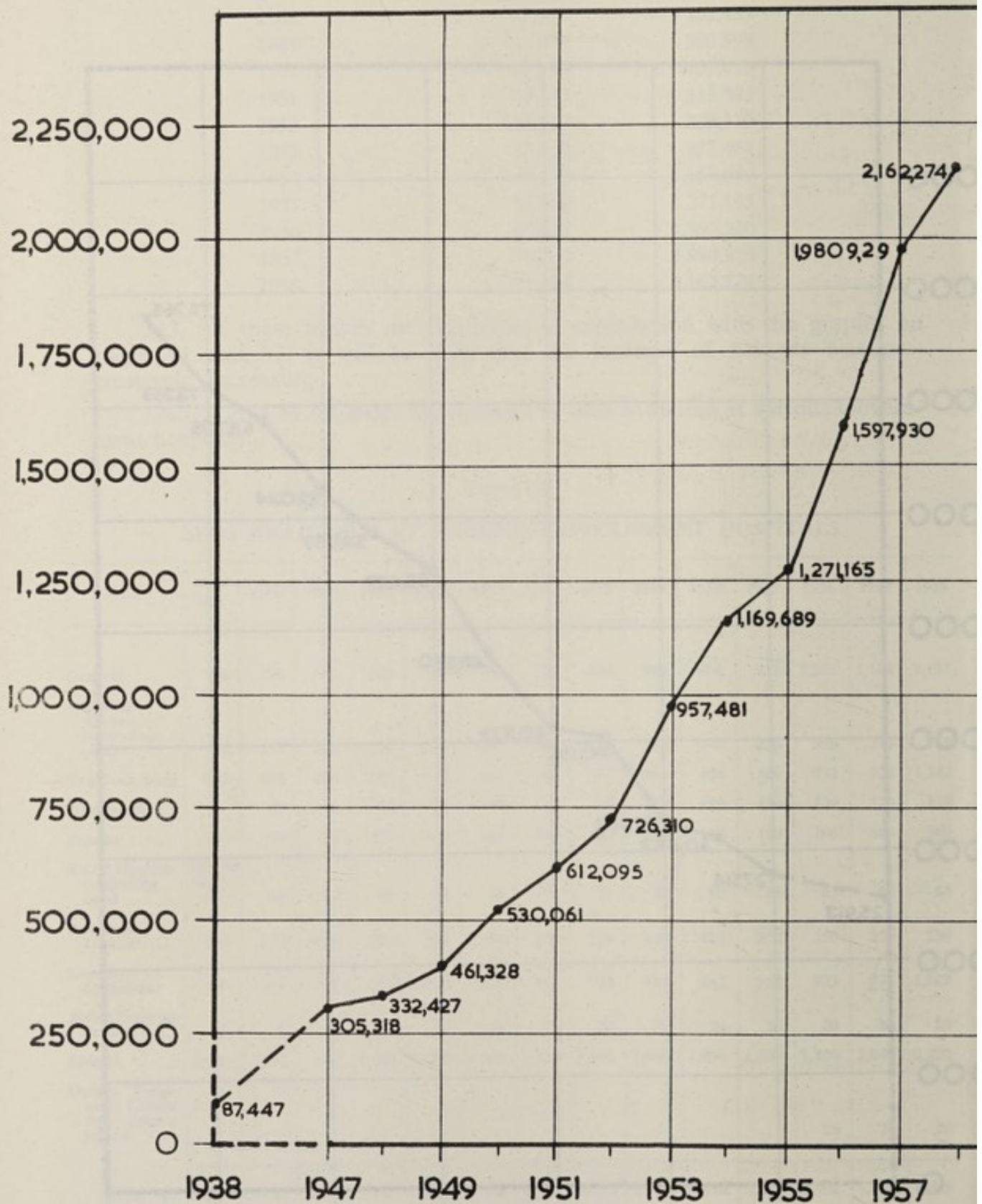


TABLE 55

MAIN HOSPITAL IN-PATIENTS ADMITTED AND TREATED DURING 1958

| <i>Hospitals</i>                         | <i>Admissions</i> | <i>Total Treated</i> |
|--|-------------------|----------------------|
| General Hospital ... ..                  | 35 893            | 36,852               |
| Kandang Kerbau Maternity Hospital ... .. | 39,480            | 39,761               |
| Tan Tock Seng's Hospital ... ..          | 3,169             | 3,933                |
| Social Hygiene Hospital ... ..           | 1,125             | 1,152                |
| <b>Total ... ..</b>                      | <b>79,667</b>     | <b>81,698</b>        |

TABLE 56

MAIN HOSPITAL OUT-PATIENT ATTENDANCES DURING, 1958

| <i>Hospitals</i>                         | <i>New Cases</i> | <i>Repetitions</i> | <i>Total Attendances</i> |
|--|------------------|--------------------|--------------------------|
| General Hospital ... ..                  | 331,163          | 700,802            | 1,031,965                |
| In addition, M.O. i/c. Officials ... ..  | 6,402            | —                  | 6,402                    |
| Dressings and Injections ... ..          | —                | 291,947            | 291,947                  |
| Kandang Kerbau Maternity Hospital ... .. | 84,232           | 159,388            | 243,620                  |
| Tan Tock Seng's Hospital ... ..          | 7,274            | 383,733            | 391,007                  |
| Social Hygiene Hospital ... ..           | 34,861           | 162,472            | 197,333                  |
|  | <b>463,932</b>   | <b>1,698,342</b>   | <b>2,162,274</b>         |

325. The following institutions provide beds for the public:—

- Kwong Wai Siu Free Hospital (Chinese).
- St. Andrew's Mission Hospital.
- Malayan Union Mission of Seventh-Day Adventists.
- Hainanese Hospital.
- Kheh Hospital.

TABLE 57

MAINTENANCE CHARGES AT GOVERNMENT HOSPITALS

(DAILY AVERAGE COST)

|  | Paying Patients<br>(a) | Paying Patients<br>(b) | Free Patients |
|--|------------------------|------------------------|---------------|
|  | \$ c.                  | \$ c.                  | \$ c.         |
| General Hospital:<br>Maintenance (including diet) ..         | 29 19                  | 27 52                  | 26 25         |
| Kandang Kerbau Hospital:<br>Maintenance (including diet) ..  | 23 25                  | 22 45                  | 21 36         |
| Tan Tock Seng's Hospital:<br>Maintenance (including diet) .. | No Paying Patients     | No Paying Patients     |               |
| Tuberculosis patients ..                                     | ..                     | ..                     | 14 61         |
| Other patients .. ..   | ..                     | ..                     | 13 31         |
| Social Hygiene Hospital:<br>Maintenance (including diet) ..  | No Paying Patients     | No Paying Patients     | 14 89         |

TABLE 58

## IN-PATIENT ADMISSIONS, 1958

| <i>Hospitals</i>                         | <i>Paying</i> | <i>Free</i> | <i>Total</i> |
|--|---------------|-------------|--------------|
| General Hospital ... ..                  | 3,668         | 32,225      | 35,893       |
| Kandang Kerbau Hospital ... ..           | 2,900         | 36,580      | 39,480       |
| Tan Tock Seng's Hospital ... ..          | —             | 3,169       | 3,169        |
| Social Hygiene Hospital ... ..           | —             | 1,125       | 1,125        |
| Middleton Hospital ... ..                | —             | 3,679       | 3,679        |
| St. Andrew's Orthopaedic Hospital ... .. | —             | 139         | 139          |
| Total ... ..                             | 6,568         | 76,917      | 83,485       |

326. Excluding mental and leprosy cases, out of the total number of in-patients admitted throughout the year 6,568 or 7.9 per cent were paying cases.

## AMBULANCE SERVICE

327. The Ambulance Advisory Committee met as and when required to review the Colony's requirements in this field.

328. The number of ambulances in use at the various hospitals at the end of 1958 is given in Table 59.

TABLE 59

## AMBULANCES IN SINGAPORE, 1958

|  |   |
|--|---|
| General Hospital ... ..                        | 7 |
| Kandang Kerbau Hospital ... ..                 | 4 |
| Tan Tock Seng's Hospital ... ..                | 2 |
| Middleton Hospital ... ..                      | 2 |
| Fire Brigade Accident Ambulance Service ... .. | 6 |
| Rural Board ... ..                             | 1 |

*Note:*—Three ambulances were on order at the end of 1956.

TABLE 60

## AMBULANCE SERVICE

| <i>Year</i> | <i>Patients</i> | <i>Mileage Covered</i> |
|-------------|-----------------|------------------------|
| 1953 ... .. | 5,725           | 68,368                 |
| 1954 ... .. | 7,906           | 74,542                 |
| 1955 ... .. | 10,105          | 102,688                |
| 1956 ... .. | 13,268          | 121,782                |
| 1957 ... .. | 16,371          | 147,539                |
| 1958 ... .. | 7,224           | 112,325                |

329. Dr. C. Marcus, L.M.S. (Singapore) was the Assistant Director of Medical Services (Hospitals) during the later part of 1958.

## CHAPTER THIRTEEN

### GENERAL HOSPITAL

330. Further progress in the expansion and development of the General Hospital was made in 1958. The conversion of one wing of Stanley Block into a three-floor Division of Physiotherapy was completed during the year. Incorporated into the planning and design are the most modern methods of physical therapy. The Division now integrates the various sections, previously functioning in different parts of the hospital, in one building and under one administrative control.

331. Ambulance garages were commenced in the latter part of 1957 and were completed in April this year.

332. The new Sisters' Quarters facing Kampong Bahru consisting of nine-storey flats for the accommodation of six matrons and 72 nursing sisters and ancillary staff was completed in December.

333. Work commenced on an extension of Ward 59 of the Orthopædic Department in March to provide accommodation for the specialised treatment of burns. The extension will provide 40 beds, of which 14 are for male, 11 for female and 15 for children. The Burns Unit will have its own operating theatre and other special facilities designed to meet the requirements in the modern treatment of burns. It is expected to be completed early in 1959.

334. In March work commenced for the erection of a seven-storey housemen's flats, which will contain 60 units for the housing of two housemen each.

#### *Staff*

335. The staff of the Hospital is given in Table 65. Dr. C. Marcus, L.M.S. was the Medical Superintendent for most part of the year. Others who carried out the duties of the Medical Superintendent at various times during the year were: Dr. L. M. Ram, M.B., B.S., M.R.C.P., D.P.H., Dr. Toh Chiong Hieng, L.M.S. and Dr. Ho Yuen, L.M.S., M.R.C.P.

336. Table 61 summarises the activities of the hospital and shows the progressive increase over the last eleven years. In-patient figures show an increase of 2,229 patients, which represents an increase of 6 per cent over the corresponding figures for 1957. Similarly, the increase of 91,033 out-patient attendances represents a 7 per cent increase over the previous year. The total number of deaths was 2,739 as compared to 2,585 in 1957. The percentage of deaths to the total number of cases treated was 7.43 as against 7.47 in the previous year.

337. The hospital is the main teaching hospital of the Faculty of Medicine of the University of Malaya.

338. During the year the average bed state was 1,000.39 as against 1,051.90 in the previous year. The bed strength fell from 1,205 to 1,191 as the result of the transfer of the Prison Ward, previously occupying Ward 36, to Ward G in the H.M. Prison at Outram Road to make room for the development of the Physiotherapy Department.

TABLE 61

## BED STRENGTH AND PATIENT ATTENDANCES AT THE GENERAL HOSPITAL

| <i>Year</i> | <i>Beds</i> | <i>In-Patients</i> | <i>Out-Patient Attendances</i> |
|-------------|-------------|--------------------|--------------------------------|
| 1947 ... .. | 550         | 15,021             | 114,167                        |
| 1948 ... .. | 600         | 14,683             | 138,801                        |
| 1949 ... .. | 700         | 15,478             | 153,534                        |
| 1950 ... .. | 700         | 17,886             | 162,524                        |
| 1951 ... .. | 750         | 19,720             | 185,131                        |
| 1952 ... .. | 800         | 22,753             | 358,769                        |
| 1953 ... .. | 800         | 26,219             | 482,332                        |
| 1954 ... .. | 800         | 27,404             | 615,588                        |
| 1955 ... .. | 957         | 28,222             | 691,064                        |
| 1956 ... .. | 1,205       | 32,324             | 881,742                        |
| 1957 ... .. | 1,191       | 34,623             | 1,239,281                      |
| 1958 ... .. | 1,191       | 36,852             | 1,330,314                      |

TABLE 62

## BREAKDOWN OF OUT-PATIENTS AT GENERAL HOSPITAL

| Nationalities | NEW CASES |        |         | Total   | REPETITIONS |         |         | Total   |
|---------------|-----------|--------|---------|---------|-------------|---------|---------|---------|
|               | Male      | Female | Child   |         | Male        | Female  | Child   |         |
| Europeans ..  | 1,381     | 763    | 466     | 2,610   | 3,564       | 2,997   | 765     | 7,326   |
| Eurasians ..  | 1,561     | 1,190  | 924     | 3,675   | 3,323       | 3,687   | 1,967   | 8,977   |
| Chinese ..    | 82,230    | 74,206 | 87,463  | 243,899 | 213,803     | 155,339 | 150,723 | 519,865 |
| Indians ..    | 36,397    | 9,208  | 10,711  | 56,316  | 72,779      | 19,740  | 17,438  | 109,957 |
| Malays ..     | 9,414     | 4,692  | 8,225   | 22,331  | 22,523      | 13,971  | 13,385  | 49,879  |
| Javanese ..   | 283       | 76     | 52      | 411     | 347         | 66      | 66      | 479     |
| Japanese ..   | 17        | 4      | ..      | 21      | 4           | 5       | ..      | 9       |
| Others ..     | 1,085     | 458    | 357     | 1,900   | 1,901       | 1,263   | 1,146   | 4,310   |
| Total ..      | 133,368   | 89,597 | 108,198 | 331,163 | 318,244     | 197,068 | 185,490 | 700,802 |

TABLE 63

GENERAL HOSPITAL, OUT-PATIENTS, 1958

|  | <i>New Cases</i>  | <i>Repeats</i> | <i>Total</i>     |
|--|-------------------|----------------|------------------|
| Male Out-patient Department ... ..                 | 46,272            | 84,975         | 131,247          |
| Female Out-patient Department ... ..               | 97,477            | 95,001         | 192,478          |
| Casualty Out-patient Department ... ..             | 62,819            | 19,032         | 81,851           |
| Medical Officer i/c. Officials (Senior) ... ..     | 4,299             | 9,873          | 14,172           |
| Medical Officer i/c. Officials (Junior) ... ..     | 5,675             | 19,684         | 25,359           |
| Eye Clinic ... ..                                  | 19,311            | 70,904         | 90,215           |
| Surgical O.P.D. "A" Unit ... ..                    | 13,194            | 14,409         | 27,603           |
| Surgical O.P.D. "B" Unit ... ..                    | 11,330            | 25,535         | 36,865           |
| Surgical O.P.D. "C" Unit ... ..                    | 9,399             | 30,853         | 40,252           |
| Ear, Nose and Throat Department ... ..             | 12,526            | 18,480         | 31,006           |
| Medical O.P.D. Unit I ... ..                       | 1,912             | 27,949         | 29,861           |
| Medical O.P.D. Unit II ... ..                      | 2,214             | 29,291         | 31,505           |
| Pædiatric O.P.D. ... ..                            | 2,055             | 28,592         | 30,647           |
| Dental Clinic ... ..                               | 25,770            | 61,523         | 87,293           |
| Skin Clinic ... ..                                 | 6,630             | 9,767          | 16,397           |
| Medical and Surgical Physiotherapy Department      | 9,681             | 136,781        | 146,462          |
| Occupational Therapy ... ..                        | 599               | 18,153         | 18,752           |
|  | <hr/>             | <hr/>          | <hr/>            |
| <b>Total</b> ... ..                                | <b>331,163</b>    | <b>700,802</b> | <b>1,031,965</b> |
|  | <hr/>             | <hr/>          | <hr/>            |
| In addition M.O. i/c. Officials ... ..             | 6,402             | —              | 6,402            |
| In addition Dressings and Injections O.P.D. ... .. | —                 | 291,947        | 291,947          |
| <i>In addition M.O. i/c. Officials</i>             |                   |                |                  |
|  | <i>Senior</i>     | <i>Junior</i>  |                  |
| Recruits ... ..                                    | 1,114             | 3,028          |                  |
| Medical Boards ... ..                              | 83                | —              |                  |
| Inoculation and Vaccinations                       | 2,158             | 19             |                  |
|  | <hr/>             | <hr/>          |                  |
| <b>Total</b> ... ..                                | <b>3,355</b>      | <b>3,047</b>   |                  |
|  | <hr/>             | <hr/>          |                  |
| <i>Monthly average Out-patients</i>                |                   |                |                  |
| New Cases ... ..                                   | 28,130.42         |                |                  |
| Repeats ... ..                                     | 82,729.08         |                |                  |
|  | <hr/>             |                |                  |
| <b>Total</b> ... ..                                | <b>110,859.50</b> |                |                  |
|  | <hr/>             |                |                  |

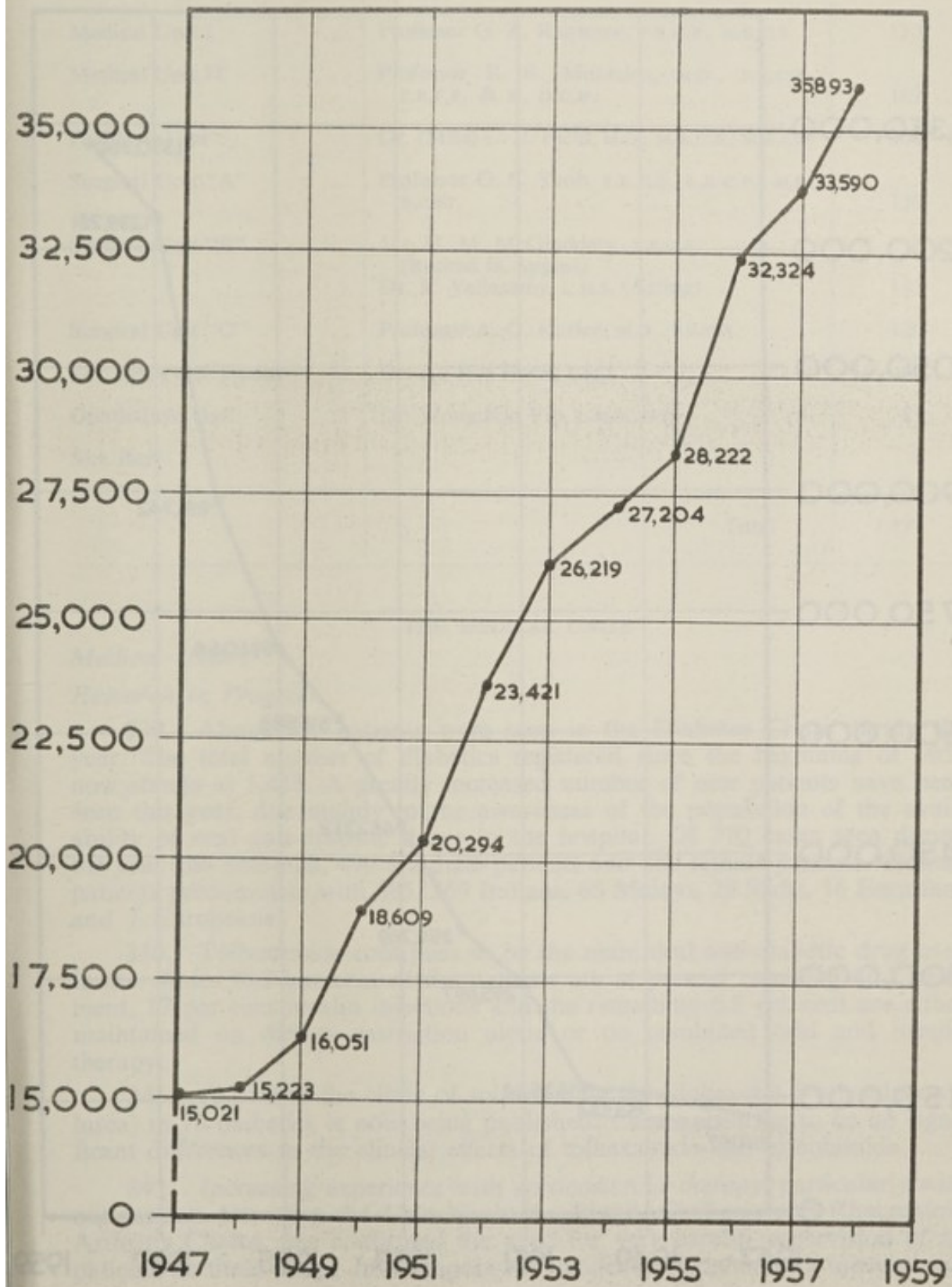
TABLE 64

MAIN CAUSES OF MORBIDITY OF IN-PATIENTS IN GENERAL HOSPITAL  
1957 AND 1958

|  | 1957              |               | 1958              |               |
|--|-------------------|---------------|-------------------|---------------|
|  | <i>Admissions</i> | <i>Deaths</i> | <i>Admissions</i> | <i>Deaths</i> |
| Enteric Group ... ..   | 105               | 4             | 140               | 4             |
| Typhus ... ..  | 23                | —             | 16                | —             |
| Malaria ... ..   | 51                | 3             | 52                | 1             |
| Diphtheria ... ..  | 43                | 5             | 36                | 4             |
| Influenza ... ..   | 358               | 28            | 23                | —             |
| Dysentery, Diarrhoea and Enteritis ...                         | 1,573             | 164           | 2,142             | 174           |
| Leprosy ... ..   | 27                | 1             | 16                | —             |
| Tuberculosis Respiratory System ...                            | 942               | 103           | 747               | 65            |
| Other Tuberculosis Diseases ... ..                             | 546               | 70            | 539               | 40            |
| Cancer ... ..  | 1,636             | 307           | 1,823             | 331           |
| Beri-Beri ... ..   | 31                | 4             | 35                | 8             |
| Cerebral Hæmorrhage ... ..                                     | 187               | 131           | 155               | 123           |
| Diabetes ... ..  | 246               | 19            | 294               | 8             |
| Bronchitis ... ..  | 334               | 14            | 438               | 7             |
| Pneumonia all forms ... ..                                     | 1,757             | 374           | 1,759             | 455           |
| Other Respiratory Diseases ... ..                              | 2,628             | 45            | 2,625             | 57            |
| Ulcer of Stomach, Duodenum, etc. ...                           | 793               | 26            | 913               | 32            |
| Ankylostomiasis ... ..   | 94                | —             | 73                | —             |
| Other intestinal parasites ... ..                              | 90                | —             | 78                | 3             |
| Appendicitis ... ..  | 1,574             | 8             | 1,954             | 11            |
| Cirrhosis of Liver ... ..                                      | 226               | 52            | 242               | 52            |
| Acute and Chronic Nephritis ... ..                             | 794               | 82            | 789               | 82            |
| Venereal Affections ... ..                                     | 166               | 24            | 169               | 23            |
| Congenital debility, Malnutrition Premature Birth, etc. ... .. | 689               | 87            | 725               | 123           |
| Suicidal ... ..  | 108               | 29            | 77                | 10            |
| Other forms of Violence ... ..                                 | 3,912             | 190           | 4,248             | 211           |
| Other Diseases ... ..  | 14,657            | 815           | 15,784            | 915           |
| <b>Total</b> ... ..  | <b>33,590</b>     | <b>2,585</b>  | <b>35,892</b>     | <b>2,739</b>  |

# GENERAL HOSPITAL

## TOTAL NUMBER OF IN-PATIENTS TREATED



# GENERAL HOSPITAL

## TOTAL NUMBER OF OUT-PATIENTS TREATED

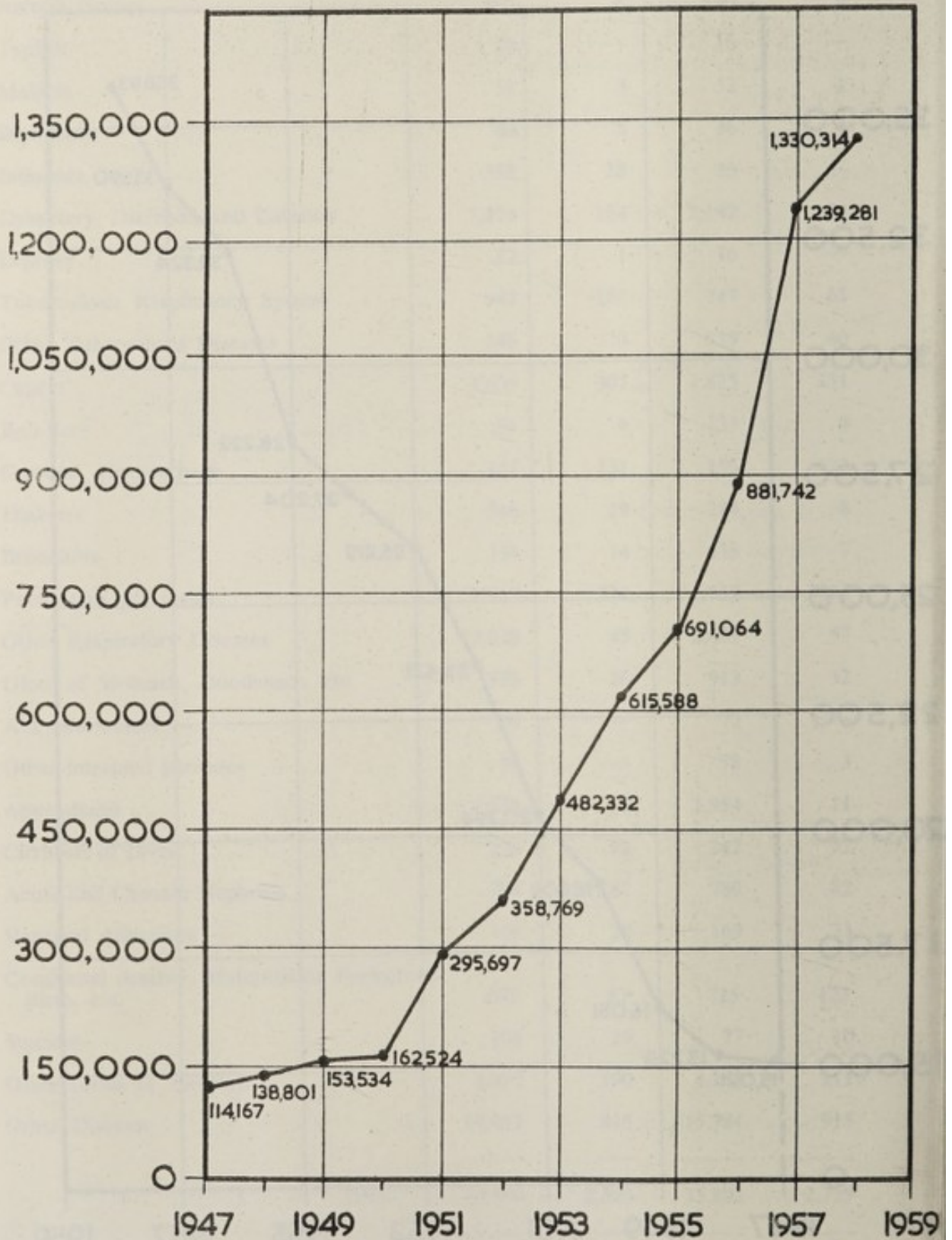


TABLE 65

UNITS IN GENERAL HOSPITAL

| Unit                    | Head of Unit  | Basic Beds |
|-------------------------|---|------------|
| Medical Unit I ..       | Professor G. A. Ransome, F.R.C.P., M.R.C.S.   | 150        |
| Medical Unit II ..      | Professor E. S. Monteiro, M.D., F.R.C.P.,<br>F.R.F.P. & S., D.C.H. .. ..                      | 189        |
| Pædiatric Unit ..       | Dr. (Miss) C. E. Field, M.D., M.R.C.S., M.R.C.P.  | 300        |
| Surgical Unit "A" ..    | Professor G. S. Yeoh, F.R.C.S., L.R.C.P., M.B.,<br>B.chir. .. ..                              | 136        |
| Surgical Unit "B" ..    | Mr. H. M. McGladdery, F.R.C.S.<br>(Retired in August)<br>Dr. K. Vellasamy, L.M.S. (Acting) .. | 143        |
| Surgical Unit "C" ..    | Professor A. G. Karlen, M.D., F.R.C.S. ..   | 120        |
| Ear, Nose and Throat .. | Dr. Au Kee Hock, L.M.S. .. ..   | 60         |
| Ophthalmic Unit ..      | Dr. Wong Kin Yip, L.M.S., D.O. ..   | 85         |
| Sick Bay .. ..          | —   | 8          |
|                         | Total ..  | 1,191      |

THE MEDICAL UNITS

*Medical Unit I*

*Research in Progress*

339. About 800 patients were seen in the Diabetes Clinic during the year. The total number of diabetics registered since the beginning of 1953 now stands at 1,438. A greatly increased number of new patients have been seen this year, due mainly to the awareness of the population of the availability of oral anti-diabetic drugs in the hospital. Of 770 cases seen during the year and analysed, 490 are male patients and 280 female patients. Chinese patients predominate with 385, 269 Indians, 65 Malays, 29 Sikhs, 16 Eurasians and 7 Europeans.

340. Tolbutamide continues to be the main oral anti-diabetic drug used in the clinic. 76.2 per cent of the patients are at present receiving oral treatment, 17 per cent insulin injections and the remaining 6.8 per cent are either maintained on dietary restriction alone or on combined oral and insulin therapy.

341. A trial in the clinic of tolhexamide (L-cylohexyl-2-p-tolysulphony-lurea) in 78 diabetics is now being published; there appearing to be no significant differences in the clinical effects of tolhexamide and tolbutamide.

342. Increasing experience with *corticosteroid therapy*, particularly with out-patients attending the Unit Nephritis, Blood, Cirrhosis and Rheumatoid Arthritis Clinics, has confirmed the need for very careful supervision of all patients on these drugs. In Singapore the incidence of pulmonary tuberculosis,

peptic ulceration and osteoporosis resulting from corticosteroid therapy appears to be particularly high, though readily amenable to prompt treatment. A trial in the Unit with a new corticosteroid, triamcinolone, is being published and has revealed arthritis to be an apparent complication of the use of this drug in women. Since this finding was published and although it has not as yet been confirmed by other investigators, further cases have been observed in the Unit.

343. Many patients are seen in Singapore with hepatic cirrhosis, probably following a viral hepatitis. They present a difficult therapeutic problem because there have been few objective evaluations of specific treatment. A controlled trial is now in progress in the Unit of treatment with testosterone and prednisolone. Both these treatments have been variously reported in the literature as being either valuable or useless in cirrhosis of the liver. The results in the Unit so far are hopeful in both groups but a long study will be required to give conclusive results.

344. In the Blood Clinic a comprehensive study has been started on the *incidence of the various types of leukæmia* in Singapore during the ten year period 1949—58. From a preliminary study of over 200 cases based on the Unit clinical records, post-mortem reports (with collaboration of the Government and University Departments of Pathology) and death certificates (with the aid of the Registrar of Deaths), it has been confirmed that the chronic form of lymphocytic leukæmia is very uncommon in Singapore. It is the commonest form of leukæmia in many temperate countries, and the reason for this difference in incidence is being studied.

345. Many individual *hematological problems* are also being studied in the Unit, particularly the therapeutic value of splenectomy and corticosteroids in thalassæmia and hæmoglobin H disease, the association of megaloblastic erythropoiesis and various hæmoglobinopathies, the improvements in anti-coagulant therapy control, and the treatment of leukæmia. A case report of di Guglielmo's erythræmia is being published and a new hæmorrhagic syndrome due to ovarian deficiency has been reported.

346. Research into the ætiological factors important locally in the production of a raised blood pressure and the use of the newer hypotensive drugs is now under extensive study.

#### *Chest Clinic*

347. Patients suspected of bronchiectasis or cystic disease of the lung are being referred to the Unit for clinical examination, further investigations and treatment. Nearly 100 patients are now under study. This group will add much to the knowledge of the ætiology and the management of chronic suppurative conditions of the lung which have since 1952 been a line of research in this Unit.

348. The investigation, treatment and follow up of eosinophilic lung patients continues. There have been 211 new cases of eosinophilia referred and of these 151 are proven eosinophilic lung.

#### *Heart Disease in Pregnancy*

349. A group of about 200 women with acquired or congenital heart disease complicated by pregnancy are being studied carefully from the point of view of management during the antenatal period and in the puerperium. There is a special weekly clinic for these patients where their cardiac condition is carefully assessed and treatment instituted where necessary. In addition, these patients are seen fortnightly at the cardiac ante-natal clinic in the Kandang Kerbau Maternity Hospital by the obstetrician and a medical officer from this Unit.

350. A new reflex tendon jerk *The Great Toe Jerk* has been used extensively for the last two years and because of its usefulness an article on it by Professor G. A. Ransome has been published in the *British Medical Journal*.

### *Medical Unit II*

#### *Research*

351. The Study of stellate ganglion Block suggests that its beneficial effect is produced by factors other than the stellate ganglion itself, and this aspect is now under investigation.

352. Preliminary studies in cerebral arteriography have been completed and the technique is now one of normal investigational routine in the hospital. Further studies continue in evaluating the normal and abnormal vasculature of the brain in relation to disease.

353. The study of epilepsy is continuing with special reference to the response to treatment and electro-encephalographic and clinical manifestations.

354. The series of cases on Congenital Heart Disease for active study is now completed.

355. The studies into hepatocellular failure continue and investigations of the treatment of primary hepatic carcinoma with X-radiation and/or Alloxan is well under way with encouraging results.

356. Since the introduction of the oral hypoglycæmic agents in recent years, much work has been done in his clinic as in most diabetes clinics in the world in trying to assess the value of these drugs in the treatment of diabetes mellitus. The work in assessing the efficacy of these drugs, which was started last year is being continued. At the present, work is confined to Tolbutamied (Rastinon) and P607, and it is hoped, in the near future, to publish a comprehensive survey of the value of these oral hypoglycæmic drugs in the management of diabetes mellitus. The study on the efficacy of Chlorpropamide (P607) as a hypoglycæmic agent has resulted in an invitation from the Academy of Sciences of New York to Dr. Ho Yuen to read a paper on 'The Problem of Diabetes in the Singapore Population and the Impact of Oral Anti-diabetics on its Management'.

#### *Pædiatric Unit*

357. During the year all wards in the Mistri Wing were in full use for child care.

358. The increase in admissions continued during 1958. The daily admission rate works out at 26.8 persons and the average stay in hospital 6.5 days. In spite of the rise in admissions, the mortality rate has fallen to the lowest ever recorded.

359. There has been more than 50 per cent increase in repeat cases due to a further improvement in the follow-up and also out of necessity due to the rapid turnover in the wards.

360. Gastro-enteritis easily remains the commonest cause for admission but pneumonia persists as the commonest killing disease. The mortality rate for both has fallen except for pneumonia of the new-born. There is a marked drop in tuberculosis meningitis admissions from 93 in 1957 to 52 in 1958 with a marked fall in mortality rate. This might be related to the B.C.G. campaign. Furthermore, although there is an increased number of cases of pulmonary tuberculosis, the mortality has also fallen. There has been a marked increase in infective hepatitis and also jaundice of unknown ætiology with a rise in mortality particularly in the latter group.

TABLE 66

## SUMMARY OF CASES TREATED IN PAEDIATRIC UNIT

| Diagnosis  | Admissions | Total Deaths | Deaths within 24 hours | % Mortality Rate on 9,697 admissions |
|--|------------|--------------|------------------------|--------------------------------------|
| <b>Anæmia:</b>                                     |            |              |                        |                                      |
| Aplastic .. ..                                     | 2          | 2            | 2                      | 0.021                                |
| Hæmolytic .. ..                                    | 54         | 10           | 4                      | 0.103                                |
| Rh. and ABO incompatibility .. ..                  | ..         | ..           | ..                     | ..                                   |
| Nutritional .. ..                                  | 101        | 32           | 12                     | 0.328                                |
| Others .. ..                                       | 46         | ..           | ..                     | ..                                   |
| Asthma .. ..                                       | 391        | 12           | 10                     | 0.123                                |
| Beri-beri .. ..                                    | 22         | 10           | 5                      | 0.103                                |
| <b>Blood Dyscrasias:</b>                           |            |              |                        |                                      |
| Leukæmia .. ..                                     | 5          | 3            | 2                      | 0.031                                |
| Others .. ..                                       | 47         | 13           | 5                      | 0.134                                |
| <b>Bronchiectasis and Pulmonary Collapse</b> .. .. | 36         | 11           | 5                      | 0.110                                |
| Bronchitis .. ..                                   | 437        | 11           | 7                      | 0.110                                |
| <b>Cellulitis:</b>                                 |            |              |                        |                                      |
| Abscess, Boils .. ..                               | 327        | 13           | 9                      | 0.134                                |
| Cerebral Abscess .. ..                             | 6          | 6            | 4                      | 0.063                                |
| Cerebral Hæmorrhage .. ..                          | 45         | 23           | 15                     | 0.230                                |
| Cerebral Tumour .. ..                              | 21         | 7            | 2                      | 0.072                                |
| <b>Congenital Abnormalities:</b>                   |            |              |                        |                                      |
| Heart .. ..  | 261        | 84           | 46                     | 0.861                                |
| Cleft Palate .. ..                                 | 59         | 1            | ..                     | 0.010                                |
| Intestinal obstruction .. ..                       | 43         | 15           | 2                      | 0.155                                |
| Pyloric Stenosis .. ..                             | 8          | 1            | ..                     | 0.010                                |
| Phimosis .. ..                                     | 10         | ..           | ..                     | ..                                   |
| Hydrocephalus and Meningo-cæle .. ..               | 12         | 2            | 2                      | 0.021                                |
| Others .. ..                                       | 156        | 14           | 5                      | 0.144                                |
| Encephalitis .. ..                                 | 190        | 41           | 30                     | 0.410                                |
| Epilepsy .. ..                                     | 32         | ..           | ..                     | ..                                   |
| Empyema .. ..                                      | 51         | 24           | 9                      | 0.246                                |
| Gastro-enteritis .. ..                             | 2,109      | 216          | 116                    | 2.22                                 |
| Head Injury .. ..                                  | 74         | 4            | 1                      | 0.042                                |
| Heart Failure .. ..                                | 88         | 38           | 6                      | 0.389                                |
| Hernia .. ..                                       | 71         | 2            | ..                     | 0.021                                |
| Hydrocephalus, acquired .. ..                      | 25         | 5            | 1                      | 0.052                                |

TABLE 66—continued

| Diagnosis                         | Admissions | Total Deaths | Deaths within 24 hours | % Mortality Rate on 9,697 admissions |
|-----------------------------------|------------|--------------|------------------------|--------------------------------------|
| <b>Infectious Diseases:</b>       |            |              |                        |                                      |
| Amoebiasis .. ..                  | 28         | ..           | ..                     | ..                                   |
| Bacillary Dysentery .. ..         | 13         | 1            | ..                     | 0.010                                |
| Chicken Pox .. ..                 | 7          | ..           | ..                     | ..                                   |
| Diphtheria .. ..                  | 34         | 4            | ..                     | 0.042                                |
| Measles .. ..                     | 171        | 9            | 3                      | 0.093                                |
| Mumps .. ..                       | 4          | ..           | ..                     | ..                                   |
| Poliomyelitis .. ..               | 32         | ..           | ..                     | ..                                   |
| Typhoid .. ..                     | 29         | ..           | ..                     | ..                                   |
| Whooping Cough .. ..              | 72         | ..           | ..                     | ..                                   |
| Others .. ..                      | 22         | ..           | ..                     | ..                                   |
| Infective Hepatitis .. ..         | 168        | 12           | 8                      | 0.123                                |
| Influenza .. ..                   | 2          | 1            | ..                     | 0.010                                |
| Jaundice of unknown Aetiology ..  | 119        | 20           | 12                     | 0.410                                |
| Kernicterus .. ..                 | 38         | 26           | 22                     | 0.267                                |
| Laryngo-tracheo-bronchitis .. ..  | 8          | 1            | ..                     | 0.010                                |
| Lung Abscess .. ..                | 8          | 7            | 4                      | 0.072                                |
| Lung Cyst .. ..                   | 11         | ..           | ..                     | ..                                   |
| Malaria .. ..                     | 4          | ..           | ..                     | ..                                   |
| Malnutrition .. ..                | 51         | 9            | 2                      | 0.093                                |
| Meningitis-purulent .. ..         | 72         | 34           | 14                     | 0.349                                |
| <b>Mental Deficiency:</b>         |            |              |                        |                                      |
| Mongol .. ..                      | 102        | 5            | 1                      | 0.052                                |
| Cretin .. ..                      | 8          | 1            | ..                     | 0.010                                |
| Microcephaly and others .. ..     | 14         | 3            | 2                      | 0.031                                |
| Nasopharyngitis and Tonsilitis .. | 1,307      | 9            | 1                      | 0.093                                |
| <b>Nephritis:</b>                 |            |              |                        |                                      |
| Acute .. ..                       | 368        | 5            | 3                      | 0.052                                |
| Subacute .. ..                    | 73         | 3            | ..                     | 0.031                                |
| Chronic .. ..                     | 3          | ..           | ..                     | ..                                   |
| Otitis Media .. ..                | 101        | 6            | 1                      | 0.063                                |
| Pneumonia over 4 weeks .. ..      | 1,362      | 364          | 219                    | 3.76                                 |
| Pneumonia of newborn .. ..        | 153        | 76           | 38                     | 0.78                                 |
| Pneumothorax .. ..                | 3          | 3            | 1                      | 0.031                                |
| <b>Poisoning:</b>                 |            |              |                        |                                      |
| Kerosene .. ..                    | 31         | 1            | ..                     | 0.010                                |
| Alkali .. ..                      | 20         | 2            | ..                     | 0.021                                |
| Others .. ..                      | 77         | ..           | ..                     | ..                                   |

TABLE 66—continued

| Diagnosis                  | Admissions | Total Deaths | Deaths within 24 hours | % Mortality Rate on 9,697 admissions |
|----------------------------|------------|--------------|------------------------|--------------------------------------|
| Prematurity .. ..          | 59         | 17           | 4                      | 0.175                                |
| Pyelitis .. ..             | 54         | 1            | ..                     | 0.010                                |
| <b>Rheumatic Diseases:</b> |            |              |                        |                                      |
| Acute .. ..                | 43         | 1            | ..                     | 0.010                                |
| Rheumatoid .. ..           | 15         | ..           | ..                     | ..                                   |
| Chorea .. ..               | 6          | ..           | ..                     | ..                                   |
| Cardiac .. ..              | 31         | 3            | ..                     | 0.031                                |
| Rickets .. ..              | 28         | 2            | 2                      | 0.021                                |
| Scurvy .. ..               | 2          | ..           | ..                     | ..                                   |
| Septicæmia .. ..           | 32         | 19           | 13                     | 0.195                                |
| <b>Skin Diseases:</b>      |            |              |                        |                                      |
| Eczema .. ..               | 11         | ..           | ..                     | ..                                   |
| Pemphigus .. ..            | 18         | 1            | ..                     | 0.010                                |
| Impetigo .. ..             | 12         | ..           | ..                     | ..                                   |
| Allergic Dermatitis .. ..  | 14         | ..           | ..                     | ..                                   |
| Others .. ..               | 31         | ..           | ..                     | ..                                   |
| <b>Stomatitis:</b>         |            |              |                        |                                      |
| Thrush .. ..               | 69         | 2            | ..                     | 0.021                                |
| Others .. ..               | 60         | ..           | ..                     | ..                                   |
| Syphilis, Congenital .. .. | 9          | 1            | 1                      | 0.010                                |
| Tetanus .. ..              | 36         | 13           | 5                      | 0.134                                |
| <b>Tuberculosis:</b>       |            |              |                        |                                      |
| Pulmonary .. ..            | 140        | 5            | ..                     | 0.052                                |
| Meningitis .. ..           | 52         | 16           | 3                      | 0.164                                |
| Abdominal .. ..            | 6          | 3            | ..                     | ..                                   |
| Bone and Joint .. ..       | 10         | ..           | ..                     | ..                                   |
| Glandular .. ..            | 12         | ..           | ..                     | ..                                   |
| Others .. ..               | 13         | 1            | ..                     | 0.010                                |
| <b>Worms:</b>              |            |              |                        |                                      |
| Ankylostomiasis .. ..      | 71         | 1            | ..                     | 0.010                                |
| Ascariasis .. ..           | 81         | 9            | 7                      | 0.093                                |
| Others .. ..               | 22         | 2            | ..                     | 0.021                                |
| Miscellaneous .. ..        | 1,026      | 87           | 39                     | 0.89                                 |

## THE SURGICAL UNITS

361. The volume of surgical work continues to increase. The total number of operations during the year was 40,806, an increase of 2,483 over the previous year. This represents an increase of about 6 per cent.

The graph on page 109 shows the increase in surgical admission and operations that have been occurring from year to year. Table 70 gives a return of operations done in the Surgical Units. There was a reduction of the operations done in all Surgical Units during the poliomyelitis epidemic.

362. The year continues to show increasing demands on the operating theatres and wards. This has been partly due to the increase in the numbers of major emergencies of which an increasing proportion has been referred to the unit from the physicians.

363. Surgical Unit 'C' is the Orthopædic and Traumatic Unit of the Hospital. During the poliomyelitis epidemic in the latter part of the year, post-poliomyelitis paralytic cases were transferred from the Middleton Hospital for treatment mainly in physiotherapy. Ward 61, previously occupied by the Department of Physiotherapy, was re-opened and this together with half of Ward 47, an ophthalmic ward, were utilised for these patients. Altogether 104 paralytic post-poliomyelitis cases were admitted into the General Hospital.

364. In addition to the work at the General Hospital, the staff of Surgical Unit 'C' were responsible for the orthopædic cover at:—

- (i) St. Andrew's Orthopædic Hospital at Siglap with approximately 120 beds;
- (ii) A ward at Middleton Hospital with approximately 40 beds for the treatment of late cases of poliomyelitis;
- (iii) A ward at Tan Tock Seng's Hospital with 60 beds where adult Bone and Joint Tuberculosis cases and paraplegia cases are kept;
- (iv) Red Cross Home, Tanah Merah with 20 beds for crippled children.

#### ST. ANDREW'S ORTHOPÆDIC HOSPITAL, SIGLAP

365. The staff of the Hospital consists of a Resident Medical Officer, 1 Matron, 2 Sisters, 2 Staff Nurses, 21 Assistant Nurses and 1 Hospital Assistant. Dr. E. Crowe, M.B., B.S., F.R.C.S. was the Resident Medical Officer.

366. The number of beds (for children up to 14 years) is 120. There were 75 male and 64 female patients.

367. There were no cases of acute poliomyelitis. 98 per cent of the children admitted were cases of bone tuberculosis, mostly spine and hips, but many children had multiple lesions and routine X-ray of all chests revealed a number of cases of pulmonary tuberculosis.

368. The average stay of each child continued to be 12 months—all were asked to attend the follow-up out-patient clinic when they left hospital; most of them receive a tuberculosis allowance which helps to ensure regular attendance at the clinic as well as to maintain a fair standard of health—some do badly at home and a certain number were re-admitted for further treatment, especially those who had conservative (non-operative) treatment.

#### *School*

369. The children have school on five mornings a week and this year there have been a larger number of voluntary helpers, whose services are appreciated. Voluntary helpers from the R.A.F. (Changi) still come regularly every Sunday morning.

#### *Concert*

370. The annual concert was held on 19th December and was a great success. Lady Goode and the Minister for Health attended.

## RED CROSS HOME, TANAH MERAH

371. The work has continued as before. A certain change in admission policy has been accepted lately in so far as more short staying cases with better prognoses have been admitted, instead of as earlier cases needing years and years of care. This has been done for two reasons:—

- (i) to give more children the benefit of a period at the home, and
- (ii) to avoid cases getting too accustomed to the life and advantages of the home and causing too many difficulties for them when they have to be discharged home as no other possibilities are at hand.

## EAR, NOSE AND THROAT UNIT

372. The scope of the department has been gradually widened and extended into the fields of major surgery of the head and neck in relation to malignant growths, laryngectomy, block dissection of the glands in the neck, of the maxilla and mandible in conjunction with the Dental Department, and treatment of brain abscess secondary to ear infection. It is expected that when the operating microscope (which is on order) is available, it will be possible to perform micro-surgery such as stapedolysis, fenestration, tympanoplasty and myringoplasty.

373. A summary of the work of the Unit is given in Table 67.

TABLE 67

## EAR, NOSE AND THROAT UNIT—SUMMARY OF WORK

| Year        | Out-Patients |         | Operations |        |
|-------------|--------------|---------|------------|--------|
|             | New Cases    | Repeats | Major      | Minor  |
| 1952 ... .. | 4,126        | 10,541  | 1,186      | 939    |
| 1953 ... .. | 5,492        | 10,806  | 1,686      | 1,008  |
| 1954 ... .. | 6,642        | 12,139  | 2,042      | 1,217  |
| 1955 ... .. | 8,675        | 21,500  | 2,414      | 1,807  |
| 1956 ... .. | 9,563        | 19,228  | 1,855      | 1,815  |
| 1957 ... .. | 11,279       | 21,627  | 1,488      | 2,796  |
| 1958 ... .. | 12,526       | 18,480  | 1,158      | 2,537* |

\* Reduced operations as a result of the poliomyelitis epidemic.

## OPHTHALMIC UNIT

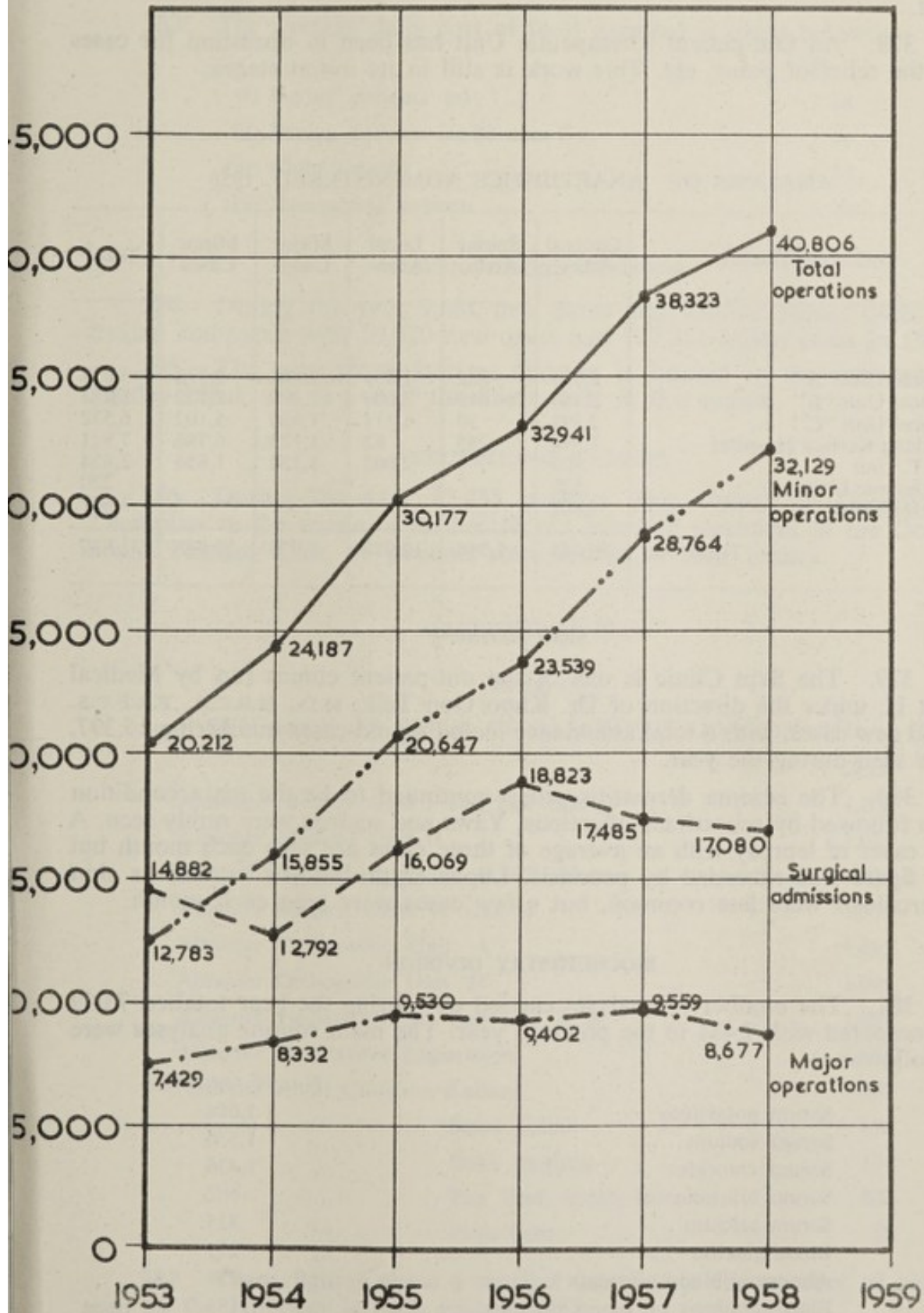
374. There was a great increase in the attendances at the clinic during the year. The number of new cases was 19,311, and 70,904 of repeated attendances as compared with 17,563 and 54,714 respectively in the previous year. The steady increase in the number of attendances for the past decade is shown by the figures below:—

|             |        |
|-------------|--------|
| 1950 ... .. | 16,512 |
| 1951 ... .. | 17,975 |
| 1952 ... .. | 18,955 |
| 1953 ... .. | 21,623 |
| 1954 ... .. | 27,543 |
| 1955 ... .. | 39,841 |
| 1956 ... .. | 44,428 |
| 1957 ... .. | 54,714 |
| 1958 ... .. | 70,904 |

375. During the year 824 major operations and 3,707 minor operations were done.

# GENERAL HOSPITAL

## OPERATIONS AND ADMISSIONS TO SURGICAL UNITS



## ANÆSTHETIC UNIT

376. Dr. B. E. G. D'Bras, M.B., B.S., F.F.A.R.C.S., was the Senior Anæsthetist after the retirement of Dr. E. G. Hudson, M.R.C.S., L.R.C.P., on Malayanisation at the end of 1957.

377. During the year clinical trials on 'Halothane' was carried out in the Unit.

378. An Out-patient Therapeutic Unit has been in operation for cases for the relief of pains, etc. This work is still in its initial stages.

TABLE 68

## ANALYSIS OF ANAESTHETICS ADMINISTERED, 1958

| Operating Theatres         | General Anæs. | Spinal Anæs. | Local Anæs. | Major Cases | Minor Cases | Total  |
|----------------------------|---------------|--------------|-------------|-------------|-------------|--------|
| Surgical Unit "A" .. ..    | 2,981         | 822          | 1,835       | 2,866       | 2,772       | 5,638  |
| Surgical Unit "B" .. ..    | 2,469         | 649          | 2,003       | 2,399       | 2,722       | 5,121  |
| Surgical Unit "C" .. ..    | 2,391         | 30           | 4,111       | 1,430       | 5,102       | 6,532  |
| Kandang Kerbau Hospital .. | 7,594         | 255          | 62          | 1,125       | 6,786       | 7,911  |
| E.N.T. Unit .. ..          | 807           | ..           | 2,007       | 1,158       | 1,656       | 2,814  |
| Ophthalmic Unit .. ..      | 220           | ..           | ..          | ..          | ..          | 220    |
| Dental Clinic .. ..        | 3,601         | ..           | ..          | ..          | ..          | 3,601  |
| Total .. ..                | 20,063        | 1,756        | 10,018      | 8,978       | 19,038      | 31,837 |

## SKIN CLINIC

379. The Skin Clinic is one of the out-patient clinics run by Medical Unit II, under the direction of Dr. Khoo Oon Teik, M.D., M.R.C.P., F.R.F.P.S. 6,630 new cases, with a total attendance including old cases numbering 16,397, were seen during the year.

380. The eczema dermatitis group continued to be the main condition seen followed by seborrhœic affections. Yaws and scabies were rarely seen. A few cases of leprosy with an average of three cases are seen each month but this figure was exceeded by psoriasis. Lupus erythematosus as well as skin tuberculosis were less common, but a few cases were seen each month.

## BIOCHEMISTRY DIVISION

381. The number of analyses carried out during the year totalled 7,059 as compared with 7,431 in the previous year. The main routine analyses were as follows:—

|   | No. of specimens |
|---|------------------|
| Serum potassium .. ..                   | 1,614            |
| Serum sodium .. ..                      | 1,530            |
| Serum chlorides .. ..                   | 1,436            |
| Serum bilirubin .. ..                   | 602              |
| Serum calcium .. ..                     | 315              |
| Blood glucose .. ..                     | 271              |
| Abnormal blood pigments .. ..           | 253              |
| Electrophoresis of serum proteins .. .. | 183              |

382. In addition to the above, other types of biochemical investigations undertaken during the year included the following: blood pyruvic acid, urinary 17-ketosteroids and 17-ketogenic steroids, ascorbic acid in blood and urine, paper chromatography of urinary amino-acids and sugars, foetal hæmoglobin and faecal fat.

DIETETIC SECTION

383. The average daily cost of food supplied is listed below:—

|                                 | \$ | c. |
|---------------------------------|----|----|
| (i) Paying patients (a) ... ..  | 3  | 18 |
| (ii) Paying patients (b) ... .. | 2  | 96 |
| (iii) Child patients ... ..     | 1  | 13 |
| (iv) Non-paying patients ... .. | 1  | 10 |

PHYSIOTHERAPY DIVISION

384. During the year 9,681 new cases and 136,781 repeat cases were treated compared with 10,320 new cases and 137,251 repeat cases in 1957.

385. The new physiotherapy division is housed in the rear wing of Stanley Block and is one of the finest units in this region.

OCCUPATIONAL THERAPY

386. During the year 12,435 patients were visited by Occupational Therapists in the wards; a further 18,153 attended treatment in the Occupational Therapy Unit. 94 patients were visited in their homes.

ALMONER'S DIVISION

TABLE 69

SUMMARY OF WORK OF ALMONER'S DIVISION, 1958

|  | <i>Cases</i> |
|--|--------------|
| Almoner Medical Unit I and Eye Clinic ... .. | 1,208        |
| Almoner Medical Unit II ... ..               | 1,025        |
| Almoner Radiotherapy and E.N.T. Units ... .. | 304          |
| Almoner Surgical Units 'A' and 'B' ... ..    | 1,079        |
| Almoner Orthopædic Unit 'A' ... ..           | 1,415        |
| Almoner Orthopædic Unit 'B' ... ..           | 1,046        |
| Almoner Pædiatric Units East and West ... .. | 1,048        |
| Almoner Out-Patient Department ... ..        | 1,615        |
| Almoner Rural Clinics:—Kallang ... ..        | 302          |
| Bukit Timah ... ..                           | 156          |
| Bukit Panjang ... ..                         | 174          |
| Tan Tock Seng's Hospital ... ..              | 402          |
| Paya Lebar ... ..                            | 88           |

387. These figures show a marked increase in the number of patients seen by the Almoner in each unit in 1958.

TABLE 70  
GENERAL HOSPITAL, SINGAPORE  
OPERATIONS FOR THE YEAR, 1958

| Month        | SURGICAL 'A' UNIT |       |       | SURGICAL 'B' UNIT |       |       | SURGICAL 'C' UNIT |        |        | OPHTHALMIC UNIT |       |       | EAR, NOSE AND THROAT UNIT |       |       |
|--------------|-------------------|-------|-------|-------------------|-------|-------|-------------------|--------|--------|-----------------|-------|-------|---------------------------|-------|-------|
|              | Major             | Minor | Total | Major             | Minor | Total | Major             | Minor  | Total  | Major           | Minor | Total | Major                     | Minor | Total |
| January ..   | 265               | 568   | 833   | 193               | 489   | 682   | 143               | 1,154  | 1,297  | 90              | 340   | 430   | 111                       | 196   | 307   |
| February ..  | 157               | 428   | 585   | 158               | 398   | 556   | 78                | 1,082  | 1,160  | 37              | 221   | 258   | 93                        | 179   | 272   |
| March ..     | 209               | 529   | 738   | 175               | 506   | 681   | 73                | 1,169  | 1,242  | 75              | 257   | 332   | 109                       | 237   | 346   |
| April ..     | 238               | 535   | 773   | 211               | 424   | 635   | 118               | 1,007  | 1,125  | 60              | 301   | 361   | 114                       | 250   | 364   |
| May ..       | 284               | 601   | 885   | 236               | 596   | 832   | 125               | 1,054  | 1,179  | 71              | 279   | 350   | 131                       | 253   | 384   |
| June ..      | 248               | 572   | 820   | 202               | 689   | 891   | 119               | 939    | 1,058  | 75              | 303   | 378   | 86                        | 207   | 293   |
| July ..      | 252               | 700   | 952   | 222               | 611   | 833   | 138               | 1,057  | 1,195  | 79              | 318   | 397   | 143                       | 267   | 410   |
| August ..    | 253               | 576   | 829   | 213               | 598   | 811   | 120               | 1,130  | 1,250  | 80              | 325   | 405   | 125                       | 272   | 397   |
| September .. | 267               | 679   | 946   | 204               | 578   | 782   | 123               | 1,107  | 1,230  | 58              | 367   | 425   | 116                       | 215   | 331   |
| October ..   | 267               | 612   | 879   | 222               | 431   | 653   | 141               | 1,154  | 1,295  | 73              | 376   | 449   | 60                        | 130   | 190   |
| November ..  | 210               | 556   | 766   | 196               | 355   | 551   | 110               | 1,032  | 1,142  | 65              | 290   | 355   | 25                        | 130   | 155   |
| December ..  | 216               | 594   | 810   | 167               | 352   | 519   | 142               | 1,096  | 1,238  | 61              | 330   | 391   | 45                        | 128   | 173   |
| Total ..     | 2,866             | 6,950 | 9,816 | 2,399             | 6,027 | 8,426 | 1,430             | 12,981 | 14,411 | 824             | 3,707 | 4,531 | 1,158                     | 2,464 | 3,622 |



CHAPTER FOURTEEN

OUT-PATIENT DISPENSARY SERVICE

388. This report covers the static and mobile dispensary services of the Island. During the year under review a total of 1,560,222 were recorded from the various clinics; 411,713 were new cases and 1,148,509 were repetitions; of these approximately 73 per cent were Chinese, 15 per cent Indians, 10 per cent Malays, and the balance of 2 per cent between Europeans, Eurasians and other nationalities. Besides the clinics listed in Table 72 this includes attendances at clinics reported in the Chapter under 'Other Special Departments'. The staff, clinic sessions and distribution of out-patient services is given in Table 72. Dr. Toh Chiong Hieng, L.M.S. (Singapore) was in charge of the Service.

TABLE 72

STAFF, CLINIC SESSIONS AND DISTRIBUTION OF OUT-PATIENT DISPENSARIES

| Clinic   | Sessions   | Medical Officers                            | Sister | Nurses | Hospital Assistants | Lab. Assistants |
|--|--|---|--------|--------|---------------------|-----------------|
| General Hospital Out-patient and Casualty Unit | Out-patients:<br>8 a.m.—4 p.m.<br>Casualty and Emergency Out-patients:<br>24 hour service. | 10  | 3      | 10     | 20                  | 1               |
| Tan Tock Seng's Hospital Out-patient Unit      | Morning Sessions   | 1   | ..     | ..     | 1                   | ..              |
| Kandang Kerbau Hospital Out-patient Unit       | Morning and afternoon sessions   | 2   | ..     | 1      | ..                  | ..              |
| Kallang Out-patient Clinic                     | Morning Sessions   | 3   | 1      | 3      | 1                   | 1               |
| Paya Lebar Outdoor Dispensary                  | Morning Sessions   | 1   | ..     | 1      | 1                   | ..              |
| Bukit Timah Outdoor Dispensary                 | Morning and afternoon sessions   | Part-time work by M.O. Rural North and West | ..     | 1      | 1                   | ..              |
| Pasir Panjang Outdoor Dispensary               | Morning and afternoon sessions   | Part-time work by Kallang O.D.D.            | ..     | 1      | 1                   | ..              |

TABLE 72—continued

| Clinic                                  | Sessions   | Medical Officers                     | Sister | Nurses | Hospital Assistants                               | Lab. Assistants |
|---|--|--------------------------------------|--------|--------|---|-----------------|
| Rural North and West Dispensary Service | Bukit Panjang: Thrice weekly morning and afternoon sessions<br>Thomson Road: Twice weekly and afternoon sessions<br>Holland Road: Once weekly morning sessions | 1                                    | ..     | 2      | 1   | ..              |
| Rural East Dispensary Service           | Changi Points: 2 afternoon sessions weekly<br>Kampong Batak: 2 afternoon sessions weekly<br>Gulega Road: 1 afternoon session weekly                            | Part-time work by M.O. Changi Prison | ..     | ..     | Part-time work by H.A. i/c. Travelling Dispensary | ..              |
| Pulau Tekong Clinic ..                  | Morning and afternoon sessions   | Do.                                  | ..     | ..     | 1   | ..              |
| Pulau Brani Clinic ..                   | Morning and afternoon sessions   | ..                                   | ..     | ..     | 1   | ..              |

*General Hospital: Out-patient and Casualty Unit*

389. The Out-patient and Casualty Unit of the General Hospital recorded a total of 732,878 cases from different sections of the Unit made up as follows:—

TABLE 73

CASES SEEN AT GENERAL HOSPITAL OUT-PATIENT AND CASUALTY UNIT

|                                 | NEW CASES |        |        | REPEAT CASES |        |        | Total   |
|---------------------------------|-----------|--------|--------|--------------|--------|--------|---------|
|                                 | Male      | Female | Child  | Male         | Female | Child  |         |
| General Out-patient cases .. .. | 46,272    | 4,655  | 50,926 | 84,975       | 44,941 | 50,060 | 323,725 |
| Casualty cases ..               | 35,128    | 9,648  | 18,043 | 11,567       | 2,195  | 5,270  | 81,851  |
| Treatment/Dressings ..          | ..        | ..     | ..     | ..           | ..     | ..     | 291,947 |
| Admissions ..                   | ..        | ..     | ..     | ..           | ..     | ..     | 35,355  |
| Total ..                        | 81,400    | 56,199 | 68,969 | 96,542       | 47,136 | 55,330 | 732,878 |

390. Below are comparative figures from:—

|      |     |     |         |
|------|-----|-----|---------|
| 1954 | ... | ... | 466,904 |
| 1955 | ... | ... | 509,053 |
| 1956 | ... | ... | 517,669 |
| 1957 | ... | ... | 625,839 |
| 1958 | ... | ... | 732,878 |

#### *General Out-patients*

391. 323,725 were recorded against 279,083 in 1957, an increase of 44,642. 173 males and 168 females were examined for assessment of age for the Labour Department, Commissioner for Registration, Immigration and Police Departments. 622 males and 173 females positive tuberculosis cases were detected and referred to Tan Tock Seng's Hospital.

#### *Casualty Room*

392. 81,851 casualties were seen in 1958 against 73,566 in 1957, an increase of 8,285.

|  | 1955  | 1956  | 1957  | 1958  |
|--|-------|-------|-------|-------|
| Road Accidents ... ..                  | 4,010 | 4,047 | 4,790 | 5,760 |
| Examination for Alcoholic Intoxication | 967   | 1,035 | 1,082 | 1,319 |
| Rape and other sexual offences ...     | 74    | 53    | 56    | 67    |

#### *Treatment and Dressing Rooms*

393. This section undertakes the dressing and treatment of the Out-patient and Casualty Unit, Skin Clinic, Orthopædic, Surgical and Medical Out-patient Units of the Hospital and injections of streptomycin of tuberculosis out-patients cases from Tan Tock Seng's Hospital.

394. During the year under review 291,947 treatments were done, an increase of 53,988 from the previous year's figure of 237,959.

#### *Laboratory*

395. 24,181 routine specimens were examined during the year.

|               |        |
|---------------|--------|
| Urine ... ..  | 13,279 |
| Blood ... ..  | 7,463  |
| Fæces ... ..  | 2,609  |
| Smears ... .. | 830    |
|               | -----  |
| Total ... ..  | 24,181 |
|               | -----  |

#### *Tan Tock Seng's Hospital General Out-patient Unit*

396. During the year 23,945 out-patient attendances were recorded. The Clinic is for male out-patients and the staff of Tan Tock Seng's Hospital.

#### *Kandang Kerbau General Out-patient Unit*

397. This Clinic is for women and children only.

398. During the year 35,988 women and 57,380 children attended the Clinic.

*Kallang Out-patient Clinic*

399. This out-patient clinic functions every morning except Sundays and holidays. The Tuberculosis clinic functions in the afternoons from Monday to Thursday, and Psychiatric Clinic and School clinic functions on Friday afternoons.

400. At this clinic 105,549 patients were seen.

*Rural North and West Dispensary Service*

401. The total attendances at the general out-patient clinics during the year with comparative figures is shown below:—

|                             | 1956   | 1957   | 1958   |
|-----------------------------|--------|--------|--------|
| Bukit Panjang Clinic ... .. | 22,890 | 27,882 | 33,813 |
| Thomson Road Clinic ... ..  | 15,283 | 17,088 | 19,942 |
| Holland Road Clinic ... ..  | 5,456  | 4,441  | 6,447  |
| Total ... ..                | 43,629 | 49,411 | 60,202 |

402. The above figures show a total increase of 10,791 out-patient attendances in 1958 in these clinics. 42,744 injections and dressings were also carried out in these clinics.

*Bukit Timah Outdoor Dispensary*

403. This clinic is housed in the Maternity and Child Health Clinic at Bukit Timah. The primary function of the clinic is to continue treatment of patients resident in this area, and who have been discharged from the hospitals.

404. The Hospital Assistant treats minor conditions and refers the more serious illness to the Bukit Panjang or the General Hospital. A total of 25,465 attendances were reported in 1958.

*Paya Lebar Outdoor Dispensary*

405. At this clinic 115,503 out-patients were seen.

*Rural East Dispensary Service*

406. The total attendances at the general out-patient clinics is shown below:—

|                             | 1956   | 1957   | 1958   |
|-----------------------------|--------|--------|--------|
| Changi Point Clinic ... ..  | 4,073  | 2,834  | 3,707  |
| Kampong Batak Clinic ... .. | 5,574  | 4,342  | 3,292  |
| Gulega Road Clinic ... ..   | 4,028  | 3,785  | 3,863  |
| Total ... ..                | 13,675 | 10,961 | 10,862 |

*Pulau Tekong Clinic.*

407. This clinic and cottage hospital is situated on the island of Pulau Tekong and is staffed by one Hospital Assistant. The Medical Officer in charge, Changi Prison visits the clinic weekly on Wednesday mornings.

408. 7,207 cases were recorded during the year.

*Pulau Brani Outdoor Dispensary*

409. This clinic is situated at the island of Pulau Brani. During the year 8,793 out-patients were seen.

*Mobile Dispensary Service*

410. In January 1958 another travelling dispensary was added to the fleet of three dispensaries in operation. These four dispensaries each with one Hospital Assistant in charge, visit rural areas and attend to minor illnesses.

411. Two floating dispensaries are operated by the Government Health Division. Both of them are staffed by Hospital Assistants. One of the floating dispensaries carried in addition a Mobile Maternal and Child Health team.

412. Attendances at the travelling dispensaries and floating dispensaries over the past five years are given in Table 74.

TABLE 74

## ATTENDANCES AT MOBILE CLINICS

|                           | 1954   | 1955   | 1956   | 1957   | 1958    |
|---------------------------|--------|--------|--------|--------|---------|
| Travelling Dispensary ... | 46,032 | 76,381 | 77,068 | 78,436 | 122,107 |
| Floating Dispensary ...   | 3,556  | 3,548  | 5,150  | 6,585  | 7,261   |

## CHAPTER FIFTEEN

### TUBERCULOSIS SERVICE

#### TUBERCULOSIS CONTROL UNIT

413. The Tuberculosis Control Unit came into operation at the end of 1957 and has now been in operation for a full year.

#### *Staff*

414. The staff of the Unit consisted of the Assistant Director of Medical Services (Tuberculosis), 2 Medical Officers, 1 Higher Executive Officer, 1 Health Sister, 5 Health Nurses, 20 Assistant Nurses, 5 Laboratory Assistants and 7 Laboratory Attendants.

#### *Tuberculosis Registry*

415. In accordance with the Quarantine and Prevention of Disease (Amendment) Ordinance, 1958, No. 19 of 1958, which came into operation on 1st August, 1958, all cases of tuberculosis are notifiable to the Assistant Director of Medical Services (Tuberculosis). Private practitioners are entitled to a fee of \$2 for each case notified. The bulk of the notifications came from the Tuberculosis Clinic, Tan Tock Seng's Hospital and the Royal Singapore Chest Clinic (S.A.T.A.); a small number came from private practitioners. Of the total number, 733 cases were discovered by the X-ray Survey.

#### *Tuberculosis Culture Laboratory*

416. In view of the importance of bacteriological examinations in connection with tuberculosis it was decided to convert the old mortuary at Tan Tock Seng's Hospital into a Tuberculosis Culture Laboratory with a capacity of dealing with as many as 200 cultures per day.

TABLE 75

#### CULTURES DONE AT TUBERCULOSIS CULTURE LABORATORY

| <i>Nature of work</i>         | <i>Total Specimens</i> | <i>Positive</i> | <i>Contaminated</i> |
|-------------------------------|------------------------|-----------------|---------------------|
| Direct Smear ... ..           | 2,647                  | 175             | —                   |
| Concentrated Deposit ... ..   | 667                    | 77              | —                   |
| Sputum Culture ... ..         | 5,559                  | 638             | 750                 |
| Laryngeal Swab Culture ... .. | 4,308                  | 287             | 118                 |
| General Culture ... ..        | 112                    | 4               | 27                  |
| Sensitivity Test ... ..       | 470                    | —               | 15                  |

#### *Health Visitors' Division*

417. To standardise tuberculosis work in various aspects in April 1958 the School Tuberculosis service came under the Tuberculosis Control Unit and its staff who have been with the service for many years were transferred. The staff of this section were engaged in the Tuberculosis-Case Finding Programme for five months from 1st July, 1958.

TABLE 76

SUMMARY OF WORK DONE BY THE HEALTH VISITORS' DIVISION,  
TUBERCULOSIS CONTROL UNIT, 1958

|                                   | 1958   |
|-----------------------------------|--------|
| Home visits to patients ... ..    | 7,192  |
| Home visits to contacts ... ..    | 5,829  |
| Tuberculin Tests done ... ..      | 14,997 |
| B.C.G. Vaccination done ... ..    | 36,515 |
| Contact Clinic attendances ... .. | 31,224 |

*B.C.G. Vaccination*

418. The B.C.G. Team continued to work on giving B.C.G. to new born infants delivered at the Kandang Kerbau Maternity Hospital. Of 25,410 discharged from the hospital in 1958 B.C.G. vaccination was given to 23,859—94 per cent response.

419. The practice of tuberculin testing three months after vaccination was discontinued in September 1958 as trials showed a 90 per cent conversion rate.

420. B.C.G. vaccination of infants under one month started in two Rural Child Health Centres in 1957 was extended to all the 20 main centres during the year. Of 16,416 births in the rural area 2,866 infants were vaccinated. The conversion rate was 98 per cent. B.C.G. vaccination was also done in schools and where emphasis was placed on the tuberculin testing of school entrants. Tuberculin negative children were given B.C.G. vaccination.

421. B.C.G. vaccination was extended to the Infant or Child Health Clinics in the City and B.C.G. vaccination was given at three such clinics. Of 17,074 infants born in the City outside Kandang Kerbau Hospital, 2,904 were given B.C.G. vaccination.

TABLE 77

## TUBERCULIN TESTING

| Age Group    | No. Done | Positive |            |
|--------------|----------|----------|------------|
|              |          | No.      | Percentage |
| 5-6 ... ..   | 5,290    | 1,693    | 32         |
| 7-8 ... ..   | 9,311    | 3,904    | 41.9       |
| 9-10 ... ..  | 396      | 241      | 60.9       |
| Total ... .. | 14,997   | 5,838    | —          |

*School Chest Section*

TABLE 78

## NUMBER OF SCHOOLS DONE 1956-58

| Year       | English | Chinese | Malay | Indian | Private | Total |
|------------|---------|---------|-------|--------|---------|-------|
| 1956 .. .. | 14      | 30      | 8     | ..     | 4       | 56    |
| 1957 .. .. | 157     | 123     | 31    | 12     | 4       | 327   |
| 1958 .. .. | 140     | 28      | 20    | ..     | ..      | 188*  |

\* Work interrupted by the Tuberculosis Case-Finding Programme.

TABLE 79

TUBERCULIN TESTS AND B.C.G. VACCINATION DONE IN SCHOOLS,  
1956-58

| Year       | First Test | Retests | VACCINATIONS     |               | Total Vaccination |
|------------|------------|---------|------------------|---------------|-------------------|
|            |            |         | after First Test | after Retests |                   |
| 1956 .. .. | 11,068     | 2,835   | 6,305            | 598           | 6,903             |
| 1957 .. .. | 31,796     | 3,837   | 19,057           | 1,281         | 20,338            |
| 1958 .. .. | 15,900     | 1,566   | 9,312            | 478           | 9,790*            |

\* Work interrupted by the Tuberculosis Case-Finding Programme.

## GOVERNMENT TUBERCULOSIS CASE FINDING PROGRAMME

422. This project involved the X-raying of 50,000 adults over the age of 14 in four selected areas, two in the City around Jalan Sultan and Chinatown and two in the rural area, Geylang Serai and Bukit Panjang, the full investigation, clinical and bacteriological, of cases with abnormal shadows suggestive of tuberculosis and the treatment of those cases found to be suffering from active disease.

423. The objects of the scheme were:—

- (i) to ascertain the incidence of tuberculosis in Singapore so as to be able to formulate plans for its eventual control and
- (ii) to discover and treat all cases with active disease especially those that were infectious.

424. It was carried out with help from Australia under the Colombo Plan, who provided equipment for the Central Culture Laboratory and a team of experts consisting of:—

Dr. Cotter Harvey (the leader of the Team and Consultant Chest Physician).

Dr. Charles Rubinstein (the Radiological Director of the Anti-Tuberculosis Association of New South Wales).

Miss G. M. J. Rodda (bacteriological technician).

Mr. L. J. Saddler (radiological engineer).

Mr. D. J. Grant (radiographer).

425. After an intensive publicity campaign the survey commenced on 1st July, 1958, and by the end of October 1958, 50,672 residents and 4,157 non-residents was X-rayed.

426. The response of the public in all areas was excellent. In the two city areas and in one of the rural areas—Geylang Serai—about 84 per cent of the eligible population were X-rayed whilst in the other rural area—Bukit Panjang—about 74 per cent were X-rayed.

427. In both city areas the X-ray part of the programme was completed two weeks ahead of schedule and advantage was taken of these intervals to tuberculin test as many as possible of the contacts of those cases which on X-ray appeared to be suffering from active disease. The tuberculin negatives were given B.C.G. while the tuberculin positives were X-rayed.

TABLE 80  
ATTENDANCES AT SCHOOLS CHEST CLINICS, 1958

|                | PAYA LEBAR CLINIC |    | NORTHCANAL ROAD CLINIC |     | TAN TOCK SENG SCHOOL CLINIC |       |                 |     | INSTITUTE OF HEALTH CLINIC          |    |                 |       | Total |                 |     |                                     |        |
|----------------|-------------------|----|------------------------|-----|-----------------------------|-------|-----------------|-----|-------------------------------------|----|-----------------|-------|-------|-----------------|-----|-------------------------------------|--------|
|                |                   |    |                        |     | School Children             |       | School Teachers |     | School Clerks, Servants and Hawkers |    | School Children |       |       | School Teachers |     | School Clerks, Servants and Hawkers |        |
|                | M.                | F. | M.                     | F.  | M.                          | F.    | M.              | F.  | M.                                  | F. | M.              | F.    |       | M.              | F.  | M.                                  | F.     |
| New Cases      | ..                | .. | 239                    | 228 | 358                         | 259   | 17              | 9   | 17                                  | 8  | 267             | 285   | 13    | 11              | 20  | 9                                   |        |
| Re-Visits      | 14                | 28 | 559                    | 528 | 2,444                       | 1,597 | 296             | 196 | 116                                 | 29 | 2,584           | 2,101 | 50    | 52              | 54  | 34                                  |        |
| Total          | 14                | 28 | 798                    | 756 | 2,802                       | 1,856 | 313             | 205 | 133                                 | 37 | 2,851           | 2,386 | 63    | 63              | 74  | 43                                  |        |
| Combined Total | 42                |    | 1,554                  |     | 4,658                       |       |                 |     | 5,237                               |    |                 |       | 126   |                 | 117 |                                     | 12,422 |

428. The investigation of cases from the Chinatown area with abnormal shadows suggestive of tuberculosis was carried out at S.A.T.A. and its co-operation in this matter is duly appreciated. The investigation of cases from the other areas was done by the Chest Physicians of Tan Tock Seng Hospital.

429. The Cardiac Clinic, Medical Unit I, General Hospital undertook the investigation of cases with abnormal cardiac shadows and the Chest Clinic, Medical Unit I, the cases of cystic lung disease and bronchiectasis.

430. A full report will be published when investigations are completed but preliminary results reveal that the incidence of active tuberculosis among those surveyed is about 3.5 per cent in the crowded city areas and about 1.5 per cent in the rural areas.

431. This was the first occasion that a Tuberculosis Case-Finding Programme was undertaken in Singapore. No provision had been made for extra staff with the result that some personnel had to be withdrawn from other sections whilst other officers had to perform extra duties in addition to their own. The success of the campaign was due to:—

- (i) the hard work and enthusiasm of the personnel of the Government Medical Department who participated in this project;
- (ii) the excellent standard set by the Australian Team;
- (iii) the assistance from many voluntary organisations and helpers;
- (iv) the strong support of the Government Information Services and the Press, both English and vernacular;
- (v) the good co-operation of the public;
- (vi) the high quality of the Watson-Odelca Mirror-Camera X-ray Units.

TABLE 81

DEATH RATE FROM TUBERCULOSIS

(Rates are the number of Deaths per 100,000 population)

| Year       | Population | Deaths (All Forms) | Death Rate (All Forms) | Deaths (Respiratory System) | Death Rate (Respiratory System) |
|------------|------------|--------------------|------------------------|-----------------------------|---------------------------------|
| 1921 .. .. | 417,859    | 1,842              | 440.81                 | 1,827                       | 437                             |
| 1931 .. .. | 562,866    | 1,431              | 254.23                 | 1,319                       | 236                             |
| 1947 .. .. | 927,849    | 1,635              | 176.2                  | 1,468                       | 158.2                           |
| 1948 .. .. | 969,713    | 1,682              | 173.5                  | 1,449                       | 149.4                           |
| 1949 .. .. | 1,013,517  | 1,560              | 153.9                  | 1,290                       | 127.3                           |
| 1950 .. .. | 1,059,354  | 1,477              | 139.4                  | 1,211                       | 114.3                           |
| 1951 .. .. | 1,107,320  | 1,299              | 117.3                  | 1,052                       | 95.0                            |
| 1952 .. .. | 1,157,518  | 1,206              | 104.2                  | 956                         | 82.6                            |
| 1953 .. .. | 1,210,056  | 1,006              | 83.1                   | 811                         | 67.0                            |
| 1954 .. .. | 1,265,045  | 964                | 76.2                   | 829                         | 65.5                            |
| 1955 .. .. | 1,322,607  | 989                | 74.8                   | 827                         | 62.5                            |
| 1956 .. .. | 1,382,857  | 784                | 56.7                   | 673                         | 48.7                            |
| 1957 .. .. | 1,445,930  | 751                | 51.94                  | 671                         | 46.4                            |
| 1958 .. .. | 1,514,900  | 919                | 60.66                  | 712                         | 47.0                            |

TAN TOCK SENG'S HOSPITAL

432. Tan Tock Seng's Hospital continued to function as the chief Government Tuberculosis Centre. The completion of two additional ward blocks constitutes the completion of the second phase of the medical plan for the extension of the Tuberculosis Service.

433. The Assistant Nurses Hostel which was provided for in the Medical Plan for the Hospital has been deferred; one of the two new ward blocks is being converted into an Assistant Nurses Hostel and Training School.

434. Two of the four new blocks at Woodbridge Hospital were taken over in November 1958, for the accommodation of chronic infectious ambulant cases of tuberculosis. These patients were carefully selected after a short stay at Tan Tock Seng's Hospital. At the end of the year there were 38 patients.

#### *Staff*

435. The staff of the hospital consisted of 1 Senior Chest Physician (Superscale, Grade E), 1 Chest Physician (Superscale, Grade G), 3 Senior Registrars, 16 Medical Officers (Timescale), 2 Matrons Grade II, 25 Sisters, 7 Hospital Nurses, 327 Assistant Nurses, 5 Almoners, 2 Radiographers, 1 Physiotherapist, 1 Occupational Therapist, 1 Pharmacist, 2 Chief Hospital Assistants, 4 Hospital Assistants (Special Grade B), 33 Hospital Assistants (Timescale), 2 Dispensing Assistants and 4 Laboratory Assistants. The Chronic Unit at Woodbridge Hospital had a Visiting Chest Physician, a part-time Medical Officer and 3 Hospital Assistants.

436. The Reverend Mother and seven Sisters of the Franciscan Missionary of the Divine Motherhood together with 53 Hospital Nurses comprised the nursing staff of the Mandalay Road Section of the Hospital.

437. The Hospital now has three units. Dr. (Miss) G. E. L. Cummins, M.B.B.CHIR. (U. Camb.), M.R.C.P. (London), Dr. Wong Hin Sun, L.M.S. (Singapore), M.R.C.P. (Edin.), and Dr. Yeoh Seang Aun, M.B.B.S. (Malaya), M.R.C.P. (Edin.), were in charge of the three units and were assisted by Dr. J. M. J. Supramaniam, M.B.B.S. (Malaya), M.R.C.P. (Edin.), F.R.F.P.S. (Glas.). Dr. H. F. Jackson, L.M.S. (Singapore) was the Acting Medical Superintendent.

438. Dr. R. J. Grove-White, M.D. (Dublin), M.R.C.P. (Edin.), Senior Chest Physician, retired on 1st April. He was associated with Tan Tock Seng's Hospital for over ten years and his retirement is a great loss to the Hospital.

#### *Treatment*

439. In-patient treatment is still essential for certain types of cases and is reckoned to be the best treatment. Infectious and acute toxic cases were given priority for admission.

440. Streptomycin, Para-amino-salicylate and Iso-nicotinic acid hydrazide, in some combination or other, are the three important drugs and treatment is now continued for a minimum of one year in most cases.

441. Cyclocerine: Report on the therapeutic trial on Cyclocerine done in the hospital was published in the *Tubercle* of August 1958. The results were encouraging in only a few cases, but the toxic manifestations were marked.

442. Kaolin Pneumoconiosis: A series of ten cases of Kaolin Pneumoconiosis were found and investigated.

443. Professor F. R. G. Heaf, Professor of Tuberculosis, Welsh National School of Medicine, Cardiff, during his short visit to Tan Tock Seng's Hospital discussed various problems regarding tuberculosis with the doctors. He emphasised on the treatment of chronic pulmonary tuberculosis with persistent cavitation and positive sputum and stressed that where the patients have failed to improve under the usual chemotherapy regime with or without collapse therapy, they should be given INAH alone in large doses. This renders the patient less infectious and the casual organism less virulent.

444. Following the report of the Edinburgh trials under Professor Crofton of the good results obtained following the use of all three anti-tuberculosis drugs (Streptomycin, INAH and PAS) on far advanced pulmonary tuberculosis cases, twenty such cases were put on this regime for one year. It is still too early to evaluate the results.

445. Cases selected for major thoracic surgery had the pre-operative preparation and post-operative follow up done at Tan Tock Seng's Hospital while the operation was done at the General Surgical Units at the General Hospital. 516 minor operations were carried out at Tan Tock Seng's Hospital, of these 279 were bronchoscopic, 1 laryngoscopic examination and 124 plaster of paris applications. No phrenic crushes or re-crushes were carried out.

446. Table 82 gives a return of tuberculosis cases admitted to Government hospitals in Singapore. Admission to hospital for in-patient treatment is made according to various priorities on medical and social grounds.

TABLE 82

TUBERCULOSIS CASES ADMITTED TO GOVERNMENT HOSPITALS

|   | 1954  | 1955  | 1956  | 1957  | 1958  |
|---|-------|-------|-------|-------|-------|
| <i>Tan Tock Seng's Hospital:</i>          |       |       |       |       |       |
| Pulmonary .. ..                           | 2,137 | 2,104 | 2,061 | 2,442 | 3,064 |
| Bones and Joints .. ..                    | 35    | 59    | 79    | 133   | 171   |
| Other forms .. ..                         | 11    | 12    | 22    | 27    | 41    |
| <i>General Hospital:</i>                  |       |       |       |       |       |
| Pulmonary .. ..                           | 686   | 776   | 944   | 942   | 785   |
| Bones and Joints .. ..                    | 240   | 287   | 146   | 302   | 338   |
| Other forms .. ..                         | 297   | 339   | 415   | 122   | 242   |
| <i>St. Andrew's Orthopaedic Hospital:</i> |       |       |       |       |       |
| Bones and Joints .. ..                    | 170   | 247   | 104   | 235   | 245   |
| Other forms .. ..                         | ..    | ..    | 105   | ..    | ..    |
| Total .. ..                               | 3,576 | 3,824 | 3,876 | 4,203 | 4,886 |

TABLE 83

COLLAPSE THERAPY ON IN-PATIENTS AT TAN TOCK SENG'S HOSPITAL

|  | 1954  | 1955  | 1956  | 1957  | 1958 |
|--|-------|-------|-------|-------|------|
| <i>Artificial Pneumothorax:</i><br>(in-patients) |       |       |       |       |      |
| Inductions done .. ..                            | 11    | 20    | 1     | ..    | 1    |
| Refills done .. ..                               | 174   | 136   | 5     | ..    | ..   |
| <i>Pneumoperitoneum:</i>                         |       |       |       |       |      |
| Inductions done .. ..                            | 205   | 148   | 106   | 74    | 66   |
| Refills done .. ..                               | 6,124 | 5,339 | 2,880 | 1,160 | 769  |

*Training*

447. Nineteen student nurses passed the examination for the Tuberculosis Nursing Certificate. 38 Assistant Nurses passed the final examination during the year. 165 nurses were in training at the end of the year.

448. Two trained Assistant Nurses who were awarded the N.A.P.T. Scholarship and spent six months in the United Kingdom from March to September 1958.

TABLE 84

## RETURN OF WORK, ROTARY TUBERCULOSIS CLINIC

|   | 1956    | 1957    | 1958    |
|---|---------|---------|---------|
| New cases of Tuberculosis .. ..           | 1,587   | 2,405   | 2,790   |
| Repeat visits of cases of Tuberculosis .. | 173,978 | 269,820 | 364,272 |
| Specialist Consultations:                 |         |         |         |
| (a) New cases .. ..                       | 2,371   | 2,796   | 3,434   |
| (b) Old cases .. ..                       | 35,500  | 36,751  | 44,474  |
| X'ray examinations .. ..                  | 60,170  | 75,973  | 82,682  |
| Fluoroscopic screenings .. ..             | 11,444  | 4,024   | 1,743   |
| Laboratory examinations .. ..             | 112,731 | 111,420 | 110,447 |
| A.P. Inductions .. ..                     | 35      | 6       | ..      |
| A.P. Refills .. ..                        | 731     | 16      | ..      |
| P.P. Inductions .. ..                     | 860     | 55      | 24      |
| P.P. Refills .. ..                        | 70,142  | 20,826  | 8,586   |
| Home visits to patients .. ..             | 8,887   | 7,609   | 3,037   |
| Home visits to contacts .. ..             | 8,837   | 9,239   | 6,179   |
| Tuberculin Tests .. ..                    | 4,184   | 3,838   | 2,693   |
| Contacts' attendance at Clinic .. ..      | 9,414   | 14,375  | 18,802  |

## ALMONER'S DIVISION

449. This has been an interesting year and one in which trends in the department have developed along firmer lines as the staff position has become more stable. Consequently, the re-organisation which has been possible during the year has meant that the Almoner's caseloads are becoming more manageable and there has been greater opportunity for effective work within the department. Considerable time has been spent during the year in examining work methods and in promoting a more effective liaison with other departments in the hospital, with Almoner Departments in other hospitals, and with various community service organisations with whom the department is in close contact, e.g. the Department of Social Welfare.

450. During the year arrangements were made for the supervised fostering of children, especially babies born into infectious homes.

451. For some years now the hospital has been operating a scheme, known as 'The Six Months' Scheme', in which 20 of the male hospital servants and one female hospital servant, are patients who have been receiving

treatment at the hospital and who are taken on to the hospital staff for a period of six months as a rehabilitation measure when they become fit to work. The object of this scheme is that it provides temporary employment, for the patient who has no immediate avenue of work open to him. It also helps the individual to gain confidence on his own ability to stand up to a certain amount of work. As such it represents for him a stepping stone from Social Welfare allowance to more permanent employment in the community.

452. Student training has again formed an important part of the department's work this year and with a more experienced Almoner staff, it has been possible to provide training placements for five students from the Department of Social Studies, University of Malaya, during 1958.

#### PHYSIOTHERAPY DIVISION

453. In April 1958 there were two physiotherapists but in July 1958 because of acute staff shortage at General Hospital one was transferred there. This necessitated in cutting down of patients' treatments from individual treatments to large group exercises.

TABLE 85

#### SUMMARY OF WORK DONE BY THE PHYSIOTHERAPY DIVISION

| <i>Year</i> |     | <i>Treatments</i> | <i>Patients treated</i> |
|-------------|-----|-------------------|-------------------------|
| 1954        | ... | 30,318            | 1,647                   |
| 1955        | ... | 26,629            | 1,578                   |
| 1956        | ... | 22,118            | 1,688                   |
| 1957        | ... | 18,357            | 1,523                   |
| 1958        | ... | 25,032            | 1,965                   |

#### OCCUPATIONAL THERAPY

454. As in previous years, the accent in this section has been on the rehabilitation of cured and arrested tubercular individuals.

455. In addition to tailoring and dressmaking, training was given in basket making and weaving. It is hoped that on completion of training in these subjects, trainees will be able to support themselves by fulfilling orders taken on their behalf by the Occupational Therapist.

#### DIVERSIONAL THERAPY UNIT

456. 29 Wards are covered by 50 voluntary workers. Many new helpers are needed to cover new wards as they open up.

457. The number of articles produced during the year is the record number of 10,062. The articles comprise:—felt toys, plastic toys, flowers, sewing and embroidery, all kinds of knitted garments from babies booties to large sweaters of elaborate design. These knitted articles will stand comparison anywhere in the world. It is hoped that the patients are finding this work remunerative when they are discharged from hospital.

#### RED CROSS LIBRARY

458. There is greatly increased activity and expansion of library work, as a result of which four new trolleys have had to be purchased.

459. Eleven voluntary workers kindly gave their services to run the library.

## HOSPITAL SCHOOL

460. The lady teacher, who was in charge of classes for child patients since May 1956, left the service early in the year.

461. The child patients are now under the care of a voluntary worker.

## ROYAL SINGAPORE CHEST CLINIC

462. The year 1958 saw the completion of another year of successful work for the Singapore Anti-Tuberculosis Association in the campaign against tuberculosis. There was a steady increase in the work of the various departments, making the year the busiest year since the inception of the Association a decade ago.

463. *Dr. G. H. Garlick.*—The Association suffered a very grievous loss in the sudden death of Dr. G. H. Garlick, who had been its Medical Director ever since the Association came into existence in 1948. It is due to the drive, the foresight and the vision of Dr. Garlick that the Singapore Anti-Tuberculosis Association has become one of the most progressive anti-tuberculosis organisations in South-East Asia.

464. *Diagnostic Unit.*—Case-finding is one of the most important procedures. The Diagnostic service has continued to fulfil effectively just this function. X-ray examinations done was 110,041, 11,000 more than in 1957. Of these, 108,118 were chest X-rays (including 1,242 tomograms) and 1,923 were X-rays of bones, sinuses, internal organs, etc.

465. In April 1958, the Clinic undertook to provide clinical examinations in addition to chest X-rays for school teachers requiring certificates of fitness for employment in Government Aided schools. The same service was extended in July 1958, at the request of the Seamen's Registry Board, to seamen applying for registration with that Board.

466. By the end of 1958 2,090 school teachers and 3,618 seamen had had such examinations.

467. *Treatment Unit.*—Monthly figures over the year 1958 showed a gradual increase in the volume of work during the first nine months, and a steep rise from September to the end of the year, when 919 new cases of tuberculosis were referred from the Government Mass X-ray Survey in the Chinatown area of the city.

468. The total number of new cases admitted during the year was 2,412, compared with 1,480 in 1957. An analysis of these 2,412 new cases serves to bring out the followings:—

|                            |   |
|----------------------------|---|
| <i>Source</i>              | 34 per cent came to the Clinic on their own initiative; 10 per cent were found by group and pre-insurance examination; 8 per cent were sent by general practitioners; 12 per cent were through other referrals and the largest group, consisting of 36 per cent of the cases admitted, came from the recently conducted Government Mass X-Ray Survey. |
| <i>Sex</i>                 | Males 79 per cent, Females 21 per cent.   |
| <i>Racial Distribution</i> | Chinese 89 per cent, others 11 per cent.  |
| <i>Residence</i>           | 58 per cent came from postal districts 1, 2 and 3—the areas of the City adjacent to the Clinic.   |
| <i>Activity of disease</i> | 87 per cent had active disease; 13 per cent were classified as doubtfully active or quiescent.  |
| <i>Classification</i>      | Minimal 33 per cent; Moderately advanced 40 per cent; Far advanced 15.5 per cent; Unclassified 11.5 per cent.   |

469. There were 225,409 attendances of patients compared with 221,855 in 1957. Of these, 30,029 (13 per cent) were attendances at the Mobile Treatment Unit at its various fixed stopping places around the City and outlying areas of the island, and 5,881 were domiciliary visits paid by the Health Sister to ill patients in their own homes. The number of attendances at the evening sessions in the Clinic, held for the benefit of office workers, rose from 9,309 in 1957 to 10,032.

470. *Surgery.*—During the year, 151 cases were accepted for operation at Government hospitals.

471. *Welfare Unit.*—The Almoner's Department had another busy year of consultation and advice to patients, investigation of contacts, follow-up of treatment defaulters, the arrangement of home-visiting and attendances at the Mobile Treatment Unit, and in addition the large volume of work required for the supervision of 1,442 Social Welfare Allowance cases.

472. Public assistance from funds set aside by the Social Welfare Department for the treatment of tuberculous patients who are eligible for public assistance have enabled the Clinic to take on all patients needing it.

473. *Rehabilitation.*—More lives are now being saved with effective treatment than ever before. The mere saving of lives, however, is not enough; the ex-tuberculous patient must be restored to a productive place in the community. The rehabilitation of the tuberculous patient has therefore continued to be an important function.

474. There has been steady increase in the number of patients receiving training in men's and ladies tailoring, weaving, printing, book-binding and boxmaking. The goods produced in our Rehabilitation Workshops have been well received by the general public.

475. At the South Winds Lee Rehabilitation Settlement about 50 ex-patients were in residence throughout the year, most of them for six months or more. They have been fully engaged in one of the occupations of the Settlement.

476. *Preventive Work.*—Propaganda and health education are vital to prevention of tuberculosis. The more the public knows about tuberculosis the greater are our chances of controlling and eventually eradicating the disease. Regular instruction of the patient and the public about the nature of tuberculosis and the means to fight it has continued both within and without the clinic. Films and talks to patients, lecture visits of school children, students and nurses, have spread direct information.

477. *Tuberculosis Insurance.*—In 1958 4,881 persons joined the Insurance Scheme and it is significant that of the applicants for admission to the scheme during the year 104 were found to have active tuberculosis. Of the 18,000 insured persons 75 developed active tuberculosis while under regular six-monthly X-ray review. A total of 141 commercial establishments have now brought their staff under the protection of the scheme, compared with 114 at the end of 1957.

478. *International Union against Tuberculosis—Eastern Regional Committee.*—The second meeting of the Eastern Regional Committee of the International Union against Tuberculosis was held in the Clinic in October. This was an important occasion which brought together representatives of Anti-Tuberculosis organisations from a number of countries in this region. Besides the valuable contacts and exchange of views afforded, the meeting confirmed the constitution of the Committee and outlined its work. Dr. Sen-Gupta was elected to serve on the Executive Committee of the Eastern Regional body.

TABLE 86

## S.A.T.A. CLINIC STATISTICS FOR THE YEAR 1958

| <i>Diagnostic Unit</i>   | 1957    | 1958    |
|--|---------|---------|
| Total X-rays (including 26,161 Treatment Unit re-x-rays)                 | 99,214  | 110,041 |
| Daily average  | 366     | 404     |
| Laboratory tests:  |         |         |
| Blood sedimentation  | 37,059  | 39,620  |
| Blood counts   | 8,038   | 10,085  |
| Mantoux tests  | 5,506   | 4,632   |
| B.C.G.   | 1,271   | 610     |
| <i>Treatment Unit (Total figures)</i>                                    |         |         |
| Total number of attendances  | 221,855 | 225,409 |
| Daily average attendances  | 818     | 830     |
| Total number of services rendered  | 468,447 | 471,775 |
| Daily average services   | 1,728   | 1,737   |
| Consultations with Physicians:   |         |         |
| New cases (T.B.)   | 2,412   |         |
| Old cases and non-T.B.   | 31,105  |         |
|  | 32,129  | 33,517  |
| Laboratory tests:  |         |         |
| Sputa—direct smear   | 16,114  |         |
| culture  | 2,324   |         |
|  | 18,438  |         |
| Laryngeal swab cultures  | 1,711   |         |
| Other tests  | 12,868  | 29,019  |
| Electrocardiographs  | 386     | 589     |
| <i>Home Visits</i>   |         |         |
| Number of treatment visits by Health Sister                              | 5,703   | 5,881   |
| Average number of patients receiving home treatment throughout the year  | 80      | 86      |
| Number of visits for investigation of income, follow-up defaulters, etc. | 2,086   | 2,577   |
| <i>Mobile Treatment Unit</i>   |         |         |
| Number of attendances  | 29,654  | 30,029  |
| Number of patients served by Unit at end of year                         | 435     | 632     |
| <i>Milk Bar</i>  |         |         |
| Free meals served  | 44,554  | 46,832  |
| Daily average  | 165     | 172     |

## CHAPTER SIXTEEN

### SOCIAL HYGIENE

479. Singapore is not only an International Port, but a great Military and Industrial Centre and a large island City of 1,500,000 inhabitants. There is a large sector of mobile population attracted to seek employment. The number of transients and persons afloat each day in the port of Singapore is quite considerable. The facilities provided for the control of venereal diseases include:—

- (i) a 55 bedded hospital with male and female out-patient clinics;
- (ii) a Seamen's Clinic in the dock area of the port of Singapore;
- (iii) two mobile units for diagnosis, treatment and case-finding in rural areas;
- (iv) an Epidemiological Unit for case-finding, contact and follow-up of patients; and
- (v) a departmental Serological Laboratory for quick diagnosis.

#### *Staff*

480. The staff consists of 3 Medical Officers, 2 part-time Medical Practitioners, 1 Sister, 11 Nurses, 21 Hospital Assistants, 1 Senior Supervisor and 11 field workers. Dr. L. M. Ram, M.B., B.S., M.R.C.P., D.P.H., was the Senior Medical Officer, Social Hygiene.

#### INCIDENCE OF VENEREAL DISEASES

481. The incidence of venereal diseases in Singapore has always been judged from the Clinic admissions of new cases to the institutions of this Division, summarised for the last five years in Table 87.

TABLE 87

#### INCIDENCE OF VENEREAL INFECTIONS, 1954-58

| <i>Year</i> |     | <i>Syphilitic Infections</i> | <i>Other V.D. Infections</i> | <i>Total</i> |
|-------------|-----|------------------------------|------------------------------|--------------|
| 1954        | ... | 1,896                        | 3,895                        | 5,791        |
| 1955        | ... | 1,647                        | 3,441                        | 5,088        |
| 1956        | ... | 1,226                        | 3,557                        | 4,803        |
| 1957        | ... | 1,276                        | 4,176                        | 5,452        |
| 1958        | ... | 1,035                        | 4,198                        | 5,233        |

482. The clinic admission rate for 1958 was only 3.5 per thousand of population as compared to 10 per thousand for 1949. It would also appear that about 5,000 V.D. infections could be expected yearly in Singapore.

#### *Syphilis*

483. Except for a slight increase in 1957, syphilitic infections have progressively been diminishing in number for the past several years as shown in Table 88.

TABLE 88  
BREAKDOWN OF SYPHILITIC INFECTIONS, 1954-58

| Year       | Primary Syphilis | Secondary Syphilis | Early Latent Syphilis | Late Latent Syphilis | Infantile Syphilis | Total |
|------------|------------------|--------------------|-----------------------|----------------------|--------------------|-------|
| 1954 .. .. | 104              | 39                 | 418                   | 943                  | 25                 | 1,529 |
| 1955 .. .. | 88               | 28                 | 209                   | 1,266                | 14                 | 1,605 |
| 1956 .. .. | 128              | 41                 | 182                   | 650                  | 10                 | 1,011 |
| 1957 .. .. | 172              | 33                 | 249                   | 577                  | 17                 | 1,048 |
| 1958 .. .. | 125              | 49                 | 168                   | 528                  | 8                  | 878   |

484. In addition there were 25 cases of congenital syphilis above the age of 2 years and 132 cases of late symptomatic syphilis. A breakdown of the latter by nationality and sex is given in Table 89.

TABLE 89  
TERTIARY SYPHILIS, 1958

| Nationality    | Gummata Skin | Bones and Joints | Cardio-vascular | G.P.I. | Tabes | Other Neuro Syphilis |
|----------------|--------------|------------------|-----------------|--------|-------|----------------------|
| <i>Male:</i>   |              |                  |                 |        |       |                      |
| Chinese ..     | 10           | 16               | 10              | 14     | 2     | 40                   |
| Indian ..      | 2            | 4                | 4               | 1      | ..    | 3                    |
| Malaysians ..  | 1            | 4                | 2               | ..     | ..    | 5                    |
| Total ..       | 13           | 24               | 16              | 15     | 2     | 48=118               |
| <i>Female:</i> |              |                  |                 |        |       |                      |
| Chinese ..     | 2            | ..               | 3               | 1      | 1     | 4                    |
| Indian ..      | ..           | ..               | ..              | ..     | ..    | ..                   |
| Malaysians ..  | ..           | ..               | ..              | ..     | ..    | 3                    |
| Total ..       | 2            | ..               | 3               | 1      | 1     | 7= 14                |
| Grand Total .. | 15           | 24               | 19              | 16     | 3     | 55=132               |

485. Ratio of various lesions during the last five years has been as follows:—

TABLE 90

## RATIO OF VARIOUS SYPHILITIC LESIONS, 1954-58

| Lesions                  | 1954 | 1955 | 1956 | 1957 | 1958 |
|--------------------------|------|------|------|------|------|
| Neuro Syphilis .. .. .   | 35.9 | 40.2 | 40.0 | 43.6 | 56.0 |
| Cardio-vascular .. .. .  | 13.3 | 22.0 | 14.2 | 11.0 | 14.4 |
| Cautaneous .. .. .       | 22.3 | 18.9 | 18.7 | 22.7 | 11.4 |
| Bones and Joints .. .. . | 28.5 | 18.9 | 27.1 | 22.7 | 18.2 |

486. Neuro syphilis has always been the predominating lesion of late symptomatic syphilis in the tropical island.

*Gonorrhœa and Non-specific Urethrites*

487. While both incidence and prevalence of syphilis has considerably declined during the last several years, the incidence of gonorrhœa and allied conditions has been steadily increasing in spite of the simplicity of treatment and the inestimable number of cases being treated by general practitioners. Clinic admissions for the last five years are shown in Table 91.

TABLE 91

## INCIDENCE OF GONORRHŒA AND NON-SPECIFIC URETHRITIS, 1954-58

| Year         | Gonor-<br>rhœa | Gonor-<br>rhœa<br>Oph-<br>thalmia | Gonor-<br>rhœa<br>Compli-<br>cations | Gonor-<br>rhœa<br>and Non-<br>Urethritis | Non-<br>specific<br>Urethritis | Total |
|--------------|----------------|-----------------------------------|--------------------------------------|--|--------------------------------|-------|
| 1954 .. .. . | 2,454          | 21                                | 14                                   | 218                                      | 424                            | 3,131 |
| 1955 .. .. . | 2,339          | 31                                | 18                                   | 241                                      | 696                            | 3,325 |
| 1956 .. .. . | 2,584          | 54                                | 11                                   | 240                                      | 529                            | 3,418 |
| 1957 .. .. . | 2,856          | 33                                | 10                                   | 177                                      | 522                            | 3,598 |
| 1958 .. .. . | 2,808          | 37                                | 6                                    | 253                                      | 804                            | 3,908 |

*Other Venereal Infections*

488. There is still an irregular rise and fall in the incidence of soft sore. The incidence of lymphogranuloma inguinales has been steadily declining during the past several years and no case of granuloma inguinales has been reported for the last 11 years.

TABLE 92  
INCIDENCE OF OTHER VENEREAL INFECTIONS, 1954-58

| Year |       | Lympho-<br>granuloma<br>Venereum | Soft<br>Sore | Mixed<br>Infections | Granuloma<br>Inguinale |
|------|-------|----------------------------------|--------------|---------------------|------------------------|
| 1954 | .. .. | 103                              | 1,083        | 270                 | ..                     |
| 1955 | .. .. | 70                               | 822          | 161                 | ..                     |
| 1956 | .. .. | 40                               | 647          | 141                 | ..                     |
| 1957 | .. .. | 33                               | 1,056        | 188                 | ..                     |
| 1958 | .. .. | 13                               | 1,228        | 106                 | ..                     |

## ROUTINE WORK

*Attendances*

489. The average daily attendances totalled 665 based on 297 working days of the year. Table 93 give comparative figures for the last five years.

TABLE 93  
PATIENT ATTENDANCES AT SOCIAL HYGIENE DIVISION, 1954-58

| Year | In-patients | OUT-PATIENTS |         |        | Total<br>Attendances |         |
|------|-------------|--------------|---------|--------|----------------------|---------|
|      |             | Males        | Females | Total  |                      |         |
| 1954 | .. ..       | 2,332        | 19,925  | 9,456  | 29,381               | 162,072 |
| 1955 | .. ..       | 1,379        | 15,803  | 9,943  | 25,746               | 184,033 |
| 1956 | .. ..       | 1,353        | 14,596  | 9,955  | 24,551               | 185,452 |
| 1957 | .. ..       | 1,335        | 16,713  | 11,502 | 28,215               | 190,549 |
| 1958 | .. ..       | 1,125        | 19,864  | 14,997 | 34,861               | 197,333 |

*Social Hygiene Travelling Dispensaries*

490. There are two mobile units in operation since 1957. This facility introduced first in 1950, now covers all the main Maternity and Child Welfare Centres in the rural area, some out-patient dispensaries and clubs. The number of new cases investigated during the year was 12,330 of whom 11,448 were ante-natal cases. Tables 94 and 95 summarise the work of the units.

TABLE 94

CASES TREATED BY SOCIAL HYGIENE TRAVELLING DISPENSARY, 1958

| Clinic                  | Male  | Female | Ante-natals | V.D. Cases | Investigation Cases | Total  |
|-------------------------|-------|--------|-------------|------------|---------------------|--------|
| <i>Central Rural:</i>   |       |        |             |            |                     |        |
| Yio Chu Kang .. .. .    | } 260 | 3,356  | 3,309       | 41         | 3,575               | 3,616  |
| Upper Serangoon .. .. . |       |        |             |            |                     |        |
| Seletar .. .. .         |       |        |             |            |                     |        |
| Paya Lebar .. .. .      |       |        |             |            |                     |        |
| <i>Rural West:</i>      |       |        |             |            |                     |        |
| Bukit Timah .. .. .     | } 442 | 4,359  | 4,281       | 47         | 4,754               | 4,801  |
| Pasir Panjang .. .. .   |       |        |             |            |                     |        |
| Bukit Panjang .. .. .   |       |        |             |            |                     |        |
| Holland Road .. .. .    |       |        |             |            |                     |        |
| Jurong .. .. .          |       |        |             |            |                     |        |
| <i>Rural East:</i>      |       |        |             |            |                     |        |
| Kampong Batak .. .. .   | } ..  | 3,913  | 3,858       | 37         | 3,876               | 3,913  |
| Changi .. .. .          |       |        |             |            |                     |        |
| Ulu Bedok .. .. .       |       |        |             |            |                     |        |
| Siglap .. .. .          |       |        |             |            |                     |        |
| Total ..                | 702   | 11,628 | 11,448      | 125        | 12,205              | 12,330 |

TABLE 95

ANTE-NATAL CASES EXAMINED, 1958

| Nationality  | Ante-natals | Primipara | Primipara Positive | Multipara | Multipara Positive |
|--------------|-------------|-----------|--------------------|-----------|--------------------|
| Chinese ..   | 7,614       | 1,023     | 12                 | 6,591     | 32                 |
| Malaysian .. | 2,810       | 407       | 8                  | 2,403     | 30                 |
| Indian ..    | 948         | 161       | 2                  | 787       | 1                  |
| Others ..    | 76          | 15        | ..                 | 61        | ..                 |
| Total ..     | 11,448      | 1,606     | 22                 | 9,842     | 63                 |

491. For the first time in the history of Singapore the S.T.S. positivity rate of expectant mothers has fallen below 1 per cent (0.7 per cent).

*Epidemiological Section*

492. The staff of this section consists of a Senior Supervisor and 12 field workers, an interpreter and a clerk. The activities of this section are chiefly directed towards:—

- (i) follow-up of treated cases to detect relapse or re-infection;
- (ii) contact of defaulters;
- (iii) screening of marital partners of the patients and their children;
- (iv) contact of promiscuous women for continuous treatment and
- (v) health education.

493. 14,137 home visits were made and 3,705 letters were written to various individuals during the year. There were 4,865 V.D. families under surveillance of whom 585 came under treatment for the first time in 1958. The successful contact index was about 40 per cent. 106 girls below the age of 18 were referred by the Social Welfare Department under the Women and Girls Protection Act of 1930 of whom 13 were found to be infected—on with early syphilis, eight with gonorrhœa and four with syphilis and gonorrhœa.

*Antibiotic Prophylaxis*

494. As a promiscuous woman has several exposures a day, it is difficult for her to escape infection. To help her for prevention and cure of the disease, she is advised to report weekly for examination and health education and treatment with P.A.M. (Penicillin Ammonium Monostearate) or Bicillin given monthly, fortnightly or weekly as the case might be. There were 129 new cases admitted during the year in this category of whom 80 were free from infection. Since the inauguration of this service in 1950, 1,333 women have been treated of whom only 405 attended during 1958 receiving an average of seven injections per person.

*Dermatological Clinic*

495. 22 per cent of all new cases admitted to this clinic in 1958 were suffering from skin ailments. Since 1950, diagnosis and treatment of dermatological complaints has been a regular feature of Social Hygiene Clinics and an air-conditioned room has been set apart for treatment of acute cases. Table 96 summarises the routine work done in the Social Hygiene Division for the last five years.

TABLE 96

## SUMMARY OF WORK IN SOCIAL HYGIENE DIVISION, 1954-58

|  | 1954      | 1955      | 1956      | 1957      | 1958      |
|--|-----------|-----------|-----------|-----------|-----------|
| Blood specimens for Kahn Test                    | 28,892    | 29,452    | 29,315    | 33,400    | 33,983    |
| Cerebro Spinal Fluid for Kahn Test               | 461       | 406       | 596       | 242       | 198       |
| Specimen for Dark Ground Microscopic Examination | 4,267     | 4,091     | 4,223     | 4,114     | 3,003     |
| Smears for Examination for Gonococci             | 20,861    | 23,372    | 26,641    | 26,482    | 31,356    |
| Swabs for Culture for Gonococci                  | 356       | 157       | 110       | 115       | 134       |
| Aqua Penicillin G. used                          | 7,753 mu  | 4,035 mu  | 4,020 mu  | 3,540 mu  | 2,426 mu  |
| Procain Penicillin P.A.M.                        | 34,398 .. | 31,224 .. | 34,437 .. | 33,485 .. | 26,808 .. |
| Penidure (Bicillin)                              | 382 ..    | 1,392 ..  | 2,712 ..  | 2,175 ..  | 740 ..    |
| Total number of Injections administered          | 179,423   | 182,121   | 189,209   | 183,523   | 187,662   |

*Investigation Cases*

496. Due largely to health education, a great number of patients reported to the clinic for exclusion of venereal disease for a clean bill of health as well as to seek relief for alleviation of allied conditions. A breakdown of such cases for the last five years is given in Table 97.

TABLE 97

GENERAL MEDICAL WORK, SOCIAL HYGIENE, 1954-58

|   | 1954   | 1955   | 1956   | 1957   | 1958   |
|---|--------|--------|--------|--------|--------|
| Apprehensive group including ante-natal and contact cases   | 10,391 | 10,982 | 11,265 | 12,552 | 14,538 |
| Dermatological complaints ..  | 5,412  | 5,587  | 4,711  | 5,538  | 7,613  |
| Arthritis and Arthralgia ..   | 419    | 460    | 572    | 620    | 942    |
| Non-gonococcal Urethritis, Cervicitis, Trichomonas, Infestation, Dysuria, etc. ..   | 942    | 985    | 869    | 983    | 1,509  |
| Other genital infections, Balanitis, Warts, Paraphimosis, Traumatic, Ulcers, Hydroceles, Non-specific Epididymitis and sexual complaints .. | 372    | 480    | 692    | 712    | 922    |
| Yaws .. .. .  | 65     | 53     | 30     | 9      | 15     |
| Leprosy .. .. .   | 24     | 26     | 16     | 19     | 27     |
| Non-venereal Iritis, Conjunctivitis .. .. .   | 96     | 108    | 115    | 136    | 299    |
| Miscellaneous .. .. .   | 483    | 563    | 1,478  | 2,197  | 3,763  |
| Total ..  | 18,190 | 19,244 | 19,748 | 22,760 | 29,628 |

*Seamen*

497. Under Brussel's International Agreement of 1924, seamen of all nationalities are afforded all the facilities for free diagnosis and treatment both in Dock Area Clinic and in the Middle Road Hospital. There are about 25,000 local people employed as seamen. The number treated during the last five years has been as follows:—

|      |     |     |       |
|------|-----|-----|-------|
| 1954 | ... | ... | 907   |
| 1955 | ... | ... | 1,019 |
| 1956 | ... | ... | 1,072 |
| 1957 | ... | ... | 995   |
| 1958 | ... | ... | 1,054 |

498. Table 98 gives the break down by nationality and disease of seamen treated in 1958:—

TABLE 98

## SEAMEN TREATED AT SOCIAL HYGIENE DIVISION, 1958

| —               | Primary  | Secondary | Tertiary | Period not indicated | Gonorrhœa | Soft Sore | Investigation Cases | Total        |
|-----------------|----------|-----------|----------|----------------------|-----------|-----------|---------------------|--------------|
| Chinese ..      | 2        | 3         | 4        | 8                    | 23        | 9         | 164                 | 213          |
| Indian ..       | 2        | ..        | 1        | 1                    | 5         | 2         | 15                  | 26           |
| Malaysian ..    | ..       | ..        | ..       | 6                    | 10        | 1         | 38                  | 55           |
| European ..     | ..       | ..        | ..       | ..                   | 50        | 26        | 669                 | 745          |
| Others ..       | ..       | 1         | ..       | 1                    | ..        | ..        | 13                  | 15           |
| <b>Total ..</b> | <b>4</b> | <b>4</b>  | <b>5</b> | <b>16</b>            | <b>88</b> | <b>38</b> | <b>899</b>          | <b>1,054</b> |

499. Table 98 summarises the various types of venereal diseases treated in 1958 and the number of patients by nationality.

#### *Teaching and Health Education*

One of the primary functions of the Social Hygiene Division is the training of medical and para medical personnel. Medical students, doctors (studying for the Diploma in Public Health), nurses, midwives, almoners, hospital assistants and trainees for Social Studies receive regular training—practical and theoretical in the institutions of the Division. The field workers of the epidemiological section educate patients and the public at interviews and follow-up and hand over pamphlets in English, Chinese, Tamil and Malay to the patients and members of the public who are literate in any of these languages.

## CHAPTER SEVENTEEN

### MATERNITY AND GYNÆCOLOGY

#### KANDANG KERBAU HOSPITAL

501. The Kandang Kerbau Hospital is the main Government Institution in the Colony which deals with maternity and gynæcology. This hospital is essentially a free hospital except for a small paying section, is run on a two-unit system. The University Unit is under Professor B. H. Sheares, M.D., M.S., F.A.C.S., F.R.C.O.G., Professor of Obstetrics and Gynæcology, University of Malaya, and the Government Unit is under Dr. A. C. Sinha, L.M.S., M.M.S.A., M.R.C.O.G. Dr. A. Arulanandam, L.M.S. (Singapore), the Medical Superintendent, was responsible for the administration of the hospital.

502. There was no change in the basic beds in the hospital; of 316 beds 40 are for gynæcological patients and the remainder for maternity cases. In addition, the usual ante-natal, post-natal and gynæcological clinics as well as a general out-patient clinic for women and children are available. Alterations to Block E started during the year will be completed in mid 1959 and will increase the bed-strength of the hospital to 450.

503. As the teaching hospital of the University 154 medical students attended the hospital during the year. Forty-four nurses and 40 pupil midwives received training in midwifery during the year; 35 nurses and 36 pupil midwives obtained the certificates issued by the Midwives Board.

#### *Development Programme*

504. Besides the remodelling of Block E, work on the reconstruction of the Central kitchen, boiler house and bulk stores has commenced and should be ready for occupation by the end of 1959.

TABLE 99

#### DELIVERIES IN KANDANG KERBAU MATERNITY HOSPITAL, SINGAPORE

| <i>Year</i> | <i>Hospital Deliveries</i> | <i>Hospital Domiciliary Service</i> | <i>Total</i> |
|-------------|----------------------------|-------------------------------------|--------------|
| 1954        | 20,301                     | —                                   | 20,301       |
| 1955        | 22,813                     | —                                   | 22,813       |
| 1956        | 24,940                     | 938                                 | 25,878       |
| 1957        | 27,765                     | 1,515                               | 29,280       |
| 1958        | 30,146                     | 1,578                               | 31,724       |

#### *Domiciliary Delivery Service*

505. The Domiciliary Delivery Service which was established as a teaching unit in 1956 has entered its third year in 1958. During 1958 it continued to give the same services as in the previous years.

506. Medical students, trained nurses and pupil midwives continued to gain experience in the Domiciliary field. The trained nurses and pupil midwives spent eight consecutive weeks in extern practice. Medical students are rostered in turn to gain this experience as part of their training in obstetrics. In all cases students are accompanied by experienced Staff Midwives and the Service is supervised by two Staff Nurses and a Sister.

507. The training comprised of selection of suitable patients for home delivery, ante-natal care of patients in their homes, attendance at delivery and follow up during the lying-in period. Medical students received an average of two cases while trained nurses and pupil midwives students received a minimum of 15 cases each.

508. During the year 96 medical students, 46 trained nurses and 42 pupil midwives gained this experience.

509. Women who attended the ante-natal clinic are interviewed by a Staff Midwife on their first visit and the service offered is explained to them. The patients are at liberty to choose to have their babies born either at hospital or in their own homes. Hospital delivery is the choice of a vast majority, since homes are overcrowded and also because of existing beliefs which prevent the birth of the baby at home. Relatives and friends are a potent force in this regard and they have considerable influence over the mother in her choice of whether delivery should be at home or in hospital.

510. Out of 6,179 women interviewed in the ante-natal clinics only 1,854 cases were booked for home delivery.

511. In spite of the apparent lack of response, the number of women attended at delivery at the home was 1,609 of which 31 cases were re-admitted to hospital for obvious maternal or foetal causes. This gradual increase in number indicates that the service is gaining favour steadily.

512. Including mothers and babies 487 cases were referred to doctor and treatment carried out at home by the staff. Visits to the patient's house in the ante-natal, during labour and puerperium totalled 23,797.

513. Those who choose home confinement are given ante-natal care by the Domiciliary staff as well as by the Medical Officer in the ante-natal clinic.

#### *Domiciliary Aftercare Service*

514. The Aftercare Service continues to care for a large number of hospital deliveries, 9,104 women being attended in their own homes after having been delivered in Kandang Kerbau Hospital and kept under observation for 24 hours.

515. Staff Midwives in this service paid 57,297 visits to patients in their homes giving care to them in the lying-in period.

#### *Pædiatric Care*

516. *Lying-in Wards.*—The care of infants nursed in these wards has improved. Infants requiring individual observation and treatment are nursed in the Sisters' office and are seen daily by the Pædiatric Medical Officer. Cross infection is controlled by isolation and early treatment of cases in these nurseries.

517. Supervision and examination of apparently well infants prior to discharge is inadequate. This cannot be improved with the present ratio of patients to medical staff.

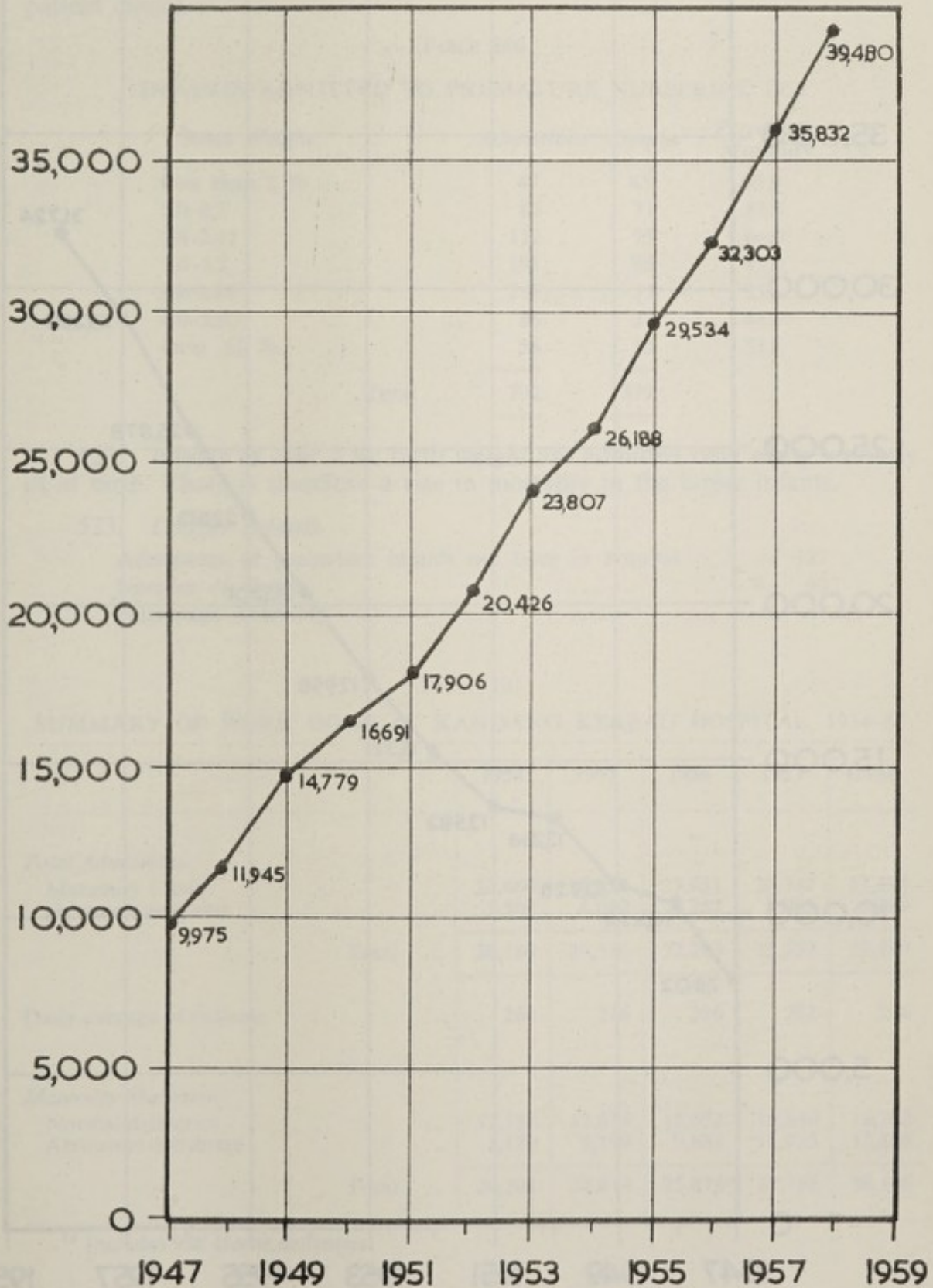
518. *Premature Nurseries.*—Incubators have been in use during the second half of the year. Only four are in use at present.

519. There has been some improvement in survival rate among the infants birth weight of less than 3 lb. The smallest infant to survive the neo-natal period had a birth weight 1-14 oz.

# KANDANG KERBAU HOSPITAL

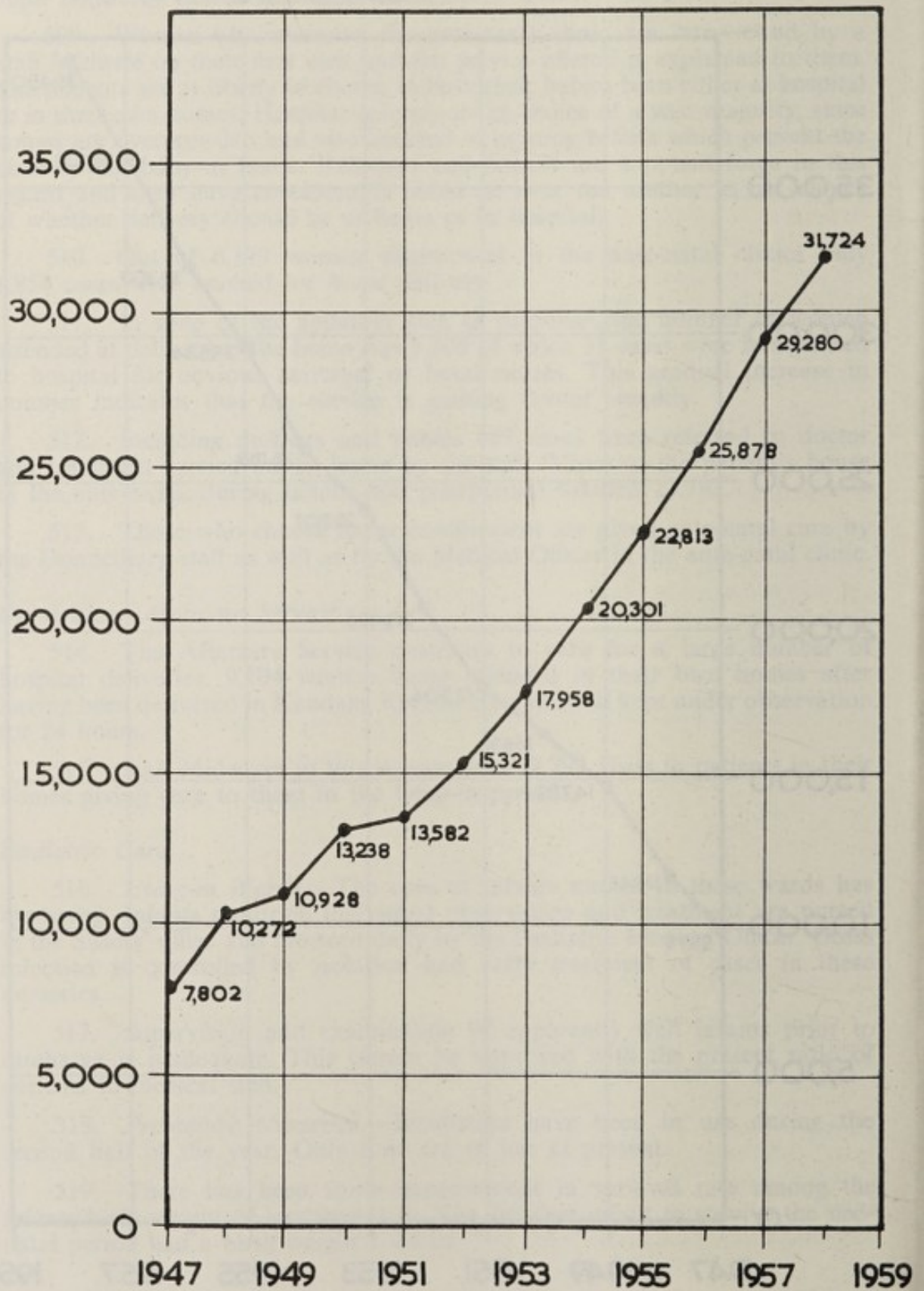
## ADMISSIONS

(Maternity and gynaecologic cases)



# KANDANG KERBAU HOSPITAL

## DELIVERIES



520. *Infection.*—An outbreak of gastro-enteritis occurred in October 1958 due to staphylococcal infection. This was controlled quickly and there was no mortality. A cross infection with pathogenic B Coli occurred and further spread of infection necessitated temporary closure of one nursery. Infected cases were transferred to the Mistri Wing for treatment and the outbreak has been controlled.

521. *Out-patients.*—402 new cases were seen at the clinic for infants requiring care after discharge; this included cases referred from other out-patient clinics.

TABLE 100  
INFANTS ADMITTED TO PREMATURE NURSERIES, 1958

| <i>Birth Weight</i> | <i>Admissions</i> | <i>Deaths</i> | <i>Percentage Mortality</i> |
|---------------------|-------------------|---------------|-----------------------------|
| Less than 2 lb. ... | 47                | 45            | 95.9                        |
| 2.0-2.7 ...         | 85                | 71            | 83.5                        |
| 2.8-2.15 ...        | 112               | 75            | 66.0                        |
| 3.0-3.7 ...         | 191               | 86            | 45.0                        |
| 3.8-3.15 ...        | 215               | 55            | 25.6                        |
| 4.0-5.8. ...        | 86                | 37            | 44.5                        |
| Over 5½ lb. ...     | 56                | 30            | 53.6                        |
| Total ...           | 792               | 399           |                             |

522. Infants of over 4 lb. birth weight are admitted only when seriously ill at birth. There is therefore a rise in mortality in the larger infants.

523. *Lodger Infants*

|  |   |       |
|--|---|-------|
| Admissions of premature infants not born in hospital ... | = | 127   |
| Number of deaths ...                                     | = | 60    |
| Percentage Mortality ...                                 | = | 47.2% |

TABLE 101  
SUMMARY OF WORK DONE AT KANDANG KERBAU HOSPITAL, 1954-58

|                                 | 1954   | 1955   | 1956    | 1957   | 1958   |
|---------------------------------|--------|--------|---------|--------|--------|
| <i>Total Admissions:</i>        |        |        |         |        |        |
| Maternity Cases .. ..           | 22,680 | 25,522 | 27,951  | 30,747 | 33,491 |
| Gynæcologic Cases .. ..         | 3,508  | 4,012  | 4,252   | 5,085  | 5,989  |
| Total .. ..                     | 26,188 | 29,534 | 32,203  | 35,832 | 39,480 |
| Daily average of patients .. .. | 264    | 276    | 296     | 282    | 296    |
| <i>Maternity Statistics:</i>    |        |        |         |        |        |
| Normal deliveries .. ..         | 17,181 | 13,614 | 15,058  | 15,840 | 16,742 |
| Abnormal deliveries .. ..       | 3,120  | 9,199  | 9,882   | 11,925 | 13,404 |
| Total .. ..                     | 20,301 | 22,813 | 25,878* | 27,765 | 30,146 |

\* Includes 938 Home deliveries.

TABLE 101—continued

|   | 1954   | 1955   | 1956    | 1957    | 1958    |
|---|--------|--------|---------|---------|---------|
| Breach deliveries .. ..   | 671    | 731    | 916     | 1,001   | 997     |
| Forceps deliveries .. ..  | 312    | 396    | 470     | 563     | 544     |
| Cæsarian deliveries .. ..   | 272    | 368    | 488     | 571     | 530     |
| Triplets (sets) .. ..   | 6      | 6      | 3       | 2       | 4       |
| Twins (pairs) .. ..   | 221    | 256    | 285     | 320     | 347     |
| Still births .. ..  | 531    | 550    | 478     | 592     | 564     |
| Born before arrival .. ..   | 337    | 339    | 307     | 307     | 364     |
| Maternal deaths .. ..   | 45     | 53     | 39      | 37      | 35      |
| Maternal deaths rate per 1,000 .. ..  | 2.2    | 2.3    | 1.4     | 1.3     | 1.1     |
| Cases cared by Domiciliary After-care Service (Started in May 1954) .. ..   | a.     | 7,572  | 7,282   | 8,128   | 9,104   |
| Domiciliary deliveries (Started in September 1955) .. ..  |        | 107    | 938     | 1,515   | 1,578   |
| <i>Gynæcologic Statistics:</i>  |        |        |         |         |         |
| Gynæcologic operations (mainly hysterectomies, colporrhapies, dilatation and curettage, cautery of cervix, myomectomies and sterilization)— |        |        |         |         |         |
| In-patient operations .. ..   | 3,273  | 3,353  | 3,944   | 4,775   | 5,494   |
| Out-patient operations .. ..  | 1,161  | 1,343  | 2,774   | 2,815   | 2,873   |
| Total .. ..   | 4,434  | 4,947  | 5,718   | 7,590   | 8,363   |
| Gynæcologic deaths .. ..  | 20     | 22     | 12      | 13      | 25      |
| Gynæcologic deaths rate percentage .. ..  | .57    | .55    | .28     | .26     | .42     |
| <i>Out-patient Statistics:</i>  |        |        |         |         |         |
| Ante-natal attendances .. ..  | 41,043 | 45,609 | 63,256  | 69,803  | 71,361  |
| Gynæcologic attendances .. ..   | 29,403 | 31,220 | 37,074  | 36,430  | 34,200  |
| Total .. ..   | 70,446 | 76,829 | 100,330 | 106,233 | 105,561 |
| Post-natal Mothers .. ..  | 9,598  | 11,332 | 17,115  | 20,697  | 26,489  |
| Post-natal Babies .. ..   | 7,832  | 8,450  | 10,484  | 11,993  | 18,202  |
| <i>Clinical Laboratory:</i>   |        |        |         |         |         |
| Routine examinations .. ..  | 38,862 | 41,605 | 47,280  | 49,722  | 46,138  |
| <i>Radiologic Unit:</i>   |        |        |         |         |         |
| Patients for Radiologic examinations .. ..  | 2,858  | 3,371  | 3,930   | 4,244   | 4,076   |
| Radiologic examinations .. ..   | 2,983  | 3,563  | 4,266   | 4,435   | 4,206   |
| <i>Anaesthetic Unit:</i>  |        |        |         |         |         |
| Anæsthetics administered—   |        |        |         |         |         |
| Major cases .. ..   | ..     | ..     | 1,414   | 934     | 1,125   |
| Minor cases .. ..   | ..     | ..     | 5,138   | 5,731   | 6,786   |
| Total .. ..   | ..     | ..     | 6,552   | 6,665   | 7,911   |
| Number of general anæsthetics .. ..   | ..     | ..     | 6,261   | 6,386   | 7,594   |
| Number of spinal anæsthetics .. ..  | ..     | ..     | 244     | 227     | 255     |
| Number of local anæsthetics .. ..   | ..     | ..     | 47      | 52      | 62      |
| <i>Physiotherapy Section:</i>   |        |        |         |         |         |
| Patients for physiotherapy .. ..  | ..     | ..     | 2,131   | 1,997   | 1,877   |
| Physiotherapy attendances .. ..   | ..     | ..     | 9,724   | 10,066  | 9,674   |

*Almoners' Division*

524. Services rendered to patients during 1958 were as follows:—

|   | <i>Cases</i> |
|---|--------------|
| Recommended for financial aid ... ..                  | 1,190        |
| Arrangements for fostering ... ..                     | 101          |
| Arrangements for adoption ... ..                      | 57           |
| Cases requiring home visits ... ..                    | 181          |
| Arrangements for institutional care ... ..            | 16           |
| Referred to Infant Welfare Clinics ... ..             | 85           |
| Referred to Family Planning Association ... ..        | 31           |
| Referred to other agencies not mentioned above ... .. | 43           |
| Other kinds of assistance not mentioned ... ..        | 410          |

## CHAPTER EIGHTEEN

### TRAFALGAR HOME

525. Trafalgar Home is the only leprosarium in Singapore and is essentially for the segregation of infectious cases of leprosy. It is in the north-eastern part of Singapore and is about 8 miles from the city.

526. The centre has undergone great changes since its original inception at the present site in 1926, especially over the last nine years.

527. The institution is managed on the open village scheme. There are 15 wards for those requiring specialised nursing in the male and female infirmaries. There are 1,023 basic beds in the Home at the end of the year. There were 869 in-patients.

#### *Staff*

528. The staff of the Trafalgar Home consisted of 1 Medical Superintendent, 2 Resident Medical Officers, 3 Religious Nursing Sisters of the Franciscan Mission of the Divine Motherhood, 5 Hospital Assistants, 1 Staff Nurse (and 14 Nursing Aids and 30 Dressers who are in-patients of the Home). Sister Mary Phillipa, who is a Franciscan Sister, is in charge of the Rotary School. Dr. R. J. Grove-White, M.B., B.Ch., M.D. (Dubin), M.R.C.P. (Edin.) acted as Medical Superintendent during the year until his departure in January 1958. From then until his resignation from Government Service in September 1958 Dr. Han Wee Fong, M.B., B.S. was the Acting Medical Superintendent when Dr. E. S. Pillay, M.B., B.S., D.T.M.H. took over.

529. There are also 270 patients employed as workers in the home. They are paid under the scheme for remuneration of in-patients introduced in 1956.

#### *Development Programme*

530. A new ward block was completed in September 1958 at a cost of \$138,000. This houses on the ground floor the General Office, Dispensary, Laboratory and the Offices of the Medical Superintendent and Almoner and Lay Superintendent. The first floor has two wards—one for chronic male patients and the other for patients suffering from tuberculosis in addition to Hansen's disease.

531. The Rotary School, which was presented to the Home in 1953 by the Rotarians of Singapore, has an extension, built on Government funds at a cost of \$57,000. This provides an extra six classrooms for the school which now has a total enrolment of 113 students (78 boys and 35 girls).

532. A new out-patient clinic for the care of the 3,200 out-patients was completed in September 1958 in Irrawaddy Road. This replaces the old Skin Clinic at Tan Tock Seng's Hospital.

533. Staff quarters for the Medical Superintendent, and four male nurses and a block of 16 flats for the watchmen and drivers was also completed.

TABLE 102

PATIENT STATISTICS OF TRAFALGAR HOME, 1958

|  | Males | Females | Total |
|--|-------|---------|-------|
| Total Patients remaining on 31-12-57 ... ..                        | 686   | 251     | 937   |
| Admissions from 1-1-58 to 31-12-58 ... ..                          | 198   | 45      | 243   |
| Discharges from 1-1-58 to 31-12-58 ... ..                          | 209   | 77      | 286   |
| Absconsions from 1-1-58 to 31-12-58 ... ..                         | 23    | —       | 23    |
| Transfer to other Hospitals etc., from 1-1-58 to 31-12-58 ... ..   | 12    | 2       | 14    |
| Transfer from other Hospitals etc., from 1-1-58 to 31-12-58 ... .. | 17    | 6       | 23    |
| Deaths from 1-1-58 to 31-12-58 ... ..                              | 9     | 2       | 11    |
| Total Patients remaining on 31-12-58 ... ..                        | 648   | 221     | 869   |

Total patients remaining on 31-12-58—made up as follows:—

| Males  |          | Females |          | Total |
|--------|----------|---------|----------|-------|
| Adults | Children | Adults  | Children |       |
| 577    | 71       | 187     | 34       | 869   |

ADMISSIONS DURING THE YEAR 1958—CLASSIFIED BY ETHNIC GROUP

|                              | Chinese |    | Indians |    | Malays |    | Euro-peans |    | Eura-sians |    | Total |    | Total |
|------------------------------|---------|----|---------|----|--------|----|------------|----|------------|----|-------|----|-------|
|                              | M.      | F. | M.      | F. | M.     | F. | M.         | F. | M.         | F. | M.    | F. |       |
| Adults ..                    | 142     | 34 | 24      | .. | 5      | 3  | 1          | .. | ..         | 1  | 172   | 38 | 210   |
| Children (under 18 years) .. | 22      | 7  | 3       | .. | 1      | .. | ..         | .. | ..         | .. | 26    | 7  | 33    |
|                              |         |    |         |    |        |    |            |    |            |    | 198   | 45 | 243   |

ADMISSIONS DURING THE YEAR OF 1958

|   | Males | Females | Total |
|---|-------|---------|-------|
| New positive cases ... ..   | 94    | 26      | 120   |
| Absconded cases re-admitted ... ..  | 17    | 1       | 18    |
| Boarded case became positive again re-admitted ... ..                             | 1     | —       | 1     |
| Conditional discharged cases brought back because of breach of regulations ... .. | 1     | —       | 1     |
| Conditional discharged cases re-admitted for treatment ... ..                     | 1     | 1       | 2     |
| Discharged cases from Sg. Buloh or Pulau Jerejak Leprosariums admitted—positive   | 3     | —       | 3     |
| Non-infectious cases became positive admitted—due to defaulty ... ..              | 2     | —       | 2     |
| Negative cases ... ..   | 79    | 17      | 96    |
| Total ... ..  | 198   | 45      | 243   |

## DISCHARGES DURING THE YEAR, 1958

|  | <i>Males</i> | <i>Females</i> | <i>Total</i> |
|--|--------------|----------------|--------------|
| Formerly positive cases discharged by Board in 1958 ... ..           | 111          | 45             | 156          |
| Formerly positive cases discharged by Board in previous years ... .. | 22           | 3              | 25           |
| Conditional discharges under close surveillance ... ..               | 6            | 2              | 8            |
| Negative cases on Admission ... ..                                   | 70           | 27             | 97           |
|  | <hr/>        | <hr/>          | <hr/>        |
| Total ... ..   | 209          | 77             | 286          |
|  | <hr/>        | <hr/>          | <hr/>        |

534. 243 cases of leprosy were admitted during the year. Of these, 120 cases were smear positive, the remainder were admitted for special reasons, e.g. for orthopaedic treatment.

535. More than half the number of cases (55 per cent) admitted to the Home for the current year, had symptoms for less than a year, showing a satisfactory response from the public. Quite a proportion still come for medical attention in the late stage.

536. When a new case is registered the Health Sister and Staff checked amongst the household for contacts. This includes tuberculin testing and negative reactors to tuberculin are encouraged to have B.C.G. vaccination.

TABLE 103

## STATED DURATION OF DISEASE PRIOR TO SEEKING TREATMENT

|                          |             |       |
|--------------------------|-------------|-------|
| 1-6 months ... ..        | 46 patients | } 55% |
| 6 months-1 year ... ..   | 20 patients |       |
| Up to 2 years ... ..     | 18 patients | 15%   |
| Up to 3 years ... ..     | 12 patients | 10%   |
| Up to 4 years ... ..     | 9 patients  | 7.8%  |
| More than 4 years ... .. | 15 patients | 12.5% |

*Discharges*

537. Cases reacting continued to take up many of the beds in the wards. The treatment used in these cases are Injection Stibophen, Cortisone, Prednisolone are being used on short and long term.

538. Response to the treatment has been good and compares very favourably with centres in other parts of the world.

539. Patients are discharged when skin smears are negative on four consecutive times, taken at intervals of one month.

540. Number of cases discharged, i.e. cases rendered smear negative:—

|             |     |
|-------------|-----|
| 1954 ... .. | 84  |
| 1955 ... .. | 74  |
| 1956 ... .. | 94  |
| 1957 ... .. | 122 |
| 1958 ... .. | 162 |

## TREATMENT

541. Dapsone orally, continued to be the most widely used form of treatment. Sulphetrone tablets and injection and sulphone in oil are also used.

542. In October this year a trial sample of the new drug Diphenyl thiourea (S.U. 1906) was kindly donated by Ciba in Singapore. So far 14 patients have been receiving this drug and studies are being continued on this drug.

TABLE 104

## TREATMENT GIVEN TO PATIENTS, 1958

| <i>Nature of Drug</i>                       | <i>No. of Patients</i> |
|---|------------------------|
| Dapsone Tabs. ... ..                        | 716                    |
| Dapsone in Oil ... ..                       | 17                     |
| Dapsone Soluble (1906) ... ..               | 14                     |
| Sulphetrone Tabs. ... ..                    | 31                     |
| Sulphetrone Soluble ... ..                  | 32                     |
| Tebacyl Tabs. ... ..                        | 1                      |
| Thacezone Tabs. ... ..                      | 1                      |
| No Treatment (temporarily suspended) ... .. | 57                     |
| Total ... ..                                | 869                    |

## SURGICAL TREATMENT

543. During the year, cases requiring orthopædic treatment are referred to the Orthopædic Surgeon at General Hospital, Singapore. Minor surgery was done at the Home.

544. In 1958 the following operations were performed:—

| <i>Orthopædic Surgery</i>                 | <i>Males</i> | <i>Females</i> |
|---|--------------|----------------|
| Below knee amputation ... ..              | 6            | 3              |
| Tendon transplant foot ... ..             | 5            | 1              |
| Arthrodesis foot ... ..                   | 5            | 1              |
| Excision of Ulcer ... ..                  | 31           | 6              |
| Tendon transplant hand ... ..             | 2            | 1              |
| Decompression of nerves ... ..            | 1            | —              |
| Amputation of toes ... ..                 | 5            | —              |
| <i>General Surgery</i>                    |              |                |
| Sub-total Gastrectomy and Vagotomy ... .. | 1            | —              |
| Appendicectomy ... ..                     | 1            | 1              |
| Minor surgery ... ..                      | 18           | 1              |

## TUBERCULOSIS

545. Every case admitted to the Home has on admission a routine X-ray of the chest. Of 120 new admissions, 17 cases were diagnosed as suffering from pulmonary tuberculosis as well. There are now in all 69 cases being treated for tuberculosis in the Home.

546. Non-infectious cases of Hansens are treated as out-patients. All of these have a routine X-ray chest, and of the 286 patients this year 14 cases were discovered to have pulmonary tuberculosis as well, and are undergoing treatment at the Tan Tock Seng's Hospital.

547. Further 25 cases already being treated for tuberculosis at Tan Tock Seng's Hospital and Singapore Anti-Tuberculosis Association were referred to us, and they were diagnosed as suffering from Hansen's disease.

#### ALMONER'S DIVISION

TABLE 105

#### SUMMARY OF WORK, 1958

|   |        |       |
|---|--------|-------|
| Number of interviews in Trafalgar Home              | ...    | 4,362 |
| Number of interviews in Skin Clinic                 | ...    | 8,574 |
| Number of In-patients on Social Welfare Allowances  |        | 168   |
| Number of Out-patients on Social Welfare Allowances | ... .. | 400   |
| Number of Marriages                                 | ... .. | 13    |
| Number of Births                                    | ... .. | 25    |

#### OUT-PATIENTS DIVISION

548. The Health Sister, Mrs. Yeoh Siew Guat, who does the domiciliary and search for contact visits reports:—

"Patients coming for treatment at the "Skin Clinic" (Leprosy Out-patients Department) at Tan Tock Seng's Hospital have been quite regular in their attendance. Of 2,748 patients registered since 1951, 431 are entirely new cases.

Clinic hours are from 1 p.m. to 4 p.m., Mondays to Fridays. Between 1 p.m. and 2 p.m. most of the office-going patients attend.

The number of contacts who attend the Clinic during 1958 was 2,688. Contacts are asked to attend the Clinic for primary checks and again for re-checks at six monthly intervals. At first some contacts refused to attend ostensibly on grounds of having to travel long distances and entailing transport difficulty. However, it is encouraging to note that most of them turned up regularly after the need for and importance of a check-up had been explained to them.

Heaf's Multiple Puncture test on out-patients and contacts of Positive and Negative cases have been done at out-patient Department. B.C.G. is given when result of H.M.P. is negative. Both these tests have been carried on until November 1958 when the outbreak of Poliomyelitis was at it's height, this was temporarily discontinued, but it is hoped that this will be resumed in the very near future.

Lepromin Test is done only to some special cases owing to the shortage of fresh and potent stock of Lepromin.

In addition to routine contact visits, domiciliary duties of the following nature were undertaken:—

- (i) Visiting old cases of defaulters.
- (ii) Contacts of open cases in Trafalgar Home.
- (iii) Follow up of abscondees.
- (iv) Supervision of fostered babies of patients who are still in Trafalgar Home.
- (v) Investigation of any special cases referred from the Almoner's Department.

During the course of the year 7,729 domiciliary visits were made".

OCCUPATIONAL THERAPY DIVISION

549. The Department was kept going by the Occupational Therapist at Tan Tock Seng's Hospital who had been trying to maintain the patients' interest by a weekly visit and the organisation of sales and the taking of orders for their work. She is assisted by an inmate worker, who visits patients regularly and supplies them with materials bought by the Department.

550. The work is carried out in the Department workshop, the wards, the infirmary blocks and the patients quarters. In November a ward was made available and the Department moved from its previous cramped quarters. In this place it is expected to equip a new workshop. The average number of patients working in the Division at one time is 50. Owing to difficulties such as the necessity for sterilising finished articles, lack of equipment and the need for work of a light nature, the arts taught are basket making, rug-making, embroidery, sewing and weaving.

551. The annual sale and exhibition was held in October at Tan Tock Seng's Hospital, the resulting total of sales amounted to \$1,948 and in addition orders were taken from people attending the sale. The patients are paid for their working according to their abilities and the cost of materials used. A total of \$8,182.39 was paid out in 1958, an average of \$681.86 per month.

552. For some time now the Occupational Therapy Department at Tan Tock Seng's Hospital has been running a small training school for tailoring, basket making and weaving in conjunction with the Disabled Resettlement Section of the Labour Department. In May it was possible to train negative Hansen's cases in the school. The first trainee has now completed his training and is now working on orders received by the Occupational Therapist. In December two more patients commenced training in basket making and weaving. It is hoped to extend this training to more and more patients as they become eligible.

TABLE 106

ARTICLES MADE AT TRAFALGAR HOME

|  |              |
|--|--------------|
| <i>Basket Work</i>   |              |
| Shopping baskets, Dhoby baskets, tiffin carriers, picnic baskets, etc. ... ..            | 2,496        |
| Supplied to Public Works Department, Waste Paper baskets                                 | 1,740        |
| Minute Paper Trays ... ..  | 370          |
| <i>Weaving</i>   |              |
| Sets luncheon mats, scarves, etc. ... ..   | 50           |
| <i>Rug Making</i>  |              |
| Hooked Wool Rugs ... ..  | 9            |
| <i>Sewing and Embroidery</i>   |              |
| Table Cloths, Tray Cloths, sets luncheon mats, pairs guest towels, cushion covers ... .. | 621          |
| <i>Candlewick</i>  |              |
| Bathmats, chair seats, etc. ... ..   | 15           |
| Total Number of Articles ... ..  | 5,301        |
| Total amount paid to Hospitals Board Revenue:—   |              |
| Sales of Stores ... ..   | \$ 11,726.30 |
| Of this amount wages to Patients was ... ..  | 8,182.39     |

## ROTARY SCHOOL

553. The school opened on 6th January. Again the school year was divided into four terms, as, both from the point of view of school work and holidays, it is more satisfactory. At the opening of the school year, there were 74 boys and 30 girls, and since January 24 boys and 5 girls have been admitted.

554. The major event of the school year has been the opening of the extension to the school, which was built by the Department of Education. The extension to the school includes a small science laboratory.

555. We are indebted to Mr. Sheriff, who, with the able assistance of Miss Wong, has run a course in tailoring for girls. This year, the senior girls have learnt how to make boys' trousers, and the juniors, dresses and blouses—taking their own measurements and drawing their own patterns.

556. The Scouts and Guides have been active; and Miss Beck has taken great interest in the Guides. The Green Cross Scout Troop with 39 boys has been run by the Chief Hospital Assistant with the assistance of Mr. Kana.

557. Sports Day, usually held in July, had to be postponed this year as the building of the new school was in progress. While it was scheduled for 18th October it had to be cancelled because of the poliomyelitis epidemic.

## LEPROSY BOARD

558. The constitution of the Leprosy Board remained unchanged throughout the year. Meetings were held at Tan Tock Seng's Hospital once a month. Dr. Loh Poon Lip and Dr. V. M. S. Thevathasan besides the Medical Superintendent formed the Board.

559. Ten Leprosy Board meetings were held and 163 cases were discharged.

## CHAPTER NINETEEN

### PSYCHOLOGICAL MEDICINE

#### WOODBIDGE HOSPITAL

560. The progress, and development of psychological medicine that was reported in previous years has been continued during 1958. The policy of liberalising the admission, and discharge of patients, and of providing them with a wider measure of freedom while in hospital has been maintained. A larger number of patients were discharged from Woodbridge Hospital during 1958 than in previous years. This was due to the implementation of a new policy, based on modern psychiatric knowledge, that the best therapeutic agency in many instances, is the natural environment from which the patient originated, i.e. the therapeutic effect of community life, plus after-care where indicated, by the use of psychiatric out-patient clinics, rather than incarceration for long periods in a mental hospital which reduces the capacity of the patient for social re-adjustment.

#### *Staff*

561. The staff of the hospital consisted of 1 Medical Superintendent, 1 Deputy Medical Superintendent, 9 Medical Officers, 1 Psychologist, 1 Psychiatric Social Worker, 2 Pupil Social Workers, 1 Matron, 2 Assistant Matrons, 10 Nursing Sisters, 24 Nurses, 1 Senior Male Nurse, 6 Male Nurses, 24 Hospital Assistants including 16 Student Hospital Assistants, 1 Nursing Tutor, 1 Pharmacist, 1 Laboratory Assistant, 1 Male Occupational Therapist and 1 Female Occupational Therapist. Dr. E. C. Winslow was the Acting Medical Superintendent during the first 11 months of the year when Dr. B. G. Burton-Bradley, M.B., B.S., D.P.M. was appointed Medical Superintendent in December 1958.

#### PSYCHIATRIC OUT-PATIENT SERVICE

562. There was a general increase in the attendance at the four psychiatric clinics which were operated by Woodbridge Hospital during the year in four different areas of Singapore. This increase is an indication of the greater confidence the public has developed for this type of service.

563. Psychiatric out-patient work was done in the two prisons, and in seven of the Homes operated by the Social Welfare Department. This work was done among juvenile delinquents, orphans and misplaced children in need of care and protection, young prostitutes under rehabilitation, elderly men and women, and among mentally defective children.

TABLE 107

## OUT-PATIENT STATISTICS OF PSYCHIATRIC OUT-PATIENT DEPARTMENTS

| Sex  | Psy-<br>chiatric<br>Out-<br>patient<br>Depart-<br>ment<br>General<br>Hospital | Psy-<br>chiatric<br>Out-<br>patient<br>Clinic<br>Paya<br>Lebar | Psy-<br>chiatric<br>Out-<br>patient<br>Clinic<br>Kallang | Psy-<br>chiatric<br>Out-<br>patient<br>Clinic<br>Bukit<br>Timah | Total | Percent-<br>age of<br>Total |
|--|---|--|--|---|-------|-----------------------------|
| <i>Total Number of Patients Examined and treated in 1958</i> |   |  |  |   |       |                             |
| Male .. ..   | 1,280   | 497  | 427  | 262   | 2,466 | 47.72                       |
| Female .. ..   | 1,332   | 737  | 402  | 231   | 2,702 | 52.28                       |
| Total ..   | 2,612   | 1,234  | 829  | 493   | 5,168 | 100.00                      |
| <i>Distribution by Race</i>                                  |   |  |  |   |       |                             |
| Chinese .. ..  | 2,114   | 1,030  | 727  | 404   | 4,275 | 82.72                       |
| Indian .. ..   | 310   | 104  | 42   | 55  | 511   | 9.89                        |
| Malays .. ..   | 98  | 27   | 52   | 15  | 192   | 3.72                        |
| Eurasian .. ..   | 34  | 49   | ..   | 19  | 102   | 1.97                        |
| European .. ..   | 12  | 7  | 1  | ..  | 20    | .39                         |
| Other Asians .. ..   | 44  | 17   | 7  | ..  | 68    | 1.31                        |
| Total ..   | 2,612   | 1,234  | 829  | 493   | 5,168 | 100.00                      |
| <i>Distribution by Age Group</i>                             |   |  |  |   |       |                             |
| 0—10 Years .. ..   | 34  | 49   | 16   | ..  | 99    | 1.92                        |
| 11—20 .. ..  | 371   | 166  | 142  | 51  | 730   | 14.13                       |
| 21—30 .. ..  | 988   | 479  | 280  | 213   | 1,960 | 37.93                       |
| 31—40 .. ..  | 676   | 350  | 194  | 108   | 1,328 | 25.70                       |
| 41—50 .. ..  | 318   | 119  | 133  | 50  | 620   | 11.97                       |
| 51—60 .. ..  | 180   | 47   | 61   | 62  | 350   | 6.77                        |
| 61—70 .. ..  | 37  | 10   | 3  | 9   | 59    | 1.15                        |
| 71—80 .. ..  | 8   | 14   | ..   | ..  | 22    | .43                         |
| 81—90 .. ..  | ..  | ..   | ..   | ..  | ..    | ..                          |
| 91—100 .. ..   | ..  | ..   | ..   | ..  | ..    | ..                          |
| Total ..   | 2,612   | 1,234  | 829  | 493   | 5,168 | 100.00                      |

TABLE 107—continued

| Diagnosis  | Psy-<br>chiatric<br>Out-<br>patient<br>Depart-<br>ment<br>General<br>Hospital | Psy-<br>chiatric<br>Out-<br>patient<br>Clinic<br>Paya<br>Lebar | Psy-<br>chiatric<br>Out-<br>patient<br>Clinic<br>Kallang | Psy-<br>chiatric<br>Out-<br>patient<br>Clinic<br>Bukit<br>Timah | Total | Percent-<br>age of<br>Total |
|--|---|--|--|---|-------|-----------------------------|
| <i>Distribution by Diagnosis</i>   |   |  |  |   |       |                             |
| <i>Psychoses:</i>  |   |  |  |   |       |                             |
| Schizophrenic Disorders<br>(Dementia præcox) ..  | 684   | 432  | 357  | 181   | 1,654 | 32.00                       |
| Manic Depressive Reaction  | 105   | 32   | 39   | 16  | 192   | 3.72                        |
| Involitional Melancholia ..  | 16  | 8  | 17   | ..  | 41    | .79                         |
| Paranoia and paranoid States   | 5   | 9  | 10   | ..  | 24    | .46                         |
| Senile psychoses ..  | 20  | 17   | 25   | 13  | 75    | 1.45                        |
| Other and unspecified psy-<br>choses .. ..   | 489   | 284  | 141  | 103   | 1,017 | 19.68                       |
| <i>Psychoneuroses and Disorders of<br/>Personality:</i>                                |   |  |  |   |       |                             |
| Hysterical Reaction ..   | 27  | 6  | ..   | ..  | 33    | .64                         |
| Neurotic Depressive Reaction   | 706   | 84   | 66   | 28  | 884   | 17.11                       |
| Alcoholism .. ..   | 16  | ..   | ..   | ..  | 16    | .31                         |
| Other Drug Addictions ..   | 1   | ..   | ..   | ..  | 1     | .02                         |
| Other and unspecified Psycho-<br>neurotic Reaction and Dis-<br>order of Personality .. | 166   | 164  | 71   | 83  | 484   | 9.37                        |
| <i>Mental Deficiency:</i>  |   |  |  |   |       |                             |
| Other and unspecified Mental<br>Deficiencies .. ..                                     | 304   | 195  | 101  | 69  | 669   | 12.95                       |
| Observation N.Y.D. ..  | 73  | 3  | 2  | ..  | 78    | 1.50                        |
| Total ..   | 2,612   | 1,234  | 829  | 493   | 5,168 | 100.00                      |

TABLE 107—continued

| Diagnosis   | Psy-<br>chiatric<br>Out-<br>patient<br>Depart-<br>ment<br>General<br>Hospital | Psy-<br>chiatric<br>Out-<br>patient<br>Clinic<br>Paya<br>Lebar | Psy-<br>chiatric<br>Out-<br>patient<br>Clinic<br>Kallang | Psy-<br>chiatric<br>Out-<br>patient<br>Clinic<br>Bukit<br>Timah | Total | Percent-<br>age of<br>Total |
|---|---|--|--|---|-------|-----------------------------|
| <i>Distribution by Sources of Referral</i>              |   |  |  |   |       |                             |
| <i>Patients Referred by</i>                             |   |  |  |   |       |                             |
| Almoners .. .. .  | 27  | 1  | ..   | 1   | 29    | .56                         |
| Business Houses .. .. .                                 | ..  | ..   | ..   | ..  | ..    | ..                          |
| City Council .. .. .                                    | 15  | 6  | 1  | ..  | 22    | .43                         |
| Children's Aid Society .. .. .                          | 7   | ..   | ..   | 1   | 8     | .15                         |
| Female Out-Patient Depart-<br>ment .. .. .              | 260   | ..   | ..   | ..  | 260   | 5.03                        |
| General Practitioners .. .. .                           | 126   | 6  | 2  | 2   | 136   | 2.63                        |
| H.M. Services .. .. .                                   | ..  | ..   | ..   | ..  | ..    | ..                          |
| Male Out-Patient Department                             | 340   | 2  | ..   | ..  | 342   | 6.62                        |
| Medical Officers i/c Officials                          | 69  | ..   | 5  | ..  | 74    | 1.43                        |
| Old cases under Out-patient<br>treatment (Repeat cases) | 795   | 1,009  | 651  | 438   | 2,893 | 55.98                       |
| Other specialist .. .. .                                | ..  | ..   | ..   | ..  | ..    | ..                          |
| Other Hospitals .. .. .                                 | 9   | ..   | ..   | ..  | 9     | .17                         |
| Police .. .. .  | 4   | 3  | ..   | ..  | 7     | .14                         |
| Prisons and Courts .. .. .                              | ..  | ..   | ..   | ..  | ..    | ..                          |
| Social Welfare Department                               | 15  | ..   | ..   | ..  | 15    | .29                         |
| S.A.T.A. .. .. .  | 5   | ..   | ..   | ..  | 5     | .10                         |
| School Clinics .. .. .                                  | ..  | ..   | ..   | ..  | ..    | ..                          |
| Tan Tock Seng's Hospital .. .. .                        | 26  | ..   | ..   | ..  | 26    | .50                         |
| Wards of the General<br>Hospital .. .. .                | ..  | ..   | ..   | ..  | ..    | ..                          |
| Relatives .. .. .                                       | 18  | 54   | 27   | 7   | 106   | 2.05                        |
| Woodbridge Hospital .. .. .                             | 896   | 153  | 143  | 44  | 1,236 | 23.92                       |
| Total .. .. .   | 2,612   | 1,234  | 829  | 493   | 5,168 | 100.00                      |
| <i>Distribution by Disposals</i>                        |   |  |  |   |       |                             |
| Admitted to Woodbridge<br>Hospital .. .. .              | 92  | 8  | ..   | 5   | 105   | 2.03                        |
| Advice to Medical Officers<br>on Treatment .. .. .      | 430   | ..   | ..   | ..  | 430   | 8.32                        |
| General Practitioners .. .. .                           | ..  | 4  | ..   | ..  | 4     | .08                         |
| No action required .. .. .                              | ..  | ..   | ..   | ..  | ..    | ..                          |
| Out-patient Therapy .. .. .                             | 1,895   | 1,220  | 826  | 486   | 4,427 | 85.66                       |
| Observation as Out-patients                             | ..  | ..   | ..   | ..  | ..    | ..                          |
| Referred to Almoner .. .. .                             | 27  | 1  | ..   | 1   | 29    | .56                         |
| Referred to Social Welfare<br>Department .. .. .        | 15  | ..   | ..   | ..  | 15    | .29                         |
| Referred to other Specialist                            | ..  | ..   | ..   | ..  | ..    | ..                          |
| Referred to General Hospital<br>Wards .. .. .           | 153   | 1  | 3  | 1   | 158   | 3.06                        |
| Total .. .. .   | 2,612   | 1,234  | 829  | 493   | 5,168 | 100.00                      |

## IN-PATIENTS

564. Table 108 shows that there has been a decrease of admissions, and an increase of discharges during 1958 as compared with the previous year. This has been due to the new policy during the year to treat minor psychiatric ailments at the out-patient psychiatric clinics where possible, and to discharge and rehabilitate recovered and improved patients in the better psychological atmosphere of their own homes rather than to attempt their rehabilitation, and social re-adjustment within the atmosphere of a mental hospital.

TABLE 108

## ADMISSIONS AND DISCHARGES FROM WOODBRIDGE HOSPITAL, 1954-58

|                                | 1954 | 1955 | 1956  | 1957  | 1958  |
|--------------------------------|------|------|-------|-------|-------|
| Male patients admitted ...     | 808  | 876  | 1,042 | 1,062 | 933   |
| Male patients discharged ...   | 647  | 821  | 896   | 826   | 1,228 |
| Female patients admitted ...   | 453  | 557  | 690   | 791   | 619   |
| Female patients discharged ... | 404  | 447  | 636   | 714   | 872   |

565. Comparison of admissions and discharges for the years 1954-57 showed a tendency for the total hospital population to steadily increase from year to year. The inception of the new policy for admissions, and discharges during 1958 resulted in a fall in the total hospital population from 2,269 patients on 31st December, 1957 to 1,643 patients on 31st December, 1958.

566. This is a welcome feature as it has resulted in better psychiatric and nursing care being made available to a smaller number of patients who were really in need of in-patient treatment.

567. Greater freedom has been permitted to patients, and where possible, patients were permitted to wear their own clothing. A new feature in 1958 was the substitution of wearing apparel in various coloured floral designs in place of white calico for female patients.

568. Male and female wards have continued to be classified in the following three categories:—

- (i) wards which are never closed;
- (ii) wards which are closed at night;
- (iii) wards which have to be always closed.

569. A new feature for 1958 was the creation in November of a Department of Social Therapy under the Psychiatric Social Worker. This department will, when fully-developed provide facilities for a canteen service, indoor games, group-singing, group discussions, individual discussions, group-dancing, stage and cinema shows, and for music from a radiogram.

570. This department is for patients of both sexes, but for females there will also be a cosmetics unit which will teach patients on methods of hair-styling, and facial make-up. Newspapers, and magazines will also be available in this department.

571. Details of in-patients statistics are given in Tables 109 to 112.

TABLE 109

## IN-PATIENT STATISTICS OF PATIENTS RECEIVING SPECIAL TREATMENTS OR ATTENTION

|   | <i>Male</i> | <i>Female</i> | <i>Total</i> |
|---|-------------|---------------|--------------|
| Number of patients receiving E.C.T. ...   | 1,553       | 3,533         | 5,086        |
| Number of E.C.T. Treatments given ...   | 8,815       | 21,400        | 30,215       |
| Number of G.P.I. Patients in hospital on 31-12-58 ...                             | 138         | 21            | 159          |
| Number of G.P.I. admitted from 1-1-58 to 31-12-58 ...                             | 16          | 5             | 21           |
| Number of patients suffering from Syphilis admitted from 1-1-58 to 31-12-58 ...   | 12          | 8             | 20           |
| Number of Neurosyphilitic Courses given from 1-1-58 to 31-12-58 ...               | 124         | 9             | 133          |
| Number of Anti-Syphilitic Courses given from 1-1-58 to 31-12-58 ...               | 78          | 6             | 84           |
| Number of patients suffering from Syphilis in Hospital on 31-12-58 ...            | 34          | 44            | 78           |
| Number of Epileptics in Hospital on 31-12-58 ...                                  | 11          | 16            | 27           |
| Number of patients discharged after E.C.T.  | 1,049       | 745           | 1,794        |
| Number of patients suffering from G.P.I. discharged from 1-1-58 to 31-12-58 ...   | 47          | 12            | 59           |
| Number of patients suffering from Syphilis discharged from 1-1-58 to 31-12-58 ... | 1           | 7             | 8            |
| Number of patients suffering from Epilepsy discharged from 1-1-58 to 31-12-58 ... | 6           | 6             | 12           |
| Number of Retarded patients (M.D.) ...  | 80          | 78            | 158          |
| Number of patients with Pulmonary Tuberculosis ...                                | 135         | 61            | 196          |
| Number of patients with Leprosy ...   | 2           | 1             | 3            |

TABLE 110

## CASUALTIES IN MALE AND FEMALE WARDS, 1958

|  | <i>Male Patients</i> | <i>Female Patients</i> | <i>Total</i> |
|--|----------------------|------------------------|--------------|
| Wounds inflicted by other patients ... | 116                  | 163                    | 279          |
| Wounds inflicted by accidents ...      | 107                  | 246                    | 353          |
| Wounds self-inflicted ...              | 19                   | 82                     | 101          |
| Patients with suicidal tendencies ...  | 37                   | 21                     | 58           |

TABLE 111

## INSULIN SHOCK THERAPY

|  | <i>Male Patients</i> | <i>Female Patients</i> | <i>Total</i> |
|--|----------------------|------------------------|--------------|
| Number of patients treated ...               | 75                   | 68                     | 173          |
| Number of patients still under treatment ... | 11                   | 5                      | 16           |
| Number of patients discharged ...            | 62                   | 60                     | 122          |
| Number of patients still in hospital ...     | 1                    | 3                      | 4            |
| Total number of treatments given ...         | 3,565                | 2,980                  | 6,545        |
| Total amount of insulin used (in units) ...  | 1,063,486            | 793,600                | 1,857,086    |
| Deaths ...                                   | 1                    | Nil                    | 1            |

TABLE 112

SECLUSION OF PATIENTS, MALE AND FEMALE

|  |     |     |
|--|-----|-----|
| Total number of male patients in seclusion   | ... | Nil |
| Total number of female patients in seclusion | ... | Nil |
| Total number of hours in seclusion           | ... | Nil |

572. Investigations done by the Division of Psychology are given in Table 113.

TABLE 113

INVESTIGATIONS DONE IN THE DIVISION OF PSYCHOLOGY, 1958

|  |     |     |
|--|-----|-----|
| Assessment of Social and Psychological factors as an aid to training, disposal and re-settlement | ... | 104 |
| Assessment of personality make-up  | ... | 72  |
| Diagnosis and differential diagnosis   | ... | 75  |
| Vocational and educational guidance  | ... | 51  |
| Assessment of general ability and special aptitudes  | ... | 60  |
|  |     | —   |
| Total  | ... | 362 |
|  |     | —   |

PSYCHIATRIC SOCIAL WORK

573. The Department of Psychiatric Social Work had a staff of one Psychiatric Social Worker, and two Pupil Social Workers. These workers carried out investigations of the case histories, and assisted in the after-discharge emplacement of 928 patients during 1958.

OCCUPATIONAL, RECREATIONAL AND DIVERSIONAL THERAPY

574. Carpentry work, repair work, painting and varnishing, basketry, rug making, soft and wooden toy making, artificial flower making, fine needle work, and raffia work were engaged in. A summary of the work in the male and female Occupational Therapy Departments, in the Tailoring Sections, in the Laundry, and in farms and gardens are given in Table 114.

TABLE 114

WORK DONE IN OCCUPATIONAL, RECREATIONAL AND DIVERSIONAL THERAPY

|   |     |             |
|---|-----|-------------|
| Articles made, repaired, or repainted in the Male and Female Occupational Therapy Departments | ... | 8,124       |
| Articles made and mended in the Male and Female Tailoring Sections                            | ... | 23,601      |
| Items handed in the Laundry   | ... | 855,744     |
| Hospital Farm Production  | ... | 125,415 lb. |

## FORENSIC PSYCHIATRY

575. There were in this hospital on the 31st December, 1958, 83 male and 29 female patients who had been sent here by the various courts, by the local prisons, or by order of the Chief Secretary to be detained here either for mental observation or for treatment of their psychiatric conditions.

576. Their offences against the law were various, and included murder, manslaughter, and causing grievous hurt, attempted suicide and vagrancy amongst the offences.

577. The courts regularly send accused persons to Woodbridge Hospital for varying periods of from one to four weeks for mental observations, and the officers of this hospital provide the courts with psychiatric reports on these persons. These reports have been of value to the courts in determining future action in regard to these accused persons, and officers from this hospital also frequently appear before the courts to give expert oral evidence.

## TEACHING

578. A course in Psychological Medicine was given to the Medical Officers of this Hospital throughout the year. This course consisted of lectures, demonstrations, and clinical discussions as follows, and was aimed at preparing them for higher examinations in Psychological Medicine:—

|                    |     |     |   |
|--------------------|-----|-----|---|
| Psychiatry         | ... | ... | 20 lectures.  |
| Psychology         | ... | ... | 20 lectures.  |
| Neuropathology     | ... | ... | 9 lectures—demonstrations.                                  |
| Clinical Neurology | ... | ... | 12 attendances at Neurological Clinics in General Hospital. |
| Clinic Psychiatry  | ... | ... | 12 Clinical Conferences in Woodbridge Hospital.             |

579. The School of Psychiatric Nursing at Woodbridge Hospital was during the year, granted reciprocal recognition by the General Nursing Council of England and Wales. A total of 22 nurses and student nurses, and 23 male nurses and student male nurses were receiving training in psychiatric nursing in this school at the end of this year.

580. Fifteen students of the Social Studies Department of the University of Malaya were given practical training in this Hospital in Psychiatric Social Work during the year. A course of nine lectures and lecture demonstrations in Psychiatry was given to final year medical students of the University of Malaya. A course of nine lectures and lecture demonstrations in Psychiatry was given to post-graduate students of the University of Malaya attending the Course for the Diploma in Public Health.

CHAPTER TWENTY  
INFECTIOUS DISEASE

MIDDLETON HOSPITAL

581. Middleton Hospital is the only institution specifically reserved for infectious diseases in the Colony apart from the Quarantine Station. The hospital admitted 3,679 cases in 1958 compared with 3,662 in 1957. The principal conditions dealt with during the year are given in Table 115.

*Staff*

582. The staff of the hospital consisted of 1 Medical Superintendent, 1 Resident Medical Officer, 7 Nursing Sisters, 20 Nurses, 27 Assistant Nurses and 6 Hospital Assistants. Dr. V. M. S. Thevathasan, L.M.S., D.P.H. was the Acting Medical Superintendent until May 1958 when he was relieved by Dr. Leong Kwok Wah, M.B., B.S.

TABLE 115

DISEASES DEALT WITH IN MIDDLETON HOSPITAL, 1958

| Diseases   | Remain-<br>ing<br>31-12-57 | Admit-<br>ted | Dis-<br>charged | Trans-<br>ferred | Died | Remain-<br>ing<br>31-12-58 |
|--|----------------------------|---------------|-----------------|------------------|------|----------------------------|
| Chickenpox .. .. .                               | 13                         | 472           | 485             | ..               | ..   | ..                         |
| Chickenpox/Broncho Pneumonia .. .. .             | ..                         | 1             | ..              | ..               | 1    | ..                         |
| Diphtheria .. .. .                               | 38                         | 548           | 529             | 1                | 34   | 22                         |
| Diphtheria Carriers .. .. .                      | 6                          | 315           | 313             | ..               | ..   | 8                          |
| A.A. Poliomyelitis (Paralytic) .. .. .           | 20                         | 390           | 139             | 113              | 12   | 146                        |
| A.A. Poliomyelitis (non-paralytic) .. .. .       | ..                         | 11            | 11              | ..               | ..   | ..                         |
| Post Poliomyelitis .. .. .                       | ..                         | 3             | 3               | ..               | ..   | ..                         |
| Typhoid Fever .. .. .                            | 11                         | 127           | 129             | 1                | 4    | 4                          |
| Post Diphtheritic Paralysis .. .. .              | ..                         | 2             | 2               | ..               | ..   | ..                         |
| Measles .. .. .                                  | 4                          | 310           | 313             | ..               | ..   | 1                          |
| Measles/Broncho pneumonia .. .. .                | ..                         | 44            | 34              | ..               | 10   | ..                         |
| Measles/Gastro-enteritis .. .. .                 | ..                         | 4             | 2               | ..               | 2    | ..                         |
| T.B. Meningitis .. .. .                          | ..                         | 7             | 7               | ..               | ..   | ..                         |
| Mumps .. .. .                                    | ..                         | 43            | 43              | ..               | ..   | ..                         |
| Whooping cough .. .. .                           | ..                         | 38            | 37              | ..               | 1    | ..                         |
| Amæbic Dysentery .. .. .                         | 2                          | 156           | 156             | ..               | 2    | ..                         |
| Bacillary Dysentery (Flexner) .. .. .            | 1                          | 37            | 38              | ..               | ..   | ..                         |
| Bacillary Dysentery (Sonne) .. .. .              | ..                         | 23            | 23              | ..               | ..   | ..                         |
| Clinical Dysentery .. .. .                       | 2                          | 92            | 93              | ..               | 1    | ..                         |
| Rubella .. .. .                                  | ..                         | 7             | 7               | ..               | ..   | ..                         |
| Transverse Myelitis .. .. .                      | ..                         | 3             | 1               | 1                | 1    | ..                         |
| Erysipilas .. .. .                               | ..                         | 1             | 1               | ..               | ..   | ..                         |
| Encephalitis .. .. .                             | ..                         | 10            | 5               | 1                | 4    | ..                         |
| Malaria S.T. .. .. .                             | ..                         | 1             | 1               | ..               | ..   | ..                         |
| Ascariasis .. .. .                               | ..                         | 6             | 6               | ..               | ..   | ..                         |
| Scrub Typhus .. .. .                             | ..                         | 1             | 1               | ..               | ..   | ..                         |
| Pulmonary Tuberculosis .. .. .                   | ..                         | 7             | 4               | 3                | ..   | ..                         |
| Hemiplegia Right .. .. .                         | ..                         | 2             | 2               | ..               | ..   | ..                         |
| Vincent's Angina .. .. .                         | ..                         | 2             | 1               | ..               | 1    | ..                         |
| Influenza .. .. .                                | ..                         | 40            | 39              | ..               | 1    | ..                         |
| Mental Difficiency/Clinic Dysen-<br>tery .. .. . | ..                         | 1             | ..              | ..               | 1    | ..                         |
| Stomatitis .. .. .                               | ..                         | 2             | 1               | 1                | ..   | ..                         |
| Observation/Carriers/<br>Diseases .. .. .        | 4                          | 973           | 947             | 13               | 8    | 9                          |
| Total .. .. .                                    | 101                        | 3,679         | 3,373           | 134              | 83   | 190                        |

583. During the year there were 3,679 admissions with 83 deaths a mortality rate of 2.27 per cent.

#### DANGEROUS INFECTIOUS DISEASES

584. There were no cases of smallpox, cholera or plague.

TABLE 116

#### DIPHTHERIA ADMISSIONS AND DEATHS FOR THE LAST 10 YEARS

| —              | 1949   | 1950  | 1951  | 1952  | 1953  | 1954 | 1955 | 1956 | 1957 | 1958  |
|----------------|--------|-------|-------|-------|-------|------|------|------|------|-------|
| Admissions ..  | 220    | 222   | 370   | 427   | 332   | 345  | 460  | 552  | 712  | 548   |
| Deaths ..      | 42     | 28    | 91    | 80    | 47    | 34   | 41   | 47   | 58   | 34    |
| Mortality Rate | 19.09% | 12.61 | 24.59 | 18.73 | 14.15 | 9.86 | 8.91 | 8.51 | 8.14 | 6.20% |

TABLE 117

#### MONTHLY DIPHTHERIA ADMISSIONS AND DEATHS FOR THE YEAR

| —             | Jan. | Feb. | Mar. | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Total |
|---------------|------|------|------|-------|-----|------|------|------|-------|------|------|------|-------|
| Admissions .. | 76   | 53   | 60   | 25    | 36  | 46   | 48   | 43   | 40    | 53   | 38   | 30   | 548   |
| Deaths ..     | 3    | 1    | 6    | ..    | 5   | 3    | 1    | 7    | 2     | 3    | 1    | 2    | 34    |

585. During the year the number of diphtheria admissions remained at a high level. 548 cases of diphtheria were admitted with 34 deaths, a mortality rate of 6.20 per cent, the lowest on record. Six cases died within 24 hours after admission. 64 cases required tracheotomy operation of which 15 died. In addition there were 315 cases of diphtheria carriers.

TABLE 118

#### REGIONAL DISTRIBUTION OF DIPHTHERIA ADMISSIONS BY MONTH

| —        | Jan. | Feb. | Mar. | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Total |
|----------|------|------|------|-------|-----|------|------|------|-------|------|------|------|-------|
| Urban .. | 65   | 47   | 49   | 17    | 31  | 39   | 40   | 40   | 33    | 42   | 29   | 26   | 458   |
| Rural .. | 11   | 6    | 11   | 8     | 5   | 7    | 8    | 3    | 7     | 11   | 9    | 4    | 90    |

TABLE 119

DIPHTHERIA ADMISSIONS AND DEATHS BY AGE AND SEX GROUP

| Age Group       | ADMISSIONS |        | Total Admissions | DEATHS |        | Total Deaths |
|-----------------|------------|--------|------------------|--------|--------|--------------|
|                 | Male       | Female |                  | Male   | Female |              |
| Under 1 year .. | 21         | 16     | 37               | 3      | ..     | 3            |
| 1 year ..       | 24         | 27     | 51               | 2      | 8      | 10           |
| 2 years ..      | 39         | 28     | 67               | 2      | 2      | 4            |
| 3 years ..      | 40         | 31     | 71               | 2      | 2      | 4            |
| 4 years ..      | 28         | 26     | 54               | 5      | 3      | 8            |
| 5 years ..      | 18         | 26     | 44               | ..     | 1      | 1            |
| 6—10 years ..   | 73         | 83     | 156              | 1      | 2      | 3            |
| 11—14 .. ..     | 19         | 16     | 35               | ..     | 1      | 1            |
| 15—19 .. ..     | 10         | 3      | 13               | ..     | ..     | ..           |
| 20+ .. ..       | 5          | 15     | 20               | ..     | ..     | ..           |
| Total ..        | 277        | 271    | 548              | 15     | 19     | 34           |

TABLE 120

DIPHTHERIA ADMISSIONS AND DEATHS BY ETHNIC GROUP

| Nationality  | ADMISSIONS |        | Total | DEATHS |        | Total |
|--------------|------------|--------|-------|--------|--------|-------|
|              | Male       | Female |       | Male   | Female |       |
| Europeans .. | 2          | ..     | 2     | ..     | ..     | ..    |
| Eurasians .. | 2          | ..     | 2     | ..     | ..     | ..    |
| Chinese ..   | 256        | 242    | 498   | 15     | 18     | 33    |
| Indians ..   | 5          | 15     | 20    | ..     | ..     | ..    |
| Malays ..    | 8          | 11     | 19    | ..     | 1      | 1     |
| Others ..    | 4          | 3      | 7     | ..     | ..     | ..    |
| Total ..     | 277        | 271    | 548   | 15     | 19     | 34    |

TABLE 121

## DIPHTHERIA: TYPE OF CASES

| Type           | Admissions | Deaths |
|----------------|------------|--------|
| Laryngeal      | 134        | 28     |
| Nasopharyngeal | 45         | —      |
| Faucial        | 323        | 6      |
| Nasal          | 42         | —      |
| Aural          | 4          | —      |
| Total          | 548        | 34     |

TABLE 122

## DIPHTHERIA: ADMISSIONS DEATHS, AND TRACHEOTOMY OPERATIONS

|                                    |       |
|------------------------------------|-------|
| Total Admissions                   | 548   |
| Total Deaths                       | 34    |
| Case Mortality rate                | 6.20% |
| Number of tracheotomies done       | 64    |
| Number of deaths after tracheotomy | 15    |

*Poliomyelitis*

586. There were 404 admissions during the year of which 393 were paralytic and 11 non-paralytic. Three cases of post-poliomyelitis were admitted. The case fatality rate was low. There were 12 deaths, a mortality rate of 2.97 per cent.

TABLE 123

## POLIOMYELITIS ADMISSIONS AND DEATHS FOR LAST 10 YEARS

|            | 1949 | 1950 | 1951 | 1952 | 1953 | 1954 | 1955 | 1956 | 1957 | 1958 |
|------------|------|------|------|------|------|------|------|------|------|------|
| Admissions | 68   | 81   | 78   | 50   | 41   | 71   | 19   | 29   | 52   | 404  |
| Deaths     | 2    | 10   | 8    | 8    | 5    | 2    | 2    | ..   | 5    | 12   |

TABLE 124

POLIOMYELITIS ADMISSIONS AND DEATHS BY MONTH

| —             | Jan. | Feb. | Mar. | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Total |
|---------------|------|------|------|-------|-----|------|------|------|-------|------|------|------|-------|
| Admissions .. | 1    | ..   | 1    | 1     | 1   | 2    | 1    | 7    | 33    | 174  | 116  | 67   | 404   |
| Deaths ..     | ..   | ..   | ..   | ..    | ..  | ..   | ..   | ..   | ..    | 5    | 4    | 3    | 12    |

TABLE 125

REGIONAL DISTRIBUTION OF POLIOMYELITIS CASES BY MONTH

| —        | Jan. | Feb. | Mar. | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Total |
|----------|------|------|------|-------|-----|------|------|------|-------|------|------|------|-------|
| Urban .. | 1    | ..   | 1    | 1     | 1   | 1    | ..   | 6    | 21    | 127  | 82   | 37   | 278   |
| Rural .. | ..   | ..   | ..   | ..    | ..  | 1    | 1    | 1    | 12    | 47   | 34   | 30   | 126   |
| Total .. | 1    | ..   | 1    | 1     | 1   | 2    | 1    | 7    | 33    | 174  | 116  | 67   | 404   |

TABLE 126

AGE GROUPS, ETHNIC GROUPS, AND SEX OF POLIOMYELITIS CASES

| Age Group       | Europeans |    | Eurasians |    | Chinese |     | Indians |    | Malays |    | Others |    | Total |     |
|-----------------|-----------|----|-----------|----|---------|-----|---------|----|--------|----|--------|----|-------|-----|
|                 | M.        | F. | M.        | F. | M.      | F.  | M.      | F. | M.     | F. | M.     | F. | M.    | F.  |
| Under 1 year .. | ..        | .. | ..        | .. | 28      | 26  | 5       | 7  | 5      | 5  | ..     | .. | 38    | 38  |
| 1 year ..       | ..        | .. | ..        | .. | 32      | 27  | 3       | 1  | 2      | 1  | ..     | 1  | 37    | 30  |
| 2 years ..      | ..        | .. | ..        | .. | 49      | 40  | 7       | 6  | 7      | 7  | 1      | .. | 64    | 53  |
| 3 ..            | ..        | .. | ..        | 1  | 29      | 14  | 3       | 2  | ..     | 2  | 2*     | 2  | 35    | 20  |
| 4 ..            | ..        | .. | ..        | .. | 8       | 5   | 2       | .. | ..     | .. | ..     | 1  | 10    | 6   |
| 5 ..            | ..        | .. | ..        | .. | 6       | 6   | ..      | .. | ..     | .. | ..     | .. | 6     | 6   |
| 6—10 ..         | ..        | .. | ..        | .. | 10      | 9   | 3       | 1  | 1      | 2  | ..     | .. | 14    | 12  |
| 11—14 ..        | ..        | .. | ..        | .. | 2       | 4   | 1       | .. | ..     | .. | ..     | .. | 4     | 3   |
| 15—19 ..        | ..        | 1  | ..        | .. | 3       | ..  | ..      | .. | ..     | .. | ..     | .. | 4     | ..  |
| 20+ ..          | ..        | 2  | ..        | .. | 12      | 5   | 1       | 1  | 2      | .. | 1†     | .. | 18    | 6   |
| Total ..        | 3         | .. | 1         | 2  | 181     | 133 | 24      | 18 | 17     | 17 | 4      | 4  | 230   | 174 |

\* Javanese.

† Australian.

TABLE 127

## POLIOMYELITIS ADMISSIONS AND DEATHS BY ETHNIC GROUP

|            |     |       | <i>Admissions</i> | <i>Deaths</i> |
|------------|-----|-------|-------------------|---------------|
| Europeans  | ... | ...   | 3                 | —             |
| Eurasians  | ... | ...   | 3                 | —             |
| Chinese    | ... | ...   | 314               | 11            |
| Indians    | ... | ...   | 42                | 1             |
| Malays     | ... | ...   | 34                | —             |
| Javanese   | ... | ...   | 5                 | —             |
| Australian | ... | ...   | 1                 | —             |
| Others     | ... | ...   | 2                 | —             |
|            |     | Total | 404               | 12            |

587. The major feature of the year was the largest outbreak of poliomyelitis in the history of Singapore. It started in late August, reached its peak in October, and had subsided by the end of December. There were 7 cases from January to July, 7 in August, 33 in September, 174 in October, 116 in November and 67 in December. At the height of the outbreak, there were as many as 30 admissions daily for suspected poliomyelitis. The extensive publicity given to the outbreak in the press and radio, resulted in any child with the slightest pain or limp or alleged weakness in the limbs being sent immediately to the hospital. This threw a great strain on the resources of the hospital. A special study of the various features of the poliomyelitis epidemic is now being undertaken.

588. *Stool Culture for Poliomyelitis Virus.*—This was carried out by Professor Hale in the Department of Bacteriology, University of Malaya. Of a total of 473 specimens (including specimens from suspected cases which later proved to be not poliomyelitis). 257 were negative and 216 were positive as follows:—

|  |     |     |                     |
|--|-----|-----|---------------------|
| Type I Poliomyelitis virus                         | ... | ... | 187                 |
| Attenuated Type II (post—Sabin)                    | ... | ... | 1                   |
| Type I and attenuated Type II                      | ... | ... | —                   |
| Poliomyelitis virus (post—Sabin)                   | ... | ... | 2                   |
| Type III   | ... | ... | 1 (admitted 3-1-58) |
| Echo   | ... | ... | 7                   |
| Coxsackie  | ... | ... | 2                   |
| Enterovirus other than poliomyelitis but (untyped) | ... | ... | 11                  |
| Awaiting typing                                    | ... | ... | 5                   |
|  |     |     | 216                 |

589. It was shown early in the outbreak that a Type I Virus was responsible. This was confirmed by subsequent routine stool culture. In 20 cases, an enterovirus other than the poliomyelitis virus was isolated.

590. *Non-Poliomyelitis Cases.*—In addition to the poliomyelitis cases, a large number (242) of cases of diverse aetiology were referred to the hospital by doctors for suspected poliomyelitis. The commonest cause of confusion were cases of influenza, rheumatic arthritis and myalgia. Other cases were encephalitis, tuberculous meningitis, transverse myelitis, mumps, rubella, malaria, cerebral embolism, chorea, broncho-pneumonia, bronchitis, acute

rheumatism, periphalar neuritis, abscesses of thigh and leg, hysteria, bursitis, serum sickness, gastrœnteritis, malnutrition post-measles debility, congenital syphilis, whooping cough, pulmonary tuberculosis, beri-beri, pleural effusion, ulcer of scalp, pneumonitis, urticaria, epilepsy, Parkinsonism, carcinoma of pancreas and congenital heart disease.

TABLE 128  
OTHER DISEASES

| Other Diseases                     | Remain-<br>ing<br>31-12-57 | Admit-<br>ted<br>1958 | Dis-<br>charged | Trans-<br>ferred<br>to<br>hospitals | Died | Remain-<br>ing<br>31-12-58 |
|------------------------------------|----------------------------|-----------------------|-----------------|-------------------------------------|------|----------------------------|
| Acute Tonsillitis .. ..            | 1                          | 138                   | 138             | ..                                  | ..   | 1                          |
| Acute Laryngitis .. ..             | ..                         | 16                    | 16              | ..                                  | ..   | ..                         |
| Acute Nasopharyngitis .. ..        | ..                         | 8                     | 8               | ..                                  | ..   | ..                         |
| Acute Bronchitis .. ..             | ..                         | 6                     | 6               | ..                                  | ..   | ..                         |
| Pyrexia of Unknown origin .. ..    | 1                          | 126                   | 127             | ..                                  | ..   | ..                         |
| Rheumatic Fever .. ..              | ..                         | 2                     | 2               | ..                                  | ..   | ..                         |
| Rheumatoid Arthritis .. ..         | ..                         | 9                     | 9               | ..                                  | ..   | ..                         |
| Gastritis .. ..                    | ..                         | 4                     | 4               | ..                                  | ..   | ..                         |
| Gastro-enteritis and Colitis .. .. | 2                          | 32                    | 33              | ..                                  | 1    | ..                         |
| Appendicitis .. ..                 | ..                         | 2                     | 2               | ..                                  | ..   | ..                         |
| Nasopharyngeal Carcinoma .. ..     | ..                         | 1                     | ..              | ..                                  | 1    | ..                         |
| Lobar Pneumonia .. ..              | ..                         | 5                     | 3               | ..                                  | 2    | ..                         |
| Hæmorrhoids .. ..                  | ..                         | 3                     | 3               | ..                                  | ..   | ..                         |
| Anæmia .. ..                       | ..                         | 1                     | 1               | ..                                  | ..   | ..                         |
| Amœbic Hepatitis .. ..             | ..                         | 1                     | 1               | ..                                  | ..   | ..                         |
| Infective Hepatitis .. ..          | ..                         | 1                     | 1               | ..                                  | ..   | ..                         |
| Pyelitis .. ..                     | ..                         | 1                     | 1               | ..                                  | ..   | ..                         |
| Polyneuritis .. ..                 | ..                         | 3                     | 3               | ..                                  | ..   | ..                         |
| Dermatitis .. ..                   | ..                         | 2                     | 2               | ..                                  | ..   | ..                         |
| Ulcer of Palate .. ..              | ..                         | 6                     | 6               | ..                                  | ..   | ..                         |
| Ulcer Intestinal .. ..             | ..                         | 1                     | ..              | ..                                  | 1    | ..                         |
| Pharyngeal Ulcer .. ..             | ..                         | 1                     | 1               | ..                                  | ..   | ..                         |
| Adenitis .. ..                     | ..                         | 2                     | 2               | ..                                  | ..   | ..                         |
| Radial Nerve Paralysis .. ..       | ..                         | 1                     | 1               | ..                                  | ..   | ..                         |
| Ludwig's Angina .. ..              | ..                         | 1                     | 1               | ..                                  | ..   | ..                         |
| Myalgia .. ..                      | ..                         | 6                     | 6               | ..                                  | ..   | ..                         |
| Subarachoid Hæmorrhage .. ..       | ..                         | 1                     | 1               | ..                                  | ..   | ..                         |
| Cerebral Hæmorrhage .. ..          | ..                         | 1                     | ..              | ..                                  | 1    | ..                         |
| Cardiac Failure/Malnutrition .. .. | ..                         | 1                     | ..              | ..                                  | 1    | ..                         |
| Impetigo .. ..                     | ..                         | 6                     | 6               | ..                                  | ..   | ..                         |
| Malnutrition .. ..                 | ..                         | 1                     | 1               | ..                                  | ..   | ..                         |
| Typhoid Carriers .. ..             | ..                         | 364                   | 364             | ..                                  | ..   | ..                         |
| Endocarditis .. ..                 | ..                         | 1                     | 1               | ..                                  | ..   | ..                         |
| Liver Abscess .. ..                | ..                         | 1                     | 1               | ..                                  | ..   | ..                         |
| Carcinoma (Pancreas) .. ..         | ..                         | 1                     | ..              | 1                                   | ..   | ..                         |
| Congenital Heart Disease .. ..     | ..                         | 2                     | 1               | ..                                  | 1    | ..                         |
| Congenital Syphilis .. ..          | ..                         | 1                     | 1               | ..                                  | ..   | ..                         |
| Epilepsy .. ..                     | ..                         | 1                     | 1               | ..                                  | ..   | ..                         |
| Asthmatic Bronchitis .. ..         | ..                         | 1                     | 1               | ..                                  | ..   | ..                         |
| Osteitis of Hip .. ..              | ..                         | 1                     | 1               | ..                                  | ..   | ..                         |
| Hyperemesis Gravidarum .. ..       | ..                         | 1                     | 1               | ..                                  | ..   | ..                         |
| <i>Carried forward</i> ..          | 4                          | 763                   | 757             | 1                                   | 8    | 1                          |

TABLE 128—continued

| Other Diseases               | Remain-<br>ing<br>31-12-57 | Admit-<br>ted<br>1958 | Dis-<br>charged | Trans-<br>ferred<br>to<br>hospitals | Died     | Remain-<br>ing<br>31-12-58 |
|------------------------------|----------------------------|-----------------------|-----------------|-------------------------------------|----------|----------------------------|
| <i>Brought forward</i> ..    | 4                          | 763                   | 757             | 1                                   | 8        | 1                          |
| Hysteria ..                  | ..                         | 1                     | 1               | ..                                  | ..       | ..                         |
| Menopausal Syndrome ..       | ..                         | 1                     | 1               | ..                                  | ..       | ..                         |
| Bursitis ..                  | ..                         | 1                     | 1               | ..                                  | ..       | ..                         |
| Allergic Rash ..             | ..                         | 1                     | ..              | 1                                   | ..       | ..                         |
| Drug Rash ..                 | ..                         | 4                     | 4               | ..                                  | ..       | ..                         |
| Parkinsonism ..              | ..                         | 1                     | 1               | ..                                  | ..       | ..                         |
| Pneumonitis ..               | ..                         | 1                     | 1               | ..                                  | ..       | ..                         |
| Chorea (rheumatic) ..        | ..                         | 1                     | 1               | ..                                  | ..       | ..                         |
| Pleural Effusion ..          | ..                         | 3                     | 2               | 1                                   | ..       | ..                         |
| Beri-Beri ..                 | ..                         | 1                     | 1               | ..                                  | ..       | ..                         |
| Abscess of thigh ..          | ..                         | 4                     | 4               | ..                                  | ..       | ..                         |
| Bronchopneumonia ..          | ..                         | 4                     | 4               | ..                                  | ..       | ..                         |
| Nothing abnormal detected .. | ..                         | 2                     | 2               | ..                                  | ..       | ..                         |
| Urticaria ..                 | ..                         | 1                     | 1               | ..                                  | ..       | ..                         |
| Scalp ulcers ..              | ..                         | 1                     | 1               | ..                                  | ..       | ..                         |
| Thrush ..                    | ..                         | 3                     | 3               | ..                                  | ..       | ..                         |
| Observation ..               | ..                         | 180                   | 162             | 10                                  | ..       | 8                          |
| <b>Total</b> ..              | <b>4</b>                   | <b>973</b>            | <b>947</b>      | <b>13</b>                           | <b>8</b> | <b>9</b>                   |

TABLE 129

## TYPHOID FEVER—ADMISSIONS AND DEATHS BY ETHNIC GROUP

| Nationality     | 0-10          |               | 11-19     |           | 20 plus       |           | Total         |               |
|-----------------|---------------|---------------|-----------|-----------|---------------|-----------|---------------|---------------|
|                 | M.            | F.            | M.        | F.        | M.            | F.        | M.            | F.            |
| Eurasians ..    | ..            | ..            | ..        | ..        | 1             | ..        | 1             | ..            |
| Chinese ..      | 16 (1)        | 8 (1)         | 20        | 10        | 18 (1)        | 17        | 54 (2)        | 35 (1)        |
| Indians ..      | ..            | 1             | 2         | ..        | 5             | 2         | 7             | 3             |
| Malays ..       | 6             | 2 (1)         | 5         | 2         | 5             | 4         | 16            | 8 (1)         |
| Others ..       | ..            | ..            | ..        | ..        | 3             | ..        | 3             | ..            |
| <b>Total</b> .. | <b>22 (1)</b> | <b>11 (2)</b> | <b>27</b> | <b>12</b> | <b>32 (1)</b> | <b>23</b> | <b>81 (2)</b> | <b>46 (2)</b> |

Deaths in Brackets.

TABLE 130

TYPHOID FEVER—ADMISSIONS AND DEATHS BY MONTH

| —             | Jan. | Feb. | Mar. | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Total |
|---------------|------|------|------|-------|-----|------|------|------|-------|------|------|------|-------|
| Admissions .. | 10   | 8    | 15   | 16    | 16  | 8    | 14   | 13   | 12    | 10   | ..   | 5    | 127   |
| Deaths ..     | 1    | ..   | 1    | ..    | ..  | ..   | ..   | ..   | ..    | 2    | ..   | ..   | 4     |

591. 127 cases of typhoid fever were admitted with 4 deaths. Of these there were 4 imported cases among seamen (2 Chinese, 1 Scot. and 1 Japanese). 25 cases were from the rural area. Three cases occurred in one household at Jalan Melayu but it was not possible to trace the source of infection.

592. A total of 364 persons employed by various ice cream manufacturers and dairy farms were investigated for the typhoid carriers state. Four were found to be carriers.

*Chickenpox*

593. 473 cases of chickenpox were admitted during the year. There was one fatality in a Chinese girl, aged 2 years with broncho-pneumonia.

594. During the height of the poliomyelitis outbreak in October, admission of chickenpox cases was stopped, after consultation with the Director of Medical Services, due to an acute shortage of accommodation and staff.

TABLE 131

CHICKENPOX—AGE, SEX AND ETHNIC GROUPS

| —            | 0—10 |    | 11—19 |    | 20 plus |    | Total |     | Total |
|--------------|------|----|-------|----|---------|----|-------|-----|-------|
|              | M.   | F. | M.    | F. | M.      | F. | M.    | F.  |       |
| Eurasians .. | ..   | 4  | ..    | 3  | 5       | 2  | 12    | 2   | 14    |
| Chinese ..   | ..   | 41 | ..    | 33 | 21      | 8  | 84    | 50  | 134   |
| Indians ..   | ..   | 35 | ..    | 27 | 114     | 14 | 178   | 49  | 227   |
| Malays ..    | ..   | 12 | ..    | 11 | 21      | 4  | 48    | 19  | 67    |
| Others ..    | ..   | 11 | ..    | 3  | 10      | .. | 25    | 5   | 30    |
| Total ..     | 103  | 74 | 73    | 23 | 171     | 28 | 347   | 125 | 472   |

595. As in previous years, male adult Indians formed the largest single group of cases.

TABLE 132

## CHICKENPOX—REGIONAL DISTRIBUTION BY MONTH

| —        | Jan. | Feb. | Mar. | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Total |
|----------|------|------|------|-------|-----|------|------|------|-------|------|------|------|-------|
| Urban .. | 68   | 45   | 80   | 54    | 34  | 32   | 20   | 27   | 32    | 17   | ..   | ..   | 409   |
| Rural .. | 14   | 3    | 14   | 7     | 4   | 4    | 1    | 4    | 5     | 7    | ..   | ..   | 63    |
| Total .. | 82   | 48   | 94   | 61    | 38  | 36   | 21   | 31   | 37    | 24   | ..   | ..   | 472   |

TABLE 133

## DYSENTERY

| Type of Dysentery                     | Admissions | Deaths |
|---------------------------------------|------------|--------|
| 1. Amœbic Dysentery ..                | 156        | 2      |
| 2. Bacillary Dysentery (a) Flexner .. | 37         | —      |
| (b) Sonne ..                          | 23         | —      |
| 3. Clinical Dysentery ..              | 92         | 1      |
| Total ..                              | 308        | 3      |

TABLE 134

## ADMISSIONS OF THE MORE IMPORTANT DISEASES FOR THE LAST 10 YEARS

| Diseases                        | 1949  | 1950  | 1951  | 1952  | 1953  | 1954  | 1955  | 1956  | 1957  | 1958  |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Smallpox ..                     | ..    | ..    | ..    | ..    | ..    | ..    | ..    | ..    | ..    | ..    |
| Plague ..                       | ..    | ..    | ..    | ..    | ..    | ..    | ..    | ..    | ..    | ..    |
| Cholera ..                      | ..    | ..    | ..    | ..    | ..    | ..    | ..    | ..    | ..    | ..    |
| Chickenpox ..                   | 373   | 422   | 610   | 450   | 836   | 1,313 | 1,769 | 1,488 | 1,039 | 472   |
| Chickenpox/Broncho/Pneumonia .. | ..    | ..    | ..    | ..    | ..    | ..    | ..    | ..    | ..    | 1     |
| Measles ..                      | 194   | 50    | 204   | 142   | 117   | 182   | 200   | 301   | 153   | 357   |
| Rubella ..                      | 6     | 1     | 11    | 9     | ..    | 1     | ..    | 86    | 36    | 7     |
| Diphtheria ..                   | 218   | 222   | 370   | 427   | 382   | 345   | 460   | 552   | 712   | 547   |
| Cerebro Spinal/Meningitis ..    | 4     | 4     | 4     | 2     | 4     | 2     | ..    | ..    | ..    | 4     |
| Typhoid Fever ..                | 62    | 88    | 91    | 117   | 91    | 125   | 114   | 76    | 118   | 127   |
| A.A. Poliomyelitis ..           | 68    | 81    | 78    | 50    | 41    | 70    | 19    | 37    | 52    | 405   |
| Erysipelas ..                   | 15    | 12    | 4     | 3     | ..    | 3     | ..    | 2     | 3     | 1     |
| Whooping Cough ..               | 8     | 27    | 5     | 3     | ..    | 10    | 5     | 85    | 30    | 38    |
| Scarlet Fever ..                | ..    | ..    | 79    | ..    | ..    | ..    | ..    | ..    | 1     | ..    |
| Mumps ..                        | 3     | 14    | ..    | 15    | 9     | 35    | 54    | 52    | 14    | 43    |
| Tropical Typhus ..              | 8     | 3     | 7     | 92    | 4     | 7     | ..    | 1     | ..    | 1     |
| Amœbic Dysentery ..             | 106   | 90    | 105   | 22    | 134   | 122   | 136   | 126   | 197   | 156   |
| Bacillary Dysentery ..          | 11    | 9     | 18    | 9     | 25    | 18    | 17    | 26    | 74    | 60    |
| Clinical Dysentery ..           | ..    | 17    | 40    | ..    | 16    | 34    | 35    | 63    | 150   | 92    |
| Other Diseases/Carriers ..      | ..    | ..    | ..    | ..    | ..    | ..    | ..    | ..    | ..    | ..    |
| Observation ..                  | 602   | 731   | 591   | 455   | 440   | 647   | 503   | 936   | 1,083 | 1,368 |
| Total ..                        | 1,678 | 1,771 | 2,217 | 1,796 | 2,049 | 2,914 | 3,312 | 3,831 | 3,662 | 3,679 |

*Measles*

596. 359 cases were admitted with 10 deaths from broncho-pneumonia and gastro-enteritis.

TABLE 135

NUMBER OF ADMISSIONS, DAYS IN HOSPITAL AND DEATHS BY ETHNIC GROUPS

| Ethnic Group           | REMAINING 1957  |                         | ADMITTED 1958   |                         | TOTAL           |                         | Deaths |
|------------------------|-----------------|-------------------------|-----------------|-------------------------|-----------------|-------------------------|--------|
|                        | No. of Patients | No. of days in Hospital | No. of Patients | No. of days in Hospital | No. of Patients | No. of days in Hospital |        |
| Europeans ..           | 2               | 451                     | 31              | 389                     | 33              | 840                     | 1      |
| Eurasians ..           | 2               | 6                       | 46              | 434                     | 48              | 440                     | ..     |
| Chinese ..             | 68              | 4,719                   | 2,494           | 29,012                  | 2,562           | 33,731                  | 78     |
| Indians and Pakistanis | 16              | 69                      | 625             | 5,531                   | 641             | 5,600                   | 1      |
| Malays ..              | 13              | 130                     | 368             | 3,279                   | 381             | 3,409                   | 2      |
| Javanese ..            | ..              | ..                      | 54              | 396                     | 54              | 396                     | 1      |
| Others ..              | ..              | ..                      | 61              | 458                     | 61              | 458                     | ..     |
| Total ..               | 101             | 5,375                   | 3,679           | 39,499                  | 3,780           | 44,874                  | 83     |

TABLE 136

|           | Remaining 1957 | Admitted 1958 | Total treated | Discharged | Transferred | Died | Remaining 1958 | Deaths | Average No. of Patients |
|-----------|----------------|---------------|---------------|------------|-------------|------|----------------|--------|-------------------------|
| Male ..   | 55             | 2,171         | 2,226         | 2,024      | 76          | 40   | 86             | %      | ..                      |
| Female .. | 46             | 1,508         | 1,554         | 1,349      | 58          | 43   | 104            | ..     | ..                      |
| Total ..  | 101            | 3,679         | 3,780         | 3,373      | 134         | 83   | 190            | 2.19   | 123                     |

Maximum capacity of the hospital = 250 beds.

*Ambulance*

597. A total of 1,155 cases of infectious diseases were removed by the Hospital ambulances during the year.

*Development Programme*

598. A boiler was obtained from the City Engineer and installed in the laundry to replace the old boiler which was condemned by the Government Inspector of Machinery as unfit for further service.

CHAPTER TWENTY-ONE

RADIOLOGY

599. The year ended with a slight increase of the overall X-ray examinations in all hospitals by 3.9 per cent compared with 1957. Furthermore, an additional 54,829 radiologic examinations were made in the mass miniature X-ray survey conducted by Government from July to October. An analysis of the figures in the General Hospital shows that there is a rise of the number of cases coming for specialised investigations. There is also an 18 per cent increase in the number of cases treated by the radiotherapy section.

*Staff*

600. The staff position at the end of the year is given in Table 137. Dr. F. Y. Khoo, M.B., B.S., D.M.R.D., Senior Radiologist was in charge of the Department; Dr. K. Lal, M.B., B.S., D.M.R.D., was in charge of the Radiotherapy Section.

TABLE 137

STAFF POSITION IN THE DEPARTMENT OF RADIOLOGY ON  
31ST DECEMBER, 1958

|                             | Radiologists | Radio-therapists | Radiographers                                     | X-Ray Assistants | X-Ray Technicians |
|-----------------------------|--------------|------------------|---|------------------|-------------------|
| General Hospital ..         | 5            | 1                | 17 (Diagnostic)<br>1 (Therapeutic)<br>(Part-time) | 2                | 3                 |
| Tan Tock Seng's Hospital .. | 1            | ..               | 2 (Diagnostic)                                    | ..               | 3                 |
| Woodbridge Hospital         | ..           | ..               | ..  | ..               | ..                |
| Kandang Kerbau Hospital ..  | ..           | ..               | ..  | ..               | ..                |
| On Scholarship ..           | 2            | 3                | 4 (Diagnostic)<br>1 (Therapeutic)                 | ..               | ..                |
| Total ..                    | 8            | 4                | 25  | 2                | 6                 |

TABLE 138

## RADIOLOGIC EXAMINATIONS DONE IN THE DEPARTMENT OF RADIOLOGY

|                             | 1954    | 1955    | 1956    | 1957    | 1958    |
|-----------------------------|---------|---------|---------|---------|---------|
| General Hospital .. .. .    | 46,189  | 53,880  | 68,662  | 69,886  | 71,331  |
| Tan Tock Seng's Hospital .. | 55,014  | 60,406  | 67,812  | 77,292  | 83,019  |
| Kandang Kerbau Hospital ..  | 2,983   | 3,563   | 4,266   | 4,435   | 4,206   |
| Woodbridge Hospital .. ..   | 419     | 3,970   | 4,106   | 3,730   | 2,911   |
| Total .. .. .               | 104,605 | 121,819 | 144,846 | 155,343 | 161,467 |

TABLE 139

## RADIOTHERAPY TREATMENTS DONE IN THE DEPARTMENT OF RADIOLOGY

|                              | 1954 | 1955 | 1956 | 1957 | 1958 |
|------------------------------|------|------|------|------|------|
| Deep X-Ray Therapy:          |      |      |      |      |      |
| Malignant Cases .. .. .      | 297  | 353  | 241  | 318  | 360  |
| Non-Malignant Cases .. ..    | 118  | 98   | 61   | 37   | 49   |
| Superficial X-Ray Therapy .. | 146  | 136  | 77   | 90   | 151  |
| Radium Treatment .. .. .     | 4    | 12   | 1    | 12   | 30   |
| Total .. .. .                | 565  | 599  | 380* | 457  | 590  |

\* Total cases for 1956 show a decrease because very few cases were accepted for treatment during the period July-October, 1956.

TABLE 140  
SUMMARY OF DIAGNOSTIC RADIOLOGIC EXAMINATIONS, 1958

| Classification  | General Hospital |        | Tan Tock Seng's Hospital |        | Kandang Kerbau Hospital |       | Woodbridge Hospital |       | Total   |         |
|---|------------------|--------|--------------------------|--------|-------------------------|-------|---------------------|-------|---------|---------|
|   | 1957             | 1958   | 1957                     | 1958   | 1957                    | 1958  | 1957                | 1958  | 1957    | 1958    |
| 1. Chest .. .. .  | 29,450           | 28,396 | 73,135                   | 78,352 | 1,829                   | 1,563 | 3,469               | 2,726 | 107,883 | 111,037 |
| 2. Bronchography .. .. .                                  | 204              | 200    | 240                      | 263    | ..                      | ..    | ..                  | ..    | 444     | 463     |
| 3. Gastro-Intestinal Tract (Ba. Meals and Enemas) .. .. . | 2,665            | 2,710  | 53                       | ..     | ..                      | ..    | ..                  | ..    | 2,718   | 2,710   |
| 4. Renal Tracts .. .. .                                   | 1,902            | 1,919  | 39                       | 71     | 106                     | 34    | ..                  | ..    | 2,047   | 2,024   |
| 5. Gall-Bladder .. .. .                                   | 508              | 487    | 60                       | 66     | 4                       | 26    | ..                  | ..    | 572     | 579     |
| 6. Heart .. .. .  | 770              | 633    | 35                       | ..     | ..                      | ..    | ..                  | ..    | 805     | 633     |
| 7. Pregnancy .. .. .                                      | 1                | ..     | ..                       | ..     | 1,569                   | 1,659 | ..                  | ..    | 1,570   | 1,659   |
| 8. Salpinography .. .. .                                  | 33               | 43     | ..                       | ..     | ..                      | ..    | ..                  | ..    | 33      | 43      |
| 9. Encephalography and Ven-triculography .. .. .          | 55               | 46     | ..                       | ..     | ..                      | ..    | ..                  | ..    | 55      | 46      |
| 10. Bones and Joints:                                     |                  |        |                          |        |                         |       |                     |       |         |         |
| (a) Injuries .. .. .                                      | 20,512           | 25,211 | 691                      | 766    | 71                      | 76    | 117                 | 55    | 20,700  | 26,108  |
| (b) Diseases .. .. .                                      | 10,346           | 8,528  | ..                       | ..     | 174                     | 238   | 144                 | 130   | 11,355  | 8,896   |
| 11. Sinuses .. .. .                                       | 1,241            | 1,168  | 93                       | 112    | 40                      | 91    | ..                  | ..    | 1,374   | 1,371   |
| 12. Teeth .. .. .   | 66               | 49     | ..                       | ..     | ..                      | ..    | ..                  | ..    | 66      | 49      |
| 13. Tomography .. .. .                                    | 82               | 67     | 2,935                    | 3,389  | ..                      | ..    | ..                  | ..    | 3,017   | 3,456   |
| 14. Myelography .. .. .                                   | 40               | 56     | ..                       | ..     | ..                      | ..    | ..                  | ..    | 40      | 56      |
| 15. Arteriography .. .. .                                 | 90               | 89     | ..                       | ..     | ..                      | ..    | ..                  | ..    | 90      | 89      |
| 16. Angiocradiograms .. .. .                              | 58               | 100    | ..                       | ..     | ..                      | ..    | ..                  | ..    | 58      | 100     |
| 17. Pelvimetry .. .. .                                    | ..               | ..     | ..                       | ..     | 642                     | 519   | ..                  | ..    | 642     | 519     |
| 18. Miscellaneous .. .. .                                 | 1,863            | 1,472  | 11                       | ..     | ..                      | ..    | ..                  | ..    | 1,874   | 1,472   |
| Total .. .. .   | 69,886           | 71,331 | 77,292                   | 83,019 | 4,435                   | 4,206 | 3,730               | 2,911 | 155,343 | 161,467 |
| Average per month .. .. .                                 | 5,824            | 5,944  | 6,441                    | 6,918  | 370                     | 351   | 311                 | 243   | 12,945  | 13,456  |

TABLE 141

SUMMARY OF RADIOTHERAPY TREATMENTS, 1958

DEEP X-RAY THERAPY

*Malignant Cases—*

|  | 1957       | 1958       |
|--|------------|------------|
| Nasopharyngeal Tumours ... ..            | 119        | 133        |
| Breast ... ..                            | 42         | 43         |
| Bronchus ... ..                          | 20         | 20         |
| Cervix and Uterus ... ..                 | 9          | 10         |
| Ovary ... ..                             | 7          | 3          |
| Oesophagus ... ..                        | 1          | 13         |
| Mouth: tongue and palate ... ..          | 5          | 11         |
| Tonsil ... ..                            | 5          | 11         |
| Lip ... ..                               | 1          | —          |
| Larynx ... ..                            | 14         | 21         |
| Carcinoma cheek and buccal mucosa ... .. | 3          | 3          |
| Chronic Myeloid Leukæmia ... ..          | 2          | 4          |
| Seminoma/Teratoma Testes ... ..          | 3          | 2          |
| Nose/Nostril ... ..                      | 2          | —          |
| Thyroid ... ..                           | 6          | 3          |
| Alveolus and antrum ... ..               | 7          | 5          |
| Malignant skin tumours ... ..            | 1          | 2          |
| Parotid tumours ... ..                   | 1          | 4          |
| Pituitary tumours ... ..                 | 1          | 1          |
| Osteogenic Sarcoma ... ..                | 4          | 1          |
| Carcinoma kidney ... ..                  | 3          | —          |
| Carcinoma liver ... ..                   | —          | 3          |
| Wilms tumour ... ..                      | 1          | 5          |
| Secondary Glands ... ..                  | 8          | 7          |
| Eye ... ..                               | 4          | 5          |
| Bladder ... ..                           | 4          | 2          |
| Ear ... ..                               | 4          | 2          |
| Hand/elbow/arm ... ..                    | 1          | 2          |
| Lymphosarcoma ... ..                     | 3          | 4          |
| Hodgkin's Disease ... ..                 | 3          | 4          |
| Carcinoma Penis ... ..                   | —          | 2          |
| Lymph glands ... ..                      | —          | 1          |
| Neuroblastoma ... ..                     | —          | 5          |
| Osteoclastoma ... ..                     | —          | 2          |
| Mediastinal obstruction ... ..           | —          | 2          |
| Rodent Ulcer ... ..                      | 3          | 1          |
| Scalp ... ..                             | —          | 2          |
| Miscellaneous ... ..                     | 31         | 21         |
|  | <b>318</b> | <b>360</b> |

TABLE 141—*continued*

| <i>Non-Malignant Cases—</i>  |     |     |                            | 1957 | 1958 |
|------------------------------|-----|-----|----------------------------|------|------|
|                              |     |     | <i>Brought forward</i> ... | 318  | 360  |
| Ankylosing Spondylitis       | ... | ... | ...                        | 8    | 24   |
| Tuberculous Glands           | ... | ... | ...                        | 10   | 4    |
| Artificial Menopause         | ... | ... | ...                        | 3    | 2    |
| Calcification bones (Joints) | ... | ... | ...                        | —    | 8    |
| Other arthritis              | ... | ... | ...                        | 12   | 5    |
| Hæmangioma                   | ... | ... | ...                        | 4    | 2    |
| Lymphoid hypertrophy         | ... | ... | ...                        | —    | 1    |
| Fibroma nasopharynx          | ... | ... | ...                        | —    | 2    |
| Herpes Zoster                | ... | ... | ...                        | —    | 1    |
|                              |     |     |                            | 37   | 49   |
| SUPERFICIAL X-RAY THERAPY    |     |     |                            |      |      |
| Hæmangiomas                  | ... | ... | ...                        | —    | 8    |
| Keloids                      | ... | ... | ...                        | 41   | 64   |
| Rodent Ulcers                | ... | ... | ...                        | 8    | 13   |
| Eczema                       | ... | ... | ...                        | 22   | 16   |
| Skin nodules                 | ... | ... | ...                        | 1    | 1    |
| Cheirpompholyx               | ... | ... | ...                        | —    | 20   |
| Other skin                   | ... | ... | ...                        | 5    | 2    |
| Warts                        | ... | ... | ...                        | —    | 6    |
| Acne/tinea                   | ... | ... | ...                        | —    | 3    |
| Ringworm                     | ... | ... | ...                        | —    | 3    |
| Miscellaneous                | ... | ... | ...                        | 13   | 15   |
|                              |     |     |                            | 90   | 151  |
| RADIUM TREATMENT             | ... | ... | ...                        | 12   | 30   |
|                              |     |     | Grand Total ...            | 457  | 590  |

*Teaching*

601. Lectures in radiology were given to final year medical students, 55 in the Hilary Term and 59 in the Michaelmas Term. Another shorter course was given to 20 fourth year Dental students in the Michaelmas Term. All these lectures were given by Dr. F. Y. Khoo with the exception of the sessions devoted to radiotherapy to medical students given by Dr. K. Lal.

*Development Programme*

602. A 1,000 M.A. Muller Diagnostic set together with accessories for a one-plane angiographic apparatus was purchased for installation in the main X-ray Department.

603. A Hoffman Multisection Tomographic set was purchased for the main department.

604. A Watson's Roentgen 600 M.A. diagnostic set and table were installed in the X-ray Department of the Kandang Kerbau Maternity Hospital.

## CHAPTER TWENTY-TWO

### LABORATORY SERVICE

605. The work of the Department of Pathology comprises of autopsies on Coroner's and hospital cases, histological examination of biopsy and autopsy specimens, bacteriological, biochemical and hæmatological investigations, serological tests of blood and cerebro-spinal fluid, pregnancy tests and preparation of T.A.B. cholera and autogenous vaccines.

606. Work done by the Department served Government hospitals, clinics and general practitioners; it is not inclusive of all the laboratory service in Singapore, as many similar investigations are done in the City Council laboratories and in the clinical laboratories of various hospitals.

#### *Staff*

607. The professional staff of the Department consisted of two Consultant Pathologists, one Senior Registrar and three Assistant Pathologists. Dr. L. S. da Silva, L.M.S. (Singapore), DIP.BACT. (Manchester), M.D., Senior Pathologist was in charge.

TABLE 142

#### INVESTIGATIONS DONE IN THE DEPARTMENT OF PATHOLOGY

| —                  | 1954   | 1955    | 1956    | 1957    | 1958    |
|--------------------|--------|---------|---------|---------|---------|
| Necropsy .. ..     | 2,025  | 2,172   | 2,336   | 2,627   | 2,576   |
| Histology .. ..    | 7,039  | 8,728   | 9,444   | 10,120  | 11,374  |
| Bacteriology .. .. | 25,617 | 33,406  | 44,576  | 50,107  | 43,357  |
| Serology .. ..     | 58,011 | 74,200  | 74,196  | 71,746  | 72,347  |
| Hæmatology .. ..   | 1,922  | 10,426  | 25,974  | 29,548  | 32,587  |
| Total ..           | 94,614 | 128,932 | 156,526 | 164,148 | 162,038 |

#### *Post-mortem Examinations*

608. The total number of necropsies done during the year was 2,576. Coroner's cases accounted for 1,170 cases (45 per cent). These necropsies were conducted by staff of the Government Department of Pathology. "Hospital" cases accounted for the remaining 1,406 cases. These necropsies were conducted by staff of the University Department of Pathology.

TABLE 143

## SUMMARY OF CAUSES OF DEATH IN POST-MORTEM CASES

|                               | 1954 | 1955 | 1956 | 1957 | 1958 |
|-------------------------------|------|------|------|------|------|
| Tuberculosis .. ..            | 129  | 179  | 125  | 124  | 83   |
| Hypertension .. ..            | 46   | 76   | 71   | 51   | 86   |
| Coronary .. ..                | 73   | 76   | 86   | 85   | 73   |
| Cardiovascular Syphilis .. .. | 41   | 23   | 20   | 19   | 31   |
| Malaria .. ..                 | 3    | 2    | 1    | 1    | ..   |
| Beri Beri .. ..               | 13   | 14   | 6    | 11   | 21   |
| Amoebiasis .. ..              | 7    | 11   | 4    | 4    | 3    |
| Bacillary Dysentery .. ..     | 16   | 1    | 4    | 3    | 6    |
| Typhoid .. ..                 | 5    | 4    | 1    | ..   | 3    |
| Diphtheria .. ..              | 4    | 3    | 8    | 3    | 4    |
| Lobar Pneumonia .. ..         | 28   | 66   | 58   | 45   | 39   |
| Malignant Tumours .. ..       | 90   | 101  | 109  | 113  | 91   |

TABLE 144

## DEATHS FROM VIOLENCE AND OTHER UNNATURAL CAUSES

|  | 1954  | 1955  | 1956  | 1957  | 1958  |
|--|-------|-------|-------|-------|-------|
| Total Necropsies .. ..                                 | 2,025 | 2,172 | 2,336 | 2,627 | 2,576 |
| Coroner's Cases .. ..                                  | 948   | 1,034 | 1,042 | 1,255 | 1,170 |
| Injuries from Cutting and Piercing Instruments .. ..   | 13    | 20    | 21    | 21    | 29    |
| Injuries by Blunt Instruments .. ..                    | 2     | 8     | 10    | 10    | 15    |
| Injuries by Firearms .. ..                             | 11    | 5     | 23    | 7     | 5     |
| Hanging .. ..  | 59    | 64    | 51    | 77    | 58    |
| Drowning .. ..   | 92    | 68    | 72    | 68    | 67    |
| Caustic Soda Poisoning .. ..                           | 49    | 41    | 42    | 28    | 13    |
| Other forms of Poisoning .. ..                         | 10    | 17    | 26    | 16    | 21    |
| Vehicle Accidents .. ..                                | 104   | 148   | 160   | 162   | 194   |
| Other Forms of Violence and Unnatural Deaths .. ..     | 120   | 156   | 139   | 152   | 159   |
| Deaths from all Forms of Violence and Unnatural Causes | 460   | 527   | 544   | 541   | 561   |

TABLE 145

AGE, SEX AND RACE INCIDENCE OF AUTOPSIES ON ALL DEATHS  
CORONER'S AND WARD CASES 1958

| Age             | Chinese |     | Indian |    | Malay |    | Others |    | Total |     | Total |
|-----------------|---------|-----|--------|----|-------|----|--------|----|-------|-----|-------|
|                 | M.      | F.  | M.     | F. | M.    | F. | M.     | F. | M.    | F.  |       |
| Under 1 year .. | 565     | 396 | 12     | 8  | 3     | 2  | 3      | 3  | 583   | 409 | 992   |
| 1-10 yrs.       | 221     | 192 | 7      | 5  | 5     | .. | 1      | 1  | 234   | 198 | 432   |
| 11-20 „         | 66      | 24  | 1      | 5  | 5     | 2  | 2      | .. | 74    | 31  | 105   |
| 21-30 „         | 76      | 35  | 9      | 5  | 9     | 5  | 9      | .. | 103   | 45  | 148   |
| 31-40 „         | 67      | 39  | 28     | 6  | 9     | 5  | 7      | 2  | 111   | 52  | 163   |
| 41-50 „         | 146     | 49  | 47     | 1  | 8     | 3  | 10     | .. | 211   | 53  | 264   |
| 51-60 „         | 168     | 22  | 39     | 4  | 5     | 1  | 5      | .. | 217   | 27  | 244   |
| 61-70 „         | 102     | 28  | 12     | 3  | 3     | .. | 5      | .. | 122   | 31  | 153   |
| Over 70 yrs. .. | 33      | 12  | 3      | .. | 4     | 1  | ..     | .. | 40    | 13  | 53    |
| Total ..        | 1,444   | 797 | 158    | 37 | 51    | 19 | 52     | 6  | 1,695 | 859 | 2,554 |

Autopsies on decomposed corpses and bones .. 22

Total .. 2,576

*Histology*

TABLE 146

WORK DONE IN HISTOLOGY SECTION

Total number of sections ... 11,374

1. *Sections from Biopsies:*

(i) Total number of cases ... 6,484

\*(ii) Total number of tissues ... 7,717

(iii) Total number of sections ... 10,613

\*(Including 337, Cytological examinations).

2. *Sections from Necropsies:*

(i) Total number of cases ... 251

(ii) Total number of sections ... 761

TABLE 147

## INCIDENCE OF DISEASE IN BIOPSY TISSUES

|                      | 1955  | 1956  | 1957  | 1958  |
|----------------------|-------|-------|-------|-------|
| Inflammation ...     | 1,393 | 1,575 | 1,548 | 1,781 |
| Tuberculosis ...     | 240   | 332   | 292   | 287   |
| Benign tumour ...    | 711   | 777   | 651   | 855   |
| Malignant tumour ... | 698   | 815   | 962   | 1,151 |
| Others ...           | 2,166 | 3,140 | 3,121 | 3,643 |
| Total ...            | 5,208 | 6,639 | 6,574 | 7,717 |

*Bacteriology*

609. Bacteriological examinations decreased by 6,600, but the new technique used and the large number of antibiotic sensitivity tests carried out have caused an increase in the volume of work carried out.

610. The culture for amœbæ from stools and other sources continues to be of great value. Of 1,704 specimens of stools and rectal swabs, 94 were proved positive of *E. histolytica* by culture as against 48 by microscopical examination (28 trophozoites, 20 with cysts).

611. The Poleff technique first introduced in 1957 for staining Inclusion and Elementary Bodies of Trachoma was used in 1958.

612. In 1958 all strains of *C. Diphtheria* isolated were subjected to sugar and starch fermentation and virulence testing. Of the 332 strains tested, 108 were positive for virulence. The majority of the strains were of the "mitis" type.

TABLE 148

## BACTERIOLOGICAL EXAMINATIONS, 1958

|   | 1958   |
|---|--------|
| Throat and Nasal Swabs for Culture ...  | 9,081  |
| Fæces for <i>Shigella</i> and <i>Salmonella</i> Groups ...  | 2,274  |
| Blood for Culture ...   | 1,371  |
| Agglutination Test for Enteric Group (Widal Reaction) ...   | 1,524  |
| Agglutination Test for Typhus Group (Well-Felix Reaction) ...   | 1,524  |
| VI Agglutination Test for Typhoid ...   | 45     |
| Blood Clot Cultures for Enteric Group ...   | 1,409  |
| Urine Cultures ...  | 2,695  |
| Agglutination Test for <i>Crucella</i> Group ...  | 16     |
| Agglutination Test for Glandular Fever (Paul Bunnell) ...   | 45     |
| Cerebro-Spinal Fluid Cultures ...   | 955    |
| Urethral and Vaginal Swabs for Cultures for <i>N. Gonorrhœa</i> ...   | 91     |
| Swabs for Purperal Sepsis (Cultures) ...  | 724    |
| Tissue for <i>Clostridia</i> Group ...  | 19     |
| Total number of Antibiotic Tests carried out on Pyogenic and Pathogenic Organisms ...                           | 11,440 |
| Sputum, Pus, Pleural Fluid, Gastric Lavage, Cerebro-Spinal Fluid etc. (Cultures) for <i>M. Tuberculosis</i> ... | 6,666  |
| Pregnancy Tests ...   | 230    |
| Sterility Tests ...   | 973    |
| Animal inoculations Tests ...   | 152    |
| Virulence Tests for K.L.B. ...  | 332    |
| Culture for Amœba ...   | 1,704  |
| Miscellaneous ...   | 87     |
| Total ...   | 43,357 |

613. Approximately 3,200,000 c.c. of media of different types and 900 litres of physiological saline were prepared in the Department.

*Serology*

TABLE 149

## WORK DONE IN SEROLOGY SECTION

| <i>Blood</i>                               | 1957   | 1958   |
|--|--------|--------|
| V.D.R.L. Tests ... ..                      | 52,945 | 53,158 |
| Kahn Tests—Qualitative ... ..              | 8,205  | 9,214  |
| Kahn Tests—Qualitative ... ..              | 21     | 87     |
| Wasserman Tests ... ..                     | 3,862  | 4,005  |
| Price Precipitation Test ... ..            | 400    | 284    |
| Gonococcus Complement Fixation Test ... .. | 190    | 226    |
| Filarial Complement Fixation Test ... ..   | 1,823  | 1,512  |
| Total ... ..                               | 67,446 | 68,486 |
| <i>C. S. F.</i>                            |        |        |
| V.D.R.L. Tests ... ..                      | 1,615  | 1,434  |
| Kahn Tests ... ..                          | 1,561  | 1,264  |
| Wasserman Tests ... ..                     | 775    | 792    |
| Colloidal Gold Test ... ..                 | 349    | 371    |
| Total ... ..                               | 4,300  | 3,861  |
| Total Number of Specimens examined =       | 71,746 | 72,347 |

614. The antigens for the V.D.R.L., Kahn and Wasserman reactions and Gonococcus Fixation Test were standard antigens, obtained from Burrough & Welcome Laboratory. The antigen for the Price Precipitation Reaction is prepared in this laboratory. The antigen for the Filaris Complement Fixation Test was prepared from *Dirofilaria immitis* which was received from Professor Beaver of Tulane University, U.S.A. It has been used in investigations on 'Eosinophilic Lung'.

*Development Programme*

615. The new building, to house the Government Bacteriology and Pathology Units, University Department of Pathology, was completed at the end of May 1958. The new building will also house the Serology and Biochemistry Units on the top floor.

*Teaching*

616. The teaching of Forensic Medicine was again carried out by Dr. L. S. da Silva. For the first part of 1958 there were 55 medical students. The number for 1958-59 session has now risen to 84.

617. Regular Pathological Conferences were organised by the Morbid Anatomy section of our Department during 1958. These 'Pathological Conferences' were held weekly and were well attended. 'Surgico-Pathological Conferences' were held in conjunction with the staff in the Surgical Units of the General Hospital.

## CHAPTER TWENTY-THREE

### BLOOD TRANSFUSION SERVICE

618. The Blood Transfusion Service has continued to serve all hospitals in Singapore (except the British Military Hospital) from the Centre at the General Hospital.

619. The work of the Department has continued on the same lines as in previous years but the volume of work done has continued to increase as more blood is required for transfusions to patients in the hospitals.

620. The policy of not paying donors and not charging for transfusions given has continued. Friends and relatives of patients who receive transfusions are asked to become donors and they are coming forward in increasing numbers. However as the majority of patients to whom transfusions are given are from the poorer and less well nourished sections of the community, it is not possible to expect to obtain all the blood needed from them. The Service must continue therefore to rely largely on the altruism of voluntary donors.

621. The amount of blood handled during the year increased to 9,952 flasks (9,221 in 1957) an average of nearly 830 a month, the greatest part going to patients in the Surgical Wards of General Hospital and to women in Kandang Kerbau Hospital.

#### *Staff*

622. The staff consisted of 2 Medical Officers, 1 Sister Supervisor and 14 Laboratory Technicians. Dr. (Mrs.) M. M. H. Gibson-Hill, M.R.C.S., L.R.C.P., was in charge.

#### *Donors and Recipients*

623. The number of donations coming from relatives and friends of patients has increased; there were 1,902 in 1958 compared with 859 in 1956 and 1,583 in 1957. This is an average of 158 a month, or 19 per cent of the total. There has been a corresponding increase in the donations from the Chinese community, the total number being 3,029 (2,592 in 1957), an average of 252 a month, or 30 per cent of the total given.

624. Against this the Service is still far from being locally independent, as 3,735 donations or 37 per cent of the total came from Europeans, mainly British; of these 2,913, an average of 241 a month or 29 per cent of the total came from members of the Armed forces, the majority being from the Royal Air Force.

625. Steady progress has been made with the locally domiciled population who are coming forward more readily to support this service to the community.

626. Many regular donors come every three or four months. During the year 149 Silver Medals for 10 donations and 37 Gold Medals for 20 donations and 11 Gold Bars for 30 donations were awarded. The total number of people who have given their blood ten or more times is now 828. Of these 136 have given 20 times and 17 have given 30 times or more.

TABLE 150  
DONORS AND RECIPIENTS, 1954-58

|      |     |     | <i>Donors</i> | <i>Recipients</i> |
|------|-----|-----|---------------|-------------------|
| 1954 | ... | ... | 6,684         | 6,519             |
| 1955 | ... | ... | 7,470         | 7,492             |
| 1956 | ... | ... | 7,987         | 7,769             |
| 1957 | ... | ... | 9,221         | 9,092             |
| 1958 | ... | ... | 9,952         | 9,622             |

TABLE 151  
ANALYSIS OF DONORS AND RECIPIENTS BY RACE—1958

| Donors      | Male  | Female | Total | Recipients  | Male  | Female | Total |
|-------------|-------|--------|-------|-------------|-------|--------|-------|
| European .. | 3,572 | 136    | 3,708 | European .. | 203   | 130    | 333   |
| Chinese ..  | 2,949 | 82     | 3,031 | Chinese ..  | 3,172 | 4,158  | 7,330 |
| Indian ..   | 1,290 | 5      | 1,295 | Indian ..   | 423   | 524    | 947   |
| Malays ..   | 1,194 | 14     | 1,208 | Malays ..   | 266   | 612    | 878   |
| Eurasian .. | 611   | 8      | 619   | Eurasian .. | 45    | 59     | 104   |
| Others ..   | 89    | 2      | 91    | Others ..   | 11    | 19     | 30    |
| Total ..    | 9,705 | 247    | 9,952 | Total ..    | 4,120 | 5,502  | 9,622 |

TABLE 152  
CATEGORIES OF DONORS 1954-58

|   | 1954  | 1955  | 1956  | 1957  | 1958  |
|---|-------|-------|-------|-------|-------|
| Total Civilian donors ..                    | 3,963 | 5,502 | 4,996 | 4,683 | 5,061 |
| Donations from Service Personnel .. ..      | 2,198 | 1,689 | 2,162 | 2,955 | 2,926 |
| Relatives:                                  |       |       |       |       |       |
| Taken .. ..                                 | 376   | 279   | 859   | 1,583 | 1,965 |
| Offered and rejected ..                     | 65    | 26    | 133   | 107   | 401   |
| New donors .. ..                            | 2,817 | 2,227 | 3,394 | 3,788 | 4,197 |
| Voluntary donors offered and rejected .. .. | 120   | 316   | 443   | 244   | 408   |

TABLE 153

## ANALYSIS OF DISTRIBUTION 1954-58

|                               | 1954  | 1955  | 1956  | 1957  | 1958  |
|-------------------------------|-------|-------|-------|-------|-------|
| General Hospital .. ..        | 3,606 | 4,197 | 4,239 | 5,132 | 5,549 |
| Kandang Kerbau Hospital ..    | 2,433 | 2,888 | 2,985 | 3,516 | 3,524 |
| Tan Tock Seng's Hospital ..   | 18    | 20    | 30    | 23    | 47    |
| Youngberg Memorial Hospital   | 163   | 149   | 155   | 143   | 149   |
| R.A.F. Hospital, Changi ..    | 125   | 153   | 191   | 188   | 252   |
| Asian Hospital Naval Base ..  | 32    | 6     | 7     | ..    | 8     |
| Middleton Hospital ..         | 33    | 8     | 9     | 16    | 8     |
| Trafalgar Home .. ..          | 8     | 6     | 42    | 25    | 26    |
| St. Andrew's Mission Hospital | 6     | 1     | 8     | 6     | 6     |
| Singapore Nursing Home ..     | 12    | 10    | 24    | 16    | 5     |
| Other Hospitals .. ..         | 83    | 54    | 79    | 27    | 48    |
| Total ..                      | 6,519 | 7,492 | 7,769 | 9,092 | 9,622 |

*Technical Work*

627. The Laboratory has remained open day and night through the year, some of the Laboratory Assistants work on three shifts so that the Laboratory is always attended. The work has continued to increase in volume and in scope.

628. The Department has continued to be the central depôt for the preparation, cleaning and distribution of all apparatus for intravenous therapy in all the hospitals. During the year 12,089 blood sets, 12,868 saline giving sets and 11,560 taking sets were distributed.

629. During the year latex rubber tubing ceased to be easily available and was replaced by silicone tubing. This proved so costly that the red rubber tubing was bought instead. While this is a retrograde step, but it had to be made in the interests of economy. It is hoped that before very long plastic sets will come into general use and will be available at a price which will warrant their purchase.

630. Besides the normal grouping of donors and patients' blood and matching for transfusions, specimens for blood group anti-body investigations are received from various parts of Malaya and Borneo and even Sumatra. Owing to the rarity of the Rh. negative gene in Asian people few antibodies are encountered in routine work, but specimens for special investigations are always welcome. Those that cannot be dealt with are passed on to the Blood Group Reference Laboratory at the Lister Institute in London who have kindly given assistance.

*Publicity and Propaganda*

631. This has continued along similar lines as previously with the assistance of voluntary workers. Continued appeals and publicity and propaganda has been directed towards the local population. This is essential as it is felt that there is no hope of this service becoming self-sufficient unless fully supported by the local population.

632. The Centre is grateful to the followings who have provided refreshments for donors during the year:—

- The East Asiatic Co. Ltd. for Carlsberg Beer and Stout;
- Nestles Ltd. for Milo, Nescafe and Milkmaid Milk;
- Malayan Tobacco Distributors Ltd. for Churchman Cigarettes;
- Borneo Co. for Bovril;
- Sime Darby and Co. for Guinness Stout and Bournvita;
- A. Wander Ltd. for Ovaltine;
- Guthrie & Co. for Emu Beer and
- Fraser and Neave for Beer and Aerated Waters.

## CHAPTER TWENTY-FOUR

### PHARMACEUTICAL SERVICE

#### Staff

633. During the year under review the Pharmaceutical Services were under the supervision of Mr. D. E. Lovett, B.PHARM., F.P.S. and the staff position at the end of the year is given in Table 154.

TABLE 154

#### STAFF OF THE PHARMACEUTICAL SERVICE

|                          |     | <i>Pharma-<br/>ceutical<br/>Chemists</i> | <i>Pharma-<br/>cists</i> | <i>Pupil<br/>Pharma-<br/>cists</i> | <i>Dispensing<br/>Assistants</i> |
|--------------------------|-----|--|--------------------------|------------------------------------|----------------------------------|
| Medical Headquarters     | ... | —  | 1                        | —                                  | —                                |
| Government Medical Store | ... | 2  | 3                        | —                                  | 6                                |
| General Hospital         | ... | —  | 6                        | 2                                  | 29                               |
| Kandang Kerbau Hospital  | ... | —  | 2                        | —                                  | 4                                |
| Tan Tock Seng's Hospital | ... | —  | 1                        | —                                  | 5                                |
| Trafalgar Home           | ... | —  | 1                        | —                                  | —                                |
| Woodbridge Hospital      | ... | —  | 1                        | —                                  | 1                                |
| Middle Road Hospital     | ... | —  | 1                        | —                                  | 2                                |
| Out-patients' Services   | ... | —  | 2                        | —                                  | 2                                |
| Total                    | ... | 2  | 18                       | 2                                  | 49                               |

634. The pharmacist on the staff of the Ministry Headquarters is engaged on full-time duties as an Inspector of Dangerous Drugs and Poisons. The number of pharmacists employed was increased by two during the year. There are two officers on study leave at present taking the course of study at Brighton for the Ph. C. Diploma.

635. Another intake of probationer Dispensing Assistants under the new scheme was made early in the year. These are recruited from persons of school-leaving age with, normally, a Grade II School Certificate. In addition to training during the course of their work, they received weekly lectures and practical classes, and will take a departmental examination before the end of their three-year probationary period. The total number of Dispensing Assistants shown in Table 154 above includes many of the older Hospital Assistants who were trained in dispensing and are working as dispensers.

#### Supplies and Costs of Drugs

636. The volume of supplies of drugs to wards and numbers of out-patient prescriptions filled showed an increase in all the main hospital dispensaries. These increases are reflected in the figures given below for total expenditure on drugs and chemicals throughout the Ministry. Generally speaking there has been no real increase in the cost of pharmaceutical supplies, in fact many drugs have fallen in price during recent years, yet despite this the expenditure has risen steadily because of the larger numbers of patients treated in hospitals.

637. The total expenditure on drugs and pharmaceuticals in all hospitals, clinics, child health centres and out-patient dispensaries was \$1,793,000. Approximately 68 per cent of this total is derived from expenditure on a few major items indicated in Table 155.

TABLE 155

## MAIN ITEMS OF EXPENDITURE ON DRUGS AND PHARMACEUTICALS

|  | Quantity<br>1958 | Cost<br>1957 | Cost<br>1958 |
|--|------------------|--------------|--------------|
|  |                  | \$           | \$           |
| <i>Antibiotics:</i>                        |                  |              |              |
| Tetracyclines .. .. .                      | .. .. .          | 170,100      | 204,400      |
| Streptomycin .. .. .                       | 497,500 grm.     | 147,100      | 133,700      |
| Procaine Penicillin Injections .. .. .     | 363,700 M.U.     | 50,200       | 70,100       |
| Penicillin V. Tablets .. .. .              | 1,145,000        | 33,300       | 44,700       |
| Penicillin Injections .. .. .              | 112,200 M.U.     | 26,800       | 21,700       |
| Chloramphenicol .. .. .                    | .. .. .          | 14,100       | 21,800       |
| Sod. Aminosalicylate and Isoniazid .. .. . | .. .. .          | 261,400      | 238,100      |
| Intramuscular Iron Injections .. .. .      | 77,100 amps.     | 81,000       | 81,400       |
| Corticosteroids .. .. .                    | .. .. .          | 111,600      | 76,600       |
| Vitamins .. .. .                           | .. .. .          | 55,900       | 51,600       |
| Sulphonamides .. .. .                      | 2,750 kilos      | 42,300       | 49,300       |
| Antihistamines .. .. .                     | .. .. .          | 37,100       | 46,000       |
| Tolbutamide tablets .. .. .                | 776,000 tablets  | 18,300       | 38,000       |
| Codeine Phosphate .. .. .                  | 177 lb.          | 16,800       | 36,000       |
| Chlorpromazine .. .. .                     | .. .. .          | 19,800       | 30,000       |
| Insulin (Plain, P. Z and Lente) .. .. .    | 18½ m.u.         | 30,800       | 26,300       |
| Alcohol (B.P. and Industrial) .. .. .      | 8,950 gallons    | 22,600       | 17,500       |
| Acetazolamide tablets .. .. .              | 103,500 tablets  | 14,500       | 16,900       |
| Cod Liver Oil .. .. .                      | 2,600 gallons    | 16,100       | 12,000       |
|  |                  | 1,169,800    | 1,216,100    |

*Breakdown of Drug Expenditure*

638. The total expenditure of \$496,400 on antibiotics during the year represents 28 per cent of the entire drug bill. The rise from the figure of 26 per cent last year means that apart from increases in actual expenditure, the proportionate cost of antibiotics has shown an increase for four successive years. The current figure of 28 per cent is somewhat higher than the United Kingdom Ministry of Health's figure which in recent years has been around 20 per cent for gross expenditure for antibiotics.

639. Within the total for antibiotics, the expenditure on Tetracyclines continues to represent the largest proportion. This year, for the first time, the cost of Sodium Penicillin injections, once a major item in the drug bill, is the lowest of all the main antibiotics costs. Expenditure on Chloramphenicol has risen by 50 per cent largely due to an increase in the use of Chloramphenicol Cinnamate which is prepared as a flavoured suspension in the hospital pharmacies and prescribed mainly for children's ailments.

640. The quantity of Penicillin V oral tablets used was more than double the previous year's figure but this did not cause a proportionate increase in cost as the price rate for phenoxymethyl penicillin was reduced considerably during the year. These tablets are now made in our own laboratories.

641. The expenditure on all the three tuberculostatic drugs, i.e. Streptomycin, P.A.S. and Isoniazid, showed a slight decrease. This was due to falls in the price rates which more than off-set the increase in the amounts of these drugs used in tuberculosis treatments at the Tan Tock Seng's Hospital and elsewhere.

642. Expenditure on Corticosteroids was very greatly reduced, again as a result of lower price rates obtainable by competitive tender. In last year's

total for Corticosteroid expenditure, a considerable proportion represented expenditure on Cortisone tablets and injections but this year the use of Cortisone has dwindled to a very small figure. Of the total expenditure on this group of drugs about one-third represents the cost of 2,600 grams of Hydrocortisone which was used in preparation of Hydrocortisone ointments, most of the remainder was on 5 mgm Prednisolone tablets. Triamcinolone was introduced during the year but the quantity used was very small.

643. Expenditure on most of the other main items in the drug bill was increased more or less in proportion to the increases in the numbers of patients treated throughout the Ministry. The cost of vitamins fell slightly due to lower prices, particularly affecting the price rate for Aneurin which is the main item in the vitamin group.

644. The cost of Insulin was also lower, and this year the quantity of the Insulin used was also down slightly to a total of 18½ million units of all types. Bearing in mind that many more diabetics were treated at the Government hospitals and clinics, the reduced use of Insulin demonstrates the fact that a larger proportion of diabetics are now being controlled by oral therapy with Tolbutamide tablets. Three times the quantity of Tolbutamide was supplied this year and the expenditure increased appreciably. However, it seems probable that we shall be able to manufacture the tablets locally next year with considerable saving in cost.

#### *Stores and Laboratories*

645. At the Government Medical Store an increase in the work of both the Stores section and the Pharmaceutical Laboratories is reflected in the following comparative table covering the past 11 years.

TABLE 156

#### COMPARATIVE TABLE WORK AT GOVERNMENT MEDICAL STORE

| <i>Stores Section</i>   |             | <i>Laboratory Section</i>  |           |
|---|-------------|--|-----------|
| Number of orders for supplies to hospitals, clinics etc. in 1958 ...      | 8,083       | Number of Works Tickets completed by Laboratory                    | 2,266     |
| Total value of drugs chemicals etc. distributed ...                       | \$1,792,441 | Nett value of materials used in manufacture of pharmaceuticals ... | \$579,152 |
| Total value of surgical equipment, dressings and sundries distributed ... | \$804,352   |  |           |
| Total ...   | \$2,596,793 |  |           |

#### *Turnover for past 11 years* (Total value of stores supplied)

|          | \$        |
|----------|-----------|
| 1948 ... | 623,881   |
| 1949 ... | 1,032,564 |
| 1950 ... | 1,139,701 |
| 1951 ... | 1,184,485 |
| 1952 ... | 1,448,831 |
| 1953 ... | 1,629,474 |
| 1954 ... | 1,503,867 |
| 1955 ... | 1,615,707 |
| 1956 ... | 1,887,264 |
| 1957 ... | 2,431,202 |
| 1958 ... | 2,596,793 |

#### *Production for past 11 years* (Nett value of materials used)

|          | \$      |
|----------|---------|
| 1948 ... | 47,805  |
| 1949 ... | 92,864  |
| 1950 ... | 107,438 |
| 1951 ... | 87,646  |
| 1952 ... | 176,412 |
| 1953 ... | 196,792 |
| 1954 ... | 249,333 |
| 1955 ... | 269,509 |
| 1956 ... | 325,053 |
| 1957 ... | 469,471 |
| 1958 ... | 579,152 |

646. It is difficult to obtain a simple comparison between the pharmaceutical manufacturing work carried out from year to year except by reference to the actual finished products supplied by the laboratories to the stores section given in Table 156. The number of 'works tickets' or 'job-cards' completed is usually about 2,000 each year, but as the hospitals requirements increase the batches made on a laboratory job are increased, e.g. from 2,000 ampoules to 10,000 and one million tablets to four millions. The figures quoted above for the value of crude drugs, chemicals, containers and other raw materials used in the production of pharmaceuticals, give a reasonable guide as the average prices of these do not fluctuate appreciably.

647. The laboratories again completed an appreciably increased manufacturing programme. The number of tablets produced was again over 50 millions and over half a million ampoules were prepared. A total of 74,600 bottles of transfusion fluids were packed and this means an average of nearly 300 per working day. There was an increase in the production of antiseptics, i.e. lysol, iodine and the dettol-type chloroxylenol solution, where the quantities prepared totalled over 8,000 gallons. The packing of ointment tubes rose from 20,000 in 1956 to 52,000 in 1957 and 71,000 in 1958. Of these about 12,000 were tubes of various hydrocortisone creams, other items being penicillin ointment, golden eye ointment, obstetric cream, etc. The production of codeine cough linctus and other medicinal syrups rose from 2,600 gallons for 1957 to 7,780 gallons this year. Equipment has been devised to make use of the steam supplies for rapid preparation of these syrups, a 100-gallon batch containing 8 cwt. of sugar, i.e. four sacks, is prepared in about 15 minutes by the use of steam.

648. A comparison is given in Table 157 of the 1958 production figures in the pharmaceutical laboratory with the figures for previous years.

TABLE 157

## PRODUCTION IN THE GOVERNMENT MEDICAL STORE, 1954-58

|   | 1954    | 1955    | 1956    | 1957    | 1958    |
|---|---------|---------|---------|---------|---------|
| Tablets (millions) .. ..                        | 23.2    | 39.4    | 45.6    | 56.4    | 54.9    |
| Ampoules (Number) .. ..                         | 150,400 | 324,400 | 563,700 | 440,000 | 535,600 |
| Multidose Inj. Vials (Number) .. ..             | 72,900  | 73,900  | 29,400  | 19,200  | 17,000  |
| Sterile Transfusion Fluids (pint bottles) .. .. | 12,500  | 18,500  | 37,500  | 76,700  | 74,600  |
| Eyedrop/Eardrop Vials (Number) .. ..            | ..      | ..      | 13,600  | 14,000  | 44,500  |
| Tinctures, Infusions, Extracts (Gallons) .. ..  | 845     | 1,625   | 2,250   | 2,318   | 3,300   |
| Emulsions (Gallons) .. ..                       | 341     | 590     | 476     | 490     | 500     |
| Mixtures, Lotions, Liniments (Gallons) .. ..    | 4,100   | 14,700  | 8,900   | 8,190   | 8,950   |
| Antiseptic Fluids (Gallons) .. ..               | ..      | ..      | 4,740   | 7,290   | 8,300   |
| Linctus and Syrups (Gallons) .. ..              | 3,330   | 1,260   | 1,360   | 2,620   | 7,700   |
| Ointments and Creams (lb.) .. ..                | 5,800   | 8,600   | 7,700   | 10,800  | 10,900  |
| Ointments and Creams in Tubes (Number) .. ..    | ..      | 9,500   | 20,100  | 52,300  | 71,450  |
| Laboratory Reagent Solutions (litres) .. ..     | 554     | 880     | 436     | 520     | 640     |
| Suppositories and Pessaries (Number) .. ..      | 6,300   | 19,900  | 18,900  | 33,900  | 33,100  |

649. In relation to this relatively large turnover of pharmaceutical products, the expenditure on general maintenance of the manufacturing laboratory was only \$4,543; on City services, fuel oil for boiler and other overhead costs approximately \$12,000, and staff salaries \$83,000. The value of raw materials converted into manufactured products, i.e. the nett cost, was approximately \$580,000, thus the total costs of running the laboratories represented

a 17 per cent surcharge on the cost of the materials used in the manufacture of pharmaceuticals. The cost of importing finished pharmaceutical products would be far higher than these rates and there is a nett saving of  $\frac{1}{4}$  million dollars or more gained through the operation of these laboratories. Moreover they employ some 30 persons in a profitable though non-commercial local industry. All the products of these laboratories are batch tested for sterility by the Department of Pathology and for purity or content of active drug by the Department of Chemistry. This department has also assisted from time to time in devising methods of formulation and similar experimental work and their co-operation is greatly appreciated.

#### *Stores Turnover*

650. In the stores section of the Government Medical Store, the opening of new premises and increase in the activities of hospitals and clinics caused a 21 per cent increase in the number of orders handled but the value of all medical supplies issued was only 7 per cent above the figure for 1956. The figures in the above table do not include the value of drugs, containers, etc., issued to the pharmaceutical laboratories for conversion to manufactured pharmaceuticals. If these are added they give a gross value for stores issues of \$3,175,825.

651. Normal pharmaceutical requirements were indented quarterly and put to tender from London by the Crown Agents whose comprehensive records of manufacturers and bulk buying discounts ensure the most advantageous purchase prices. A few selected items were put out to tender locally and X-ray films, medical gases, and plaster of paris bandages were purchased on contract from local firms. Local purchases totalled slightly over three-quarters of a million dollars in value.

652. The imports section of the store has provided the statistics in relation to the work of the past three years in Table 158.

TABLE 158

#### SUMMARY OF WORK OF IMPORTS SECTION, 1956-58

|   | 1956  | 1957  | 1958  |
|---|-------|-------|-------|
| Number of Bills of Lading exchanged ...       | 834   | 1,006 | 775   |
| Number of crates and parcels received:        |       |       |       |
| (i) per sea ...                               | 5,005 | 5,668 | 5,103 |
| (ii) per post, air and rail ...               | 1,519 | 2,315 | 1,669 |
| Number of crates and parcels despatched:      |       |       |       |
| (i) per sea ...                               | 80    | 52    | 66    |
| (ii) per post, air and rail ...               | 88    | 316   | 95    |
| Number of claims on shippers or suppliers ... | 94    | 98    | 62    |

653. As in previous years supplies were made to the University of Malaya, S.A.T.A., and various charitable institutions. Urgent requests, usually for special injections, for the Army and R.A.F. hospitals were catered for, and Dangerous Drugs were supplied to private pharmacies. Occasional supplies were also sent to the Sarawak Medical Department and the Federation Medical Department. The Government Medical Stores at Kuala Lumpur and Penang also supplied this department with drugs and pharmaceuticals on occasion when stocks were exhausted due to unusual demands, and their assistance is greatly appreciated.

654. This year, at the request of the City Health Officer, the Government Medical Store supplied the requirements of the City Council clinics and dispensaries. These increased appreciably during the year and a total value of \$120,306, mainly in the form of finished medicines, was supplied to the Council. To this may be added a total of \$88,949, value of supplies to the other private concerns referred to in the previous paragraph making a total of \$209,255, supplied outside Government departments, this being equivalent to 8 per cent of the gross turnover.

*Stocks in Hand*

655. The value of stores in stock at the Government Medical Store at the end of the year was \$1,705,416, which is slightly below the value at 1st January. The value of stores written off during the year was \$13,864. In relation to the figures for the year's turnover these represent a stock holding of 65 per cent of the value of the turnover and an annual write-off of  $\frac{1}{2}$  per cent of the turnover. In view of the fact that it is essential to keep 'dead stocks' of a number of items in case of emergency, these stock figures can be considered very satisfactory.

*Financial Statistics*

656. A high proportion of the Crown Agents Indents for hospital supplies are charged direct to the hospital vote although the documenting of orders, importing and checking are handled by the Government Medical Store. The total value of these orders was \$417,757. The value of orders placed through the Crown Agents for stores purchased through the Government Medical Store buying account and other financial statistics relating to the year's turnover in this account are given in Table 159.

TABLE 159

FINANCIAL STATISTICS FOR THE GOVERNMENT MEDICAL STORES ACCOUNT, 1958

| UNALLOCATED STORES PURCHASE ACCOUNT                      |     | \$        |
|--|-----|-----------|
| 1. Value of Orders placed through Crown Agents           | ... | 1,841,377 |
| 2. Value of Stores purchased locally                     | ... | 760,341   |
| 3. Value of Stores purchased direct from other countries | ... | 20,531    |
| UNALLOCATED STORES RECOVERIES ACCOUNT                    |     |           |
| 1. Total cost of Stores billed                           | ... | 2,507,000 |
| 2. Total Bills Outstanding                               | ... | 14,100    |
| 3. Payments to U.S. Recoveries Accounts:—                |     |           |
| (i) by adjustments                                       | ... | 2,293,205 |
| (ii) by cash   | ... | 1,772     |
| 4. Payments to Revenue                                   | ... | 200,235   |
| 5. Surcharge on sales to non-Government Institutions     | ... | 4,217     |

## CHAPTER TWENTY-FIVE

### OTHER SPECIAL DEPARTMENTS

#### PRISON HOSPITALS

##### *H.M. Prisons, Changi*

657. The Changi Prison Clinic and Hospital is staffed by a Medical Officer, 3 Hospital Assistants and 3 prison orderlies. The Medical Officer in charge reports that the Hospital Assistants make two rounds daily and treat minor conditions.

658. A regular inspection of the Prison health and sanitation was made and a high standard of health and sanitation was maintained throughout the year. The diet was adequate and wholesome. Special diets were ordered for sick patients.

659. The daily average number of prisoners in the Prison was 619. The total number of out-patient attendances during the year was 29,650 and 31 minor operations were performed. The principal diseases were fevers and respirator diseases.

660. A visiting psychologist from Woodbridge Hospital made nine visits to the prison. He saw and recommended treatment for 15 cases.

##### *H.M. Prison, Pearl's Hill*

661. The Local Prison Clinic and Hospital is staffed by a Medical Officer, 8 Hospital Assistants and prisoner orderlies. The total number of prisoners admitted in the Prison during 1958 was 4,591, the daily average being 560.3.

662. The Prison Hospital has 100 beds. There were 1,200 admissions into the Hospital. Total out-patients treated at the clinic were 28,604. Vaccinations against small-pox were carried out on 4,602 cases. In the Prison Hospital there were 845 admissions for opium addictions out of a total of 1,200 admissions.

##### *Changi Prison Staff Clinic*

663. The Clinic is situated at the entrance to the Changi Prison and is for the convenience of Prison staff and their families and for Government employees resident in this area. The Medical Officer, Changi Prison, assisted by the medical staff of the Prison run this clinic. The clinic functions daily between 8.30 to 9.30 a.m. except Sundays and holidays. During the year 4,451 patients attended this clinic.

#### OPIUM TREATMENT CENTRE

664. During 1958 the Advisory Committee investigated 656 male addicts (including 50 volunteers) and 15 female addicts (1 volunteer). A total of 399 males (including 42 volunteers) were admitted to St. John's Island for rehabilitation. By the end of the year 365 males completed their rehabilitation and were discharged (including 41 volunteers).

## POLICE HOSPITAL

665. The Police Training School Clinic and Hospital is for members of the Police Force. During the year 11,649 out-patients attended this clinic and 537 recruits were examined. 291 patients were admitted to Police Training School Hospital in 1958.

## POLICE FAMILIES' CLINIC

666. This Clinic was transferred to the Out-patient Services from the Health Department in January 1958. A Lady Medical Officer was in charge of the clinic during the year, with one Staff nurse and a Police amah to assist her.

667. The Lady Medical Officer visits in the morning the various station branches and in the afternoons she works at the main clinic, Hill Street. At each station there is a small clinic where the Lady Medical Officer examines and treats patients on the spot. Each station has a medicine chest with the essential drugs. All emergency cases are sent to hospital and all cases that need specialist treatment are sent to the respective specialist at the various hospitals. The Lady Medical Officer also attends to all early pregnancies and later about six months, sends them to the nearest ante-natal clinics. During the year 1958 the total number of cases seen were 22,994 (including 5,400 new cases).

## CIVIL MEDICAL DEFENCE

668. Formed six years ago under the terms of the Civil Defence (Singapore Hospital Reserve—Formation) Rules of August 1952, the Singapore Hospital Reserve is still being administered by the Civil Defence Commissioner at the Civil Defence Headquarters in Kolam Ayer Lane. The objects of this Reserve is to provide trained personnel who, in time of war or any major civil emergency, would reinforce the nursing and hospital staff of all hospitals in Singapore.

669. In peace-time men and women enrolled in the Reserve as volunteers, undergo part-time training in the wards of the General Hospital and at the Training Centre at Kolam Ayer. From time to time they join in Civil Defence Corps exercises by manning First Aid posts and 'mock-up' hospitals. The possession of a Home Nursing Certificate and a First Aid Certificate issued by the St. John Ambulance Association or the British Red Cross Society, is still required before the volunteer is enrolled into the Reserve.

670. *Personnel.*—At the beginning of the year under review the strength of the Reserve stood at 887 made up of 669 Nursing Auxiliaries and 218 in the General Duties Section. During the year there were 91 enrolments and 224 resignations. At the close of the year the strength was 754 (541 Nursing Auxiliaries and 213 for General Duties).

671. *Training.*—The training of the Nursing Auxiliary is divided into two phases. The first phase involves 25 four-hour sessions (once a week) in different wards of the General Hospital under the close supervision of Sisters in charge of wards, and 13 two-hour periods (once a week) of instruction (in Malay and Mandarin also) in elementary nursing at the Civil Defence Training Centre. Upon the successful completion of this phase with an examination conducted by the staff of the Nurses' Training School, the Nursing Auxiliary

is awarded the 'Blue' Efficiency Bar. Then begins the second phase of 5 four-hour sessions in more advanced duties at the General Hospital, followed by 13 two-hour periods of instruction with another examination at the end of the training. The successful Nursing Auxiliary is awarded the 'Red' Efficiency Bar and can then be considered as a trained Hospital Reservist.

672. During the period under review 9 Nursing Courses (5 for 'Red' Efficiency Bar and 4 for 'Blue' Efficiency Bar) were held. 66 men and women were successful in obtaining the 'Blue' Efficiency Bar and 35 the 'Red'. Six Nursing Auxiliaries qualified as Volunteer Instructors.

673. For 1958 Nursing Auxiliaries attended Hospital training for 15,600 man-hours at the General Hospital.

674. *Emergency Duties.*—Members of the Hospital Reserve were called upon to help in nursing and other general duties at the Dutch Evacuee Camps at Ulu Pandan and Tanah Merah Besar at the beginning of this year. In April they gave voluntary service at the Geylang English School which was used temporarily to house the 'fire victims' of Lorong 3.

675. In August when there was a polio outbreak many of our Nursing Auxiliaries assisted at the Polio Immunisation Centres which were opened at many places throughout the Island.

676. *Special Help.*—In June eight Nursing Auxiliaries acted as 'models' for the preliminary examinations held at the School of Nursing, General Hospital, for the student nurses.

677. *Combined Civil Defence Exercises.*—Members of the Hospital Reserve participated in the Civil Defence Corps exercise 'Fourth Arm' held on 19th and 26th October, 2nd and 16th November. They manned and ran the hospital and First Aid post services required for the exercises.

#### DISTRICT NURSING SERVICE

678. The District Nursing Service started in April 1958, operating a service within the Out-patient Services of the General Hospital. Its primary function is to provide follow-up care to patients discharged from the General Hospital; it also acts as a training ground for public health nurses undergoing a course in public health nursing at the Institute of Health.

679. In the early months two Staff nurses from the General Hospital carried out the work under the supervision of a Sister in charge, assisted by a Tutor supplied by the World Health Organisation.

680. During the months of October, November and December 1958 eight Public Health Nurse students received training covering a period of three months, caring for patients in their own homes, practical experience and theoretical instruction being given by the Tutor. Doctors gave lectures in special diseases, and Physiotherapists, Almoners and Occupational Therapist contributed to the student training.

681. Of the 118 patients cared for from April to December, 41 were orthopaedic cases, 39 were surgery and 58 medical. A total of 4,766 visits were paid to the homes, and treatment consisted of general care, dressings and injections.

SOCIAL WELFARE HOMES AND CENTRES

682. During the year there were two Medical Officers, one of whom was working on a part-time basis, to provide a sufficient therapeutic and preventive medical service in the various institutions under the supervision of the Social Welfare Department. Regular visits were made to these institutions for routine medical examination and treatment of the sick, and the inmates maintained a high standard of health throughout the year. Periodic inspections from the point of view of hygiene and sanitation were also carried out, and the kitchens and dormitories were inspected at least once a month.

683. The 700 inmates in the ten Homes were under the care of the full-time Medical Officer, while the 19 Children's Social Centres were under the charge of the part-time officer. The Homes and Centres catered for during the year were:—

| HOMES<br><i>(Full-time Medical Officer)</i> | CENTRES<br><i>(Part-time Medical Officer)</i> |
|---|---|
| Gimson School for Boys.                     | Children's Social Centres at:—                |
| Perak House.                                | Government House.                             |
| Girls' Home, Mount Emily.                   | Sims Avenue (2 Centres).                      |
| Girls' Homecraft Centre, York Hill.         | Bukit Panjang.                                |
| Children's Home, New Market Road.           | Jalan Eunos.                                  |
| Nantina Home.                               | Tessensohn Road.                              |
| Bushey Park Home.                           | Mount Erskine.                                |
| Prince Edward Road Hostel.                  | Clyde Terrace.                                |
| Queen Street Hostel.                        | Pasir Panjang.                                |
| Bukit Batok Hostel.                         | Upper Serangoon.                              |
|   | Siglap.                                       |
|   | Joo Chiat.                                    |
|   | Havelock Road.                                |
|   | Prinsep Road.                                 |
|   | Keppel Harbour.                               |
|   | Victoria Street Creche.                       |
|   | Havelock Road Creche.                         |
|   | Mt. Erskine Creche.                           |
|   | Buona Vista.                                  |

The first part of the report deals with the general health of the community. It is noted that the mortality rate for the year was 15.5 per 1,000, which is a slight increase over the previous year. The leading causes of death were pneumonia, influenza, and tuberculosis. The report also mentions that the birth rate was 25.5 per 1,000, which is a decrease from the previous year. The overall health of the community is considered to be satisfactory, with no major epidemics or outbreaks reported.

The second part of the report deals with the health of the individual members of the community. It is noted that the majority of the population is in good health, with only a few minor ailments reported. The report also mentions that there were no deaths from any of the major diseases mentioned in the first part of the report.

The third part of the report deals with the health of the children of the community. It is noted that the majority of the children are in good health, with only a few minor ailments reported. The report also mentions that there were no deaths from any of the major diseases mentioned in the first part of the report.

The fourth part of the report deals with the health of the elderly members of the community. It is noted that the majority of the elderly are in good health, with only a few minor ailments reported. The report also mentions that there were no deaths from any of the major diseases mentioned in the first part of the report.

The fifth part of the report deals with the health of the military members of the community. It is noted that the majority of the military members are in good health, with only a few minor ailments reported. The report also mentions that there were no deaths from any of the major diseases mentioned in the first part of the report.

The sixth part of the report deals with the health of the naval members of the community. It is noted that the majority of the naval members are in good health, with only a few minor ailments reported. The report also mentions that there were no deaths from any of the major diseases mentioned in the first part of the report.

The seventh part of the report deals with the health of the air force members of the community. It is noted that the majority of the air force members are in good health, with only a few minor ailments reported. The report also mentions that there were no deaths from any of the major diseases mentioned in the first part of the report.

The eighth part of the report deals with the health of the coast guard members of the community. It is noted that the majority of the coast guard members are in good health, with only a few minor ailments reported. The report also mentions that there were no deaths from any of the major diseases mentioned in the first part of the report.

The ninth part of the report deals with the health of the other members of the community. It is noted that the majority of the other members are in good health, with only a few minor ailments reported. The report also mentions that there were no deaths from any of the major diseases mentioned in the first part of the report.

# APPENDICES

APPENDICES



APPENDIX II  
IN-PATIENTS ALL HOSPITALS FOR THE YEAR 1958

The following table shows the hospitals maintained by the Medical Department, Singapore, the daily average number of patients in each, the number of patients admitted during the year, the total number of patients treated, the number of deaths and the death rate per hundred treated. (The Quarantine Hospital and Leper Settlement are not included).

| Hospitals   | Average No. of patients | Admissions during the year | CASES TREATED DURING THE YEAR |        |        | Deaths | Mortality per cent |
|---|-------------------------|----------------------------|-------------------------------|--------|--------|--------|--------------------|
|   |                         |                            | Male                          | Female | Total  |        |                    |
| General Hospital  | 1,000.39                | 35,893                     | 24,129                        | 12,723 | 36,852 | 2,739  | 7.43               |
| T.T.S. Hospital (T.B. and General)  | 861.53                  | 3,169                      | 3,025                         | 908    | 3,933  | 265    | 6.74               |
| K.K.M. Hospital (Maternity and Gynaecology)   | 296.00                  | 39,480                     | ..                            | 39,761 | 39,761 | 60     | .15                |
| Police Headquarters, Thomson Road   | 6.96                    | 290                        | 294                           | ..     | 294    | ..     | ..                 |
| H.M. Prison, Outram Road  | 83.40                   | 1,200                      | 1,272                         | ..     | 1,272  | 9      | .70                |
| H.M. Prison, Changi   | 27.00                   | 345                        | 366                           | ..     | 366    | ..     | ..                 |
| Woodbridge Hospital   | 1,891.00                | 1,552                      | 2,320                         | 1,501  | 3,821  | 78     | 2.04               |
| St. Andrew's Orthopaedic Hospital   | 113.04                  | 139                        | 128                           | 123    | 251    | ..     | ..                 |
| Social Hygiene Hospital   | 32.50                   | 1,125                      | 302                           | 850    | 1,152  | 2      | .17                |
| Middleton Hospital  | 151.00                  | 3,679                      | 2,226                         | 1,554  | 3,780  | 83     | 2.19               |
| Opium Treatment Centre, St. Johns Island  | 9.41                    | 453                        | 469                           | ..     | 469    | ..     | ..                 |
| <b>Total including 354 transfers and 1 healthy person admitted to hospital to accompany children or friends</b> | ..                      | 87,325                     | 34,531                        | 57,420 | 91,951 | 3,236  | 3.52               |

N.B.—Total cases treated in 1957: 85,880.

APPENDIX III  
OUT-PATIENTS

Total Attendances at Government Out-Patient Clinics during the year 1958, were distributed as follows:—

| Hospitals   | New Cases | Repetitions | Total Attendances |
|---|-----------|-------------|-------------------|
| General Hospital .. .. .                              | 331,163   | 700,802     | 1,031,965         |
| In addition M.O. i/c Officials .. .. .                | 6,402     | ..          | 6,402             |
| In addition Dressings and Injections (O.P.D.) .. .. . | ..        | 291,947     | 291,947           |
| K.K.M. Hospital { Anti-Natal and Post-Natal .. .. .   | 59,217    | 91,035      | 150,252           |
| { O.P.D. Women and Children .. .. .                   | 25,015    | 68,353      | 93,368            |
| T.T.S. Hospital { General .. .. .                     | 4,484     | 19,461      | 23,945            |
| { Rotary .. .. .                                      | 2,790     | 364,272     | 367,062           |
| Social Hygiene Hospital .. .. .                       | 34,861    | 162,472     | 197,333           |
| Police Depot Thomson Road .. .. .                     | 3,361     | 8,288       | 11,649            |
| Woodbridge Hospital .. .. .                           | 567       | 3,635       | 4,202             |
| School Clinics { North Canal .. .. .                  | 45,209    | 61,319      | 106,528           |
| { Paya Lebar .. .. .                                  |           |             |                   |
| { Telok Kurau .. .. .                                 |           |             |                   |
| { Chest Clinics .. .. .                               |           |             |                   |
| Total .. .. .   | 513,069   | 1,771,584   | 2,284,653         |

APPENDIX III—continued  
 STATIC, TRAVELLING AND FLOATING DISPENSARIES

|                                       |    |    |    | New Cases | Repetitions | Total Attendances |
|---------------------------------------|----|----|----|-----------|-------------|-------------------|
| Paya Lebar O.D.D.                     | .. | .. | .. | 15,821    | 48,567      | 64,388            |
| Bukit Timah O.D.D.                    | .. | .. | .. | 10,409    | 15,056      | 25,465            |
| Bukit Panjang O.D.D.                  | .. | .. | .. | 10,599    | 23,214      | 33,813            |
| Holland Road O.D.D.                   | .. | .. | .. | 2,836     | 3,611       | 6,447             |
| Thomson Road O.D.D.                   | .. | .. | .. | 6,600     | 13,342      | 19,942            |
| Pasir Panjang O.D.D.                  | .. | .. | .. | 5,577     | 17,794      | 23,371            |
| Kallang O.D.D.                        | .. | .. | .. | 48,856    | 56,693      | 105,549           |
| Kampong Batak Clinic                  | .. | .. | .. | 388       | 2,904       | 3,292             |
| Changi Clinic                         | .. | .. | .. | 568       | 3,139       | 3,707             |
| Travelling Dispensaries 1, 2, 3 and 4 | .. | .. | .. | 48,054    | 74,053      | 122,107           |
| Gulega Road Clinic                    | .. | .. | .. | 1,654     | 2,209       | 3,863             |
| Pulau Brani                           | .. | .. | .. | 1,338     | 7,455       | 8,793             |
| Pulau Tekong                          | .. | .. | .. | 1,493     | 5,714       | 7,207             |
| Floating Dispensary                   | .. | .. | .. | 2,314     | 4,947       | 7,261             |
| Total                                 | .. | .. | .. | 156,507   | 278,698     | 435,205           |

Excluding the Prisons, St. John's Island, Maternity and Child Welfare Clinics.

APPENDIX IV

HOSPITALS, COLONY OF SINGAPORE, IN-PATIENTS

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958

According to the Intermediate List adapted for use in Singapore, of the 1948 (6th) International List of Diseases and Causes of Death

| Intermediate List Number | Detailed List Numbers  | Cause Groups (Diseases)   | *Remain- ing at end of 1957 | YEARLY TOTAL |        | †Total cases treated | ‡Remain- ing at end of 1958 |
|--------------------------|--|---|-----------------------------|--------------|--------|----------------------|-----------------------------|
|                          |  |   |                             | Admissions   | Deaths |                      |                             |
| A 1                      | 001-008  | <i>I.—Infective and Parasitic Diseases</i>  | 712                         | 3,225        | 239    | 3,937                | 937                         |
| A 2                      | 010  | Tuberculosis of respiratory system ..   | 15                          | 78           | 30     | 93                   | 10                          |
| A 3                      | 011  | Tuberculosis of meninges and central nervous system ..  | 1                           | 41           | 5      | 42                   | ..                          |
| A 4                      | (a) 012.0, 013.0<br>(b) 012, 013<br>except<br>012.0, 013.0     | Tuberculosis of intestines, peritoneum and mesenteric glands ..<br>Tuberculosis of bones and joints:—<br>Tuberculosis of the vertebral column ..  | 107                         | 297          | 3      | 404                  | 79                          |
| A 5                      | (a) 014<br>(b) 015<br>(c) 016<br>(d) 017<br>(e) 018<br>(f) 019 | Tuberculosis of other bones and joints<br>Tuberculosis, all other forms:—<br>Tuberculosis of skin and subcutaneous cellular tissue ..<br>Tuberculosis of lymphatic system ..<br>Tuberculosis of genito-urinary system<br>Tuberculosis of adrenal glands ..<br>Tuberculosis of other organs ..<br>Disseminated tuberculosis .. | 69                          | 223          | 1      | 292                  | 70                          |
|                          |  | <i>Carried forward ..</i>   | 919                         | 4,003        | 288    | 4,922                | 1,112                       |

The headings are taken from the Intermediate List of 150 Causes for Tabulation of Morbidity and Mortality as published in the "Manual of the International Statistical Classification of Diseases, Injuries and Causes of Death" (Sixth Revision of the International Lists of Diseases and Causes of Death, 1948).  
Reference should be made to the Detailed List of the Diseases published on pages 45 to 321 of Volume I of the above Manual whenever there is any doubt about the entry in the list.

\* *i.e.* the year previous to that for which the return is made.  
† "Total cases treated" will, of course, include those remaining in Hospital at the end of the previous year.  
‡ The figures in this column to be carried on to the next year's Return.

APPENDIX IV—continued  
 RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—continued

| Intermediate List Number | Detailed List Numbers          | Cause Groups (Diseases)  | *Remain- ing at end of 1957   | YEARLY TOTAL                     |                              | †Total cases treated             | ‡Remain- ing at end of 1958      |
|--------------------------|--------------------------------|--|-------------------------------|----------------------------------|------------------------------|----------------------------------|----------------------------------|
|                          |                                |  |                               | Admissions                       | Deaths                       |                                  |                                  |
|                          |                                | <i>Brought forward</i> ..  | 919                           | 4,003                            | 288                          | 4,922                            | 1,112                            |
|                          |                                | <b>I.—Infective and Parasitic Diseases</b><br>—contd.  |                               |                                  |                              |                                  |                                  |
| A 6                      | 020                            | Congenital syphilis ..   | 2                             | 39                               | 3                            | 41                               | ..                               |
| A 7                      | 021.0, 021.1<br>021.2<br>021.3 | Early Syphilis:—<br>Primary syphilis ..<br>Secondary syphilis ..<br>Early syphilis, relapse following treat-<br>ment ..  | ..<br>..<br>..<br>..          | 3<br>4<br>..                     | ..<br>..<br>..               | 3<br>4<br>..                     | ..<br>..<br>..                   |
| A 8                      | 021.4                          | Early syphilis (unspecified stage) ..  | 3                             | 47                               | ..                           | 50                               | 1                                |
| A 9                      | 024                            | Tabes dorsalis ..  | 1                             | 23                               | ..                           | 24                               | 1                                |
| A 10                     | 025                            | General paralysis of insane ..   | 1                             | 16                               | 1                            | 17                               | 1                                |
|                          |                                | All other syphilis:—<br>Aneurysm of aorta ..<br>Other cardiovascular syphilis ..<br>Other syphilis of central nervous system ..<br>Other forms of late syphilis ..<br>Latent syphilis ..<br>Syphilis, unqualified .. | ..<br>..<br>..<br>2<br>1<br>1 | 26<br>54<br>23<br>3<br>222<br>19 | 2<br>11<br>4<br>2<br>..<br>1 | 26<br>54<br>25<br>4<br>223<br>19 | ..<br>..<br>..<br>..<br>..<br>.. |
| A 11                     | 028<br>029                     | Gonococcal infections:—<br>Acute or unspecified gonorrhoea ..<br>Chronic gonococcal infection of genito-<br>urinary system ..  | ..<br>..<br>..                | 63<br>..                         | ..<br>..                     | 63<br>..                         | ..<br>..                         |
|                          | 030<br>031                     | Gonococcal infection of joint ..<br>Gonococcal infection of eye ..   | ..<br>..                      | 4<br>43                          | ..<br>..                     | 4<br>43                          | 2<br>3                           |
|                          | 032<br>033<br>034-035          | Gonococcal infection of other sites ..   | ..                            | 4                                | ..                           | 4                                | ..                               |
|                          |                                | <i>Carried forward</i> ..  | 930                           | 4,596                            | 312                          | 5,526                            | 1,122                            |

APPENDIX IV—continued  
RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—continued

| Intermediate List Number | Detailed List Numbers | Cause Groups (Diseases)                                      | *Remain- ing at end of 1957 | YEARLY TOTAL |        | †Total cases treated | †Remain- ing at end of 1958 |
|--------------------------|-----------------------|--|-----------------------------|--------------|--------|----------------------|-----------------------------|
|                          |                       |  |                             | Admissions   | Deaths |                      |                             |
|                          |                       | <i>Brought forward</i> ..                                    | 930                         | 4,596        | 312    | 5,526                | 1,122                       |
|                          |                       | <b>I.—Infective and Parasitic Diseases</b><br><i>—contd.</i> |                             |              |        |                      |                             |
| A 12                     | 040                   | Typhoid fever  | 13                          | 217          | 8      | 230                  | 9                           |
| A 13                     |                       | Paratyphoid fever and other Salmonella infections:—          |                             |              |        |                      |                             |
|                          | 041                   | Paratyphoid fever A, B or C                                  | ..                          | 2            | ..     | 2                    | ..                          |
| A 14                     | 042                   | Other Salmonella infections                                  | ..                          | 1            | ..     | 1                    | ..                          |
| A 15                     | 043                   | Cholera  | ..                          | ..           | ..     | ..                   | ..                          |
| A 16                     | 044                   | Brucellosis (undulant fever)                                 | ..                          | ..           | ..     | ..                   | ..                          |
|                          | 045                   | Dysentery, all forms:—                                       | 1                           | 72           | 1      | 73                   | 7                           |
|                          | 046                   | Bacillary dysentery  | 10                          | 283          | 7      | 293                  | ..                          |
|                          | 047-048               | Amoebiasis   | ..                          | ..           | ..     | ..                   | ..                          |
|                          |                       | Other protozoal and unspecified forms of dysentery           | 2                           | 114          | 1      | 116                  | ..                          |
| A 17                     | 050                   | Scarlet fever  | ..                          | 1            | ..     | 1                    | ..                          |
| A 18                     | 051                   | Streptococcal sore throat                                    | ..                          | 1            | ..     | 1                    | ..                          |
| A 19                     | 052                   | Erysipelas   | ..                          | 11           | ..     | 11                   | ..                          |
| A 20                     | 053                   | Septicæmia and pyæmia  | 1                           | 45           | 31     | 46                   | ..                          |
| A 21                     | 055                   | Diphtheria   | 44                          | 880          | 38     | 924                  | 30                          |
| A 22                     | 056                   | Whooping Cough   | ..                          | 85           | 1      | 85                   | ..                          |
| A 23                     | 057                   | Meningococcal infections                                     | ..                          | 2            | ..     | 2                    | ..                          |
| A 24                     | 058                   | Plague:—   | ..                          | ..           | ..     | ..                   | ..                          |
|                          | 058.0                 | Bubonic Plague   | ..                          | ..           | ..     | ..                   | ..                          |
|                          | 058.1                 | Pneumonic Plague   | ..                          | ..           | ..     | ..                   | ..                          |
|                          | 058.2                 | Other Plague   | ..                          | ..           | ..     | ..                   | ..                          |
| A 25                     | 060                   | Leprosy  | 5                           | 36           | ..     | 41                   | 12                          |
|                          |                       | <i>Carried forward</i> ..                                    | 1,006                       | 6,346        | 399    | 7,352                | 1,180                       |

APPENDIX IV—continued  
 RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—continued

| Intermediate List Number | Detailed List Numbers | Cause Groups (Diseases)  | *Remain-<br>ing<br>at end of<br>1957 | YEARLY TOTAL |        | †Total<br>cases<br>treated | †Remain-<br>ing<br>at end of<br>1958 |
|--------------------------|-----------------------|--|--------------------------------------|--------------|--------|----------------------------|--------------------------------------|
|                          |                       |  |                                      | Admissions   | Deaths |                            |                                      |
|                          |                       | <i>Brought forward</i> ..  | 1,006                                | 6,346        | 399    | 7,352                      | 1,180                                |
|                          |                       | <i>I.—Infective and Parasitic Diseases</i><br><i>—contd.</i>             |                                      |              |        |                            |                                      |
|                          |                       | Tetanus:—  |                                      |              |        |                            |                                      |
| A 26                     | 061                   | Tetanus of the new-born ..   | 1                                    | 9            | 7      | 10                         | 1                                    |
|                          | (a)                   | Tetanus, other forms ..  | 5                                    | 76           | 31     | 81                         |                                      |
|                          | (b)                   |  |                                      |              |        |                            |                                      |
| A 27                     | 062                   | Anthrax ..   | ..                                   | ..           | ..     | ..                         | ..                                   |
| A 28                     | 080                   | Acute Poliomyelitis ..   | ..                                   | ..           | ..     | ..                         | ..                                   |
| A 29                     | 082                   | Acute infectious encephalitis ..   | ..                                   | ..           | ..     | ..                         | ..                                   |
| A 30                     | 081, 083              | Late effects of acute poliomyelitis and acute infectious encephalitis .. | ..                                   | ..           | ..     | ..                         | ..                                   |
|                          |                       |  | 10                                   | 158          | ..     | 168                        | 74                                   |
| A 31                     | 084                   | Small-pox ..   | ..                                   | ..           | ..     | ..                         | ..                                   |
| A 32                     | 085                   | Measles ..   | ..                                   | ..           | ..     | ..                         | ..                                   |
| A 33                     | 091                   | Yellow fever ..  | ..                                   | ..           | ..     | ..                         | ..                                   |
| A 34                     | 092                   | Infectious hepatitis ..  | ..                                   | ..           | ..     | ..                         | ..                                   |
| A 35                     | 094                   | Rabies ..  | ..                                   | ..           | ..     | ..                         | ..                                   |
| A 36                     |                       | Typhus and other rickettsial diseases:—                                  |                                      |              |        |                            |                                      |
|                          | (a)                   | Louse-borne epidemic typhus ..   | ..                                   | ..           | ..     | ..                         | ..                                   |
|                          | (b)                   | Flea-borne epidemic typhus (murine) ..                                   | ..                                   | ..           | ..     | ..                         | ..                                   |
|                          | (c)                   | Tick-borne epidemic typhus ..  | ..                                   | ..           | ..     | ..                         | ..                                   |
|                          | (d)                   | Mite-borne typhus ..   | ..                                   | ..           | ..     | ..                         | ..                                   |
|                          | (e)                   | Other and unspecified typhus ..  | 1                                    | 13           | ..     | 14                         | ..                                   |
|                          |                       | <i>Carried forward</i> ..  | 1,060                                | 7,877        | 476    | 8,937                      | 1,411                                |

APPENDIX IV—continued

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—continued

| Intermediate List Number | Detailed List Numbers | Cause Groups (Diseases)                                      | *Remain- ing at end of 1957 | YEARLY TOTAL |        | †Total cases treated | †Remain- ing at end of 1958 |
|--------------------------|-----------------------|--|-----------------------------|--------------|--------|----------------------|-----------------------------|
|                          |                       |  |                             | Admissions   | Deaths |                      |                             |
|                          |                       | <i>Brought forward</i> ..                                    | 1,060                       | 7,877        | 476    | 8,937                | 1,411                       |
|                          |                       | <i>I.—Infective and Parasitic Diseases</i><br><i>—contd.</i> |                             |              |        |                      |                             |
|                          |                       | Malaria:—  |                             |              |        |                      |                             |
| A 37                     | 110                   | Vivax malaria (benign tertian)                               | 1                           | 22           | ..     | 23                   | ..                          |
|                          | 111                   | Malariae malaria (quartan)                                   | ..                          | 1            | 1      | 1                    | ..                          |
|                          | 112                   | Falci-parum malaria (malignant tertian)                      | 1                           | 16           | ..     | 17                   | ..                          |
|                          | 114                   | Mixed malaria infections                                     | ..                          | 1            | ..     | 1                    | ..                          |
|                          | 115                   | Blackwater fever   | ..                          | 2            | ..     | 2                    | ..                          |
|                          | 113, 116-117          | Other and unspecified forms of malaria                       | ..                          | 11           | ..     | 11                   | 1                           |
|                          |                       | Schistosomiasis:—  |                             |              |        |                      |                             |
| A 38                     | 123.0                 | Schistosomiasis vesical (S. haematobium)                     | ..                          | ..           | ..     | ..                   | ..                          |
|                          | 123.1                 | Schistosomiasis intestinal (S. Mansoni)                      | ..                          | ..           | ..     | ..                   | ..                          |
|                          | 123.2                 | Schistosomiasis Pulmonary (S. Japonicum)                     | ..                          | ..           | ..     | ..                   | ..                          |
|                          | 123.3                 | Other and unspecified Schistosomiasis                        | ..                          | ..           | ..     | ..                   | ..                          |
| A 39                     | 125                   | Hydatid disease ..   | ..                          | 2            | ..     | 2                    | ..                          |
| A 40                     | 127                   | Filariasis ..  | ..                          | 35           | ..     | 35                   | ..                          |
| A 41                     | 129                   | Ankylostomiasis ..   | 3                           | 76           | ..     | 79                   | ..                          |
|                          |                       | Other diseases due to helminths:—                            |                             |              |        |                      |                             |
| A 42                     | 124                   | Other trematode infestation                                  | ..                          | ..           | ..     | ..                   | ..                          |
|                          | 126                   | Tape worm (infestation) and other cestode infestation ..     | 1                           | 3            | ..     | 4                    | ..                          |
|                          |                       | <i>Carried forward</i> ..                                    | 1,066                       | 8,046        | 477    | 9,112                | 1,412                       |

APPENDIX IV—continued  
 RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—continued

| Intermediate List Number | Detailed List Numbers   | Cause Groups (Diseases)                                    | •Remain-<br>ing<br>at end of<br>1957 | YEARLY TOTAL |        | †Total<br>cases<br>treated | †Remain-<br>ing<br>at end of<br>1958 |
|--------------------------|-------------------------|--|--------------------------------------|--------------|--------|----------------------------|--------------------------------------|
|                          |                         |  |                                      | Admissions   | Deaths |                            |                                      |
|                          |                         | <i>Brought forward</i> ..                                  | 1,066                                | 8,046        | 477    | 9,112                      | 1,412                                |
| A 42                     |                         | <b>I.—Infective and Parasitic Diseases</b><br>—contd.      |                                      |              |        |                            |                                      |
|                          | 128                     | Trichiniasis ..  | ..                                   | 1            | ..     | 1                          | ..                                   |
|                          | 130.0                   | Ascariasis ..  | ..                                   | 49           | 3      | 49                         | 1                                    |
|                          | 130.1-130.3             | Other diseases due to helminths ..                         | ..                                   | 36           | ..     | 36                         | ..                                   |
| A 43                     |                         | All other diseases classified as infective and parasitic:— |                                      |              |        |                            |                                      |
|                          | 036                     | Chancroid ..   | ..                                   | 2            | ..     | 2                          | ..                                   |
|                          | 037                     | Lymphogranuloma Venereum ..                                | ..                                   | 6            | ..     | 6                          | ..                                   |
|                          | 038                     | Granuloma inguinale, venereal ..                           | ..                                   | 2            | ..     | 2                          | ..                                   |
|                          | 039                     | Other and unspecified venereal diseases ..                 | 1                                    | 14           | ..     | 15                         | ..                                   |
|                          | 049                     | Food poisoning (infection and intoxication) ..             | ..                                   | 65           | ..     | 65                         | ..                                   |
|                          | 059                     | Tularæmia ..   | ..                                   | ..           | ..     | ..                         | ..                                   |
|                          | 063                     | Gas Gangrene ..  | ..                                   | 2            | ..     | 2                          | ..                                   |
|                          | 064.2                   | Glanders ..  | ..                                   | ..           | ..     | ..                         | ..                                   |
|                          | 064.3                   | Melioidosis ..   | ..                                   | ..           | ..     | ..                         | ..                                   |
|                          | 046.0, 064.1 }<br>064.4 | Other bacterial diseases ..                                | ..                                   | 3            | 1      | 3                          | ..                                   |
|                          | 070                     | Vincent's infection ..                                     | ..                                   | 2            | 1      | 2                          | ..                                   |
|                          | 071                     | Relapsing fever ..   | ..                                   | ..           | ..     | ..                         | ..                                   |
|                          | 072                     | Leptospirosis icterohæmorrhagica (Weil's disease) ..       | 2                                    | 18           | 4      | 20                         | 1                                    |
|                          |                         | <i>Carried forward</i> ..                                  | 1,069                                | 8,246        | 486    | 9,315                      | 1,414                                |

APPENDIX IV—continued  
RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—continued

| Intermediate List Number | Detailed List Numbers | Cause Groups (Diseases)                                     | *Remain-<br>ing<br>at end of<br>1957 | YEARLY TOTAL |        | †Total<br>cases<br>treated | ‡Remain-<br>ing<br>at end of<br>1958 |
|--------------------------|-----------------------|---|--------------------------------------|--------------|--------|----------------------------|--------------------------------------|
|                          |                       |   |                                      | Admissions   | Deaths |                            |                                      |
|                          |                       | <i>Brought forward</i> ..                                   | 1,069                                | 8,246        | 486    | 9,315                      | 1,414                                |
|                          |                       | <b>I.—Infective and Parasitic Diseases</b><br>—contd.       |                                      |              |        |                            |                                      |
| A 43                     | (n)                   | Yaws ..   | ..                                   | 2            | ..     | 2                          | 1                                    |
|                          | (o)                   | Rubella (German measles) ..                                 | ..                                   | 9            | ..     | 9                          | ..                                   |
|                          | (p)                   | Chicken-pox ..  | 13                                   | 482          | 1      | 495                        | ..                                   |
|                          | (q)                   | Herpes Zoster ..  | 1                                    | 22           | ..     | 23                         | 1                                    |
|                          | (r)                   | Mumps ..  | ..                                   | 58           | ..     | 58                         | ..                                   |
|                          | (s)                   | Dengue ..   | 1                                    | 128          | ..     | 129                        | 1                                    |
|                          | (t)                   | Glandular fever ..  | ..                                   | 8            | ..     | 8                          | ..                                   |
|                          | (u)                   | Trachoma ..   | ..                                   | 8            | ..     | 8                          | ..                                   |
|                          | (v)                   | Sandfly fever ..  | ..                                   | 1            | ..     | 1                          | ..                                   |
|                          | (w)                   | Leishmaniasis ..  | ..                                   | ..           | ..     | ..                         | ..                                   |
|                          | (x)                   | Trypanosomiasis gambiensiis ..                              | ..                                   | ..           | ..     | ..                         | ..                                   |
|                          | (y)                   | Trypanosomiasis rhodesiensiis ..                            | ..                                   | ..           | ..     | ..                         | ..                                   |
|                          | (z)                   | Other and unspecified trypanosomiasis ..                    | ..                                   | ..           | ..     | ..                         | ..                                   |
|                          | (A)                   | Dermatophytosis ..  | ..                                   | 3            | ..     | 3                          | ..                                   |
|                          | (B)                   | Actinomycosis ..  | ..                                   | ..           | ..     | ..                         | ..                                   |
|                          | (C)                   | Other fungus infections ..                                  | ..                                   | 25           | ..     | 25                         | ..                                   |
|                          | (D)                   | Scabies ..  | ..                                   | 10           | ..     | 10                         | ..                                   |
|                          | (E)                   | All other diseases classified as infective and parasitic .. | ..                                   | 11           | ..     | 11                         | ..                                   |
|                          |                       | <i>Carried forward</i> ..                                   | 1,084                                | 9,013        | 487    | 10,097                     | 1,417                                |

APPENDIX IV—continued  
 RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—continued

| Intermediate List Number | Detailed List Numbers | Cause Groups (Diseases)   | *Remain-<br>ing<br>at end of<br>1957 | YEARLY TOTAL |        | †Total<br>cases<br>treated | ‡Remain-<br>ing<br>at end of<br>1958 |
|--------------------------|-----------------------|---|--------------------------------------|--------------|--------|----------------------------|--------------------------------------|
|                          |                       |   |                                      | Admissions   | Deaths |                            |                                      |
|                          |                       | <i>Brought forward</i> ..   | 1,084                                | 9,013        | 487    | 10,097                     | 1,417                                |
|                          |                       | II.—Neoplasms   |                                      |              |        |                            |                                      |
| A 44                     | 140-148               | Malignant neoplasm of buccal cavity and pharynx ..                                    | 8                                    | 126          | 32     | 134                        | 7                                    |
| A 45                     | 150                   | Malignant neoplasm of œsophagus ..  | 9                                    | 102          | 36     | 111                        | 6                                    |
| A 46                     | 151                   | Malignant neoplasm of stomach ..  | 3                                    | 216          | 62     | 219                        | 8                                    |
| A 47                     |                       | Malignant neoplasm of intestine except rectum:—                                       |                                      |              |        |                            |                                      |
|                          | 152                   | Malignant neoplasm of small intestine, including duodenum ..                          | ..                                   | 9            | 1      | 9                          | ..                                   |
|                          | 153                   | Malignant neoplasm of large intestine, except rectum ..                               | 1                                    | 43           | 11     | 44                         | 6                                    |
| A 48                     | 154                   | Malignant neoplasm of rectum ..   | 7                                    | 54           | 12     | 61                         | 1                                    |
| A 49                     | 161                   | Malignant neoplasm of larynx ..   | 3                                    | 40           | 9      | 43                         | 4                                    |
| A 50                     | 162-163               | Malignant neoplasm of trachea, and of bronchus and lung not specified as secondary .. | 8                                    | 202          | 62     | 210                        | 8                                    |
| A 51                     | 170                   | Malignant neoplasm of breast ..   | 3                                    | 75           | 7      | 78                         | 2                                    |
| A 52                     | 171                   | Malignant neoplasm of cervix uteri ..   | 3                                    | 303          | 8      | 306                        | 2                                    |
| A 53                     | 172-174               | Malignant neoplasm of other and unspecified parts of uterus ..                        | ..                                   | 36           | 3      | 36                         | ..                                   |
| A 54                     | 177                   | Malignant neoplasm of prostate ..   | ..                                   | 27           | 2      | 27                         | 2                                    |
| A 55                     | 190-191               | Malignant neoplasm of skin ..   | 1                                    | 22           | 4      | 23                         | ..                                   |
| A 56                     | 196-197               | Malignant neoplasm of bone and connective tissue ..                                   | 1                                    | 33           | 5      | 34                         | 2                                    |
|                          |                       | <i>Carried forward</i> ..   | 1,131                                | 10,301       | 741    | 11,432                     | 1,465                                |

APPENDIX IV—continued  
RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—continued

| Intermediate List Number | Detailed List Numbers | Cause Groups (Diseases)   | *Remain- ing at end of 1957 | YEARLY TOTAL |        | †Total cases treated | ‡Remain- ing at end of 1958 |
|--------------------------|-----------------------|---|-----------------------------|--------------|--------|----------------------|-----------------------------|
|                          |                       |   |                             | Admissions   | Deaths |                      |                             |
|                          |                       | <i>Brought forward</i> ..   | 1,131                       | 10,301       | 741    | 11,432               | 1,465                       |
|                          |                       | <i>II.—Neoplasms—contd.</i>   |                             |              |        |                      |                             |
|                          |                       | Malignant neoplasm of all other and un- specified sites:—                 |                             |              |        |                      |                             |
| A 57                     | 155-156               | Malignant neoplasm of liver ..  | 3                           | 113          | 45     | 116                  | 5                           |
|                          | 157                   | Malignant neoplasm of pancreas ..   | 1                           | 19           | 8      | 20                   | ..                          |
|                          | 158                   | Malignant neoplasm of peritoneum ..                                       | ..                          | 6            | 3      | 6                    | ..                          |
|                          | 159                   | Malignant neoplasm of unspecified di- gestive organs ..                   | ..                          | 1            | ..     | 1                    | ..                          |
|                          | 175-176               | Malignant neoplasm of other and un- specified female genital organs ..    | ..                          | 20           | 8      | 20                   | ..                          |
|                          | 178-179               | Malignant neoplasm of other and un- specified male genital organs ..      | ..                          | 16           | 1      | 16                   | 1                           |
|                          | 180-181               | Malignant neoplasm of kidney, bladder and other urinary organs ..         | ..                          | 25           | 1      | 25                   | 1                           |
|                          | 160                   | Malignant neoplasm of all other and unspecified sites ..                  | 2                           | 69           | 15     | 71                   | 4                           |
|                          | 164-165               | Leukæmia and Aleukæmia ..   | 6                           | 95           | 35     | 101                  | 6                           |
|                          | 192-195               | Lymphosarcoma and other neoplasms of lymphatic and hæmatopoietic system:— | ..                          | 20           | 5      | 20                   | 1                           |
|                          | 198-199               | Lymphosarcoma and reticulosarcoma   | ..                          | 17           | 3      | 17                   | 1                           |
|                          | 204                   | Hodgkin's disease ..  | ..                          | ..           | ..     | ..                   | ..                          |
| A 58                     | 200                   | <i>Carried forward</i> ..   | 1,143                       | 10,702       | 865    | 11,845               | 1,484                       |
| A 59                     | 201                   |   |                             |              |        |                      |                             |

APPENDIX IV—continued  
 RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—continued

| Intermediate List Number | Detailed List Numbers | Cause Groups (Diseases)  | *Remain-<br>ing<br>at end of<br>1957 | YEARLY TOTAL |        | †Total<br>cases<br>treated | ‡Remain-<br>ing<br>at end of<br>1958 |
|--------------------------|-----------------------|--|--------------------------------------|--------------|--------|----------------------------|--------------------------------------|
|                          |                       |  |                                      | Admissions   | Deaths |                            |                                      |
|                          |                       | <i>Brought forward</i> ..  | 1,143                                | 10,702       | 865    | 11,845                     | 1,484                                |
|                          |                       | <i>II.—Neoplasms—contd.</i>  |                                      |              |        |                            |                                      |
| A 59 (c)                 | 202-203<br>205        | Other neoplasm of lymphatic and hæ-<br>matopoietic system ..   | ..                                   | 9            | 2      | 9                          | ..                                   |
| A 60 (a)                 | 210-211               | Benign neoplasms and neoplasms of un-<br>specified nature:—<br>Benign neoplasm of buccal cavity, pha-<br>rynix and digestive system .. | 6                                    | 35           | ..     | 41                         | ..                                   |
| (b)                      | 213-217               | Benign neoplasm of female genital<br>organs ..   | 6                                    | 442          | 3      | 448                        | 9                                    |
| (c)                      | 218                   | Benign neoplasm of male genital<br>organs ..   | ..                                   | 4            | ..     | 4                          | ..                                   |
| (d)                      | 212<br>219-229        | Benign neoplasm of other and un-<br>specified organs and tissue ..   | 4                                    | 375          | ..     | 379                        | 4                                    |
| (e)                      | 230                   | Neoplasm of unspecified nature of di-<br>gestive organs ..   | ..                                   | 2            | ..     | 2                          | ..                                   |
| (f)                      | 233-235               | Neoplasm of unspecified nature of other<br>female genital organs ..  | 1                                    | ..           | ..     | 1                          | ..                                   |
| (g)                      | 231-232<br>236-239    | Neoplasm of unspecified nature of other<br>unspecified organs ..   | 18                                   | 106          | 13     | 124                        | 14                                   |
|                          |                       | <i>Carried forward</i> ..  | 1,178                                | 11,675       | 883    | 12,853                     | 1,511                                |

APPENDIX IV—continued  
RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—continued

| Intermediate List Number | Detailed List Numbers   | Cause Groups (Diseases)   | *Remain- ing at end of 1957                     | YEARLY TOTAL                                |  | †Total cases treated                        | ‡Remain- ing at end of 1958                |
|--------------------------|---|---|---|---|--|---|--|
|                          |   |   |   | Admissions                                  | Deaths                                     |   |  |
|                          |   | <i>Brought forward</i> ..   | 1,178   | 11,675                                      | 883  | 12,853                                      | 1,511                                      |
|                          |   | III.— <i>Allergic, Endocrine System, Metabolic and Nutritional Diseases</i>   |   |   |  |   |  |
|                          |   | IV.— <i>Diseases of the Blood and Blood-Forming Organs</i>  |   |   |  |   |  |
| A 61                     | 250, 251  | Nontoxic goitre ..  | 4   | 101   | ..   | 105   | 1  |
| A 62                     | 252   | Thyrotoxicosis with or without goitre ..  | 9   | 97  | 4  | 106   | 5  |
| A 63                     | 260   | Diabetes mellitus ..  | 17  | 302   | 8  | 319   | 15   |
| A 64                     | 280<br>281<br>282<br>283-284<br>285<br>286.0<br>286.5<br>286.1-286.4<br>286.6 | Avitaminosis and other deficiency states:—<br>Beri-Beri ..<br>Pellagra ..<br>Scurvy ..<br>Rickets ..<br>Osteomalacia ..<br>Steatorrhœa and Sprue ..<br>Malnutrition-unqualified ..<br>Other avitaminoses and nutritional deficiency states .. | ..<br>..<br>1<br>1<br>..<br>..<br>..<br>7<br>.. | 36<br>3<br>13<br>14<br>..<br>..<br>92<br>24 | 8<br>1<br>..<br>..<br>..<br>..<br>19<br>.. | 36<br>3<br>14<br>15<br>..<br>..<br>99<br>24 | 1<br>..<br>..<br>..<br>..<br>..<br>9<br>.. |
|                          |   | <i>Carried forward</i> ..   | 1,217   | 12,357                                      | 923  | 13,574                                      | 1,542                                      |

APPENDIX IV—continued  
 RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—continued

| Intermediate List Number | Detailed List Numbers | Cause Groups (Diseases)  | *Remain- ing at end of 1957 | YEARLY TOTAL |        | †Total cases treated | ‡Remain- ing at end of 1958 |
|--------------------------|-----------------------|--|-----------------------------|--------------|--------|----------------------|-----------------------------|
|                          |                       |  |                             | Admissions   | Deaths |                      |                             |
|                          |                       | <i>Brought forward</i> ..  | 1,217                       | 12,357       | 923    | 13,574               | 1,542                       |
|                          |                       | IV.— <i>Diseases of the Blood and Blood-Forming Organs—contd.</i>          |                             |              |        |                      |                             |
|                          |                       | Anæmias:—  |                             |              |        |                      |                             |
| A 65                     | 290                   | Pernicious and other hyperchromic anæmias ..                               | ..                          | 11           | ..     | 11                   | ..                          |
| (a)                      | 291                   | Iron deficiency anæmias (hypochromic) ..                                   | ..                          | 51           | ..     | 51                   | ..                          |
| (b)                      | 292-293               | Other specified and unspecified anæmias ..                                 | 16                          | 253          | 27     | 269                  | 13                          |
| (c)                      |                       | Allergic disorders; all other endocrine metabolic and blood diseases:—     |                             |              |        |                      |                             |
| A 66                     | 241                   | Asthma ..  | 11                          | 677          | 10     | 688                  | 13                          |
| (a)                      | 240                   | Angioneurotic œdema, urticaria and other allergic disorders ..             | 4                           | 160          | 2      | 164                  | 2                           |
| (b)                      | 242-245               | Myxœdema and cretinism ..  | 2                           | 25           | 1      | 27                   | 2                           |
| (c)                      | 253                   | Other diseases of thyroid gland ..   | ..                          | 5            | ..     | 5                    | ..                          |
| (d)                      | 254                   | Disorders of pancreatic internal secretion other than diabetes mellitus .. | ..                          | 5            | 1      | 5                    | ..                          |
| (e)                      | 270                   | Diseases of parathyroid gland ..   | ..                          | 3            | 1      | 3                    | ..                          |
| (f)                      | 271                   | Diseases of pituitary gland ..   | ..                          | 5            | ..     | 5                    | ..                          |
| (g)                      | 272                   | Diseases of thymus gland ..  | ..                          | ..           | ..     | ..                   | ..                          |
| (h)                      | 273                   | Diseases of adrenal gland ..   | ..                          | 1            | 1      | 1                    | 1                           |
| (i)                      | 274                   | Other diseases of endocrine glands ..                                      | ..                          | 4            | ..     | 4                    | 1                           |
| (j)                      | 275-277               | Gout ..  | ..                          | 6            | ..     | 6                    | ..                          |
| (k)                      | 288                   | Other metabolic diseases ..  | ..                          | 20           | ..     | 20                   | ..                          |
| (l)                      | 287, 289              | Polycythemia ..  | ..                          | 3            | ..     | 3                    | ..                          |
| (m)                      | 294                   | <i>Carried forward</i> ..  | 1,250                       | 13,586       | 966    | 14,836               | 1,574                       |

APPENDIX IV—continued  
RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—continued

| Intermediate List Number | Detailed List Numbers | Cause Groups (Diseases)   | *Remain- ing at end of 1957 | YEARLY TOTAL |        | †Total cases treated | ‡Remain- ing at end of 1958 |
|--------------------------|-----------------------|---|-----------------------------|--------------|--------|----------------------|-----------------------------|
|                          |                       |   |                             | Admissions   | Deaths |                      |                             |
|                          |                       | <i>Brought forward</i> ..   | 1,250                       | 13,586       | 966    | 14,836               | 1,574                       |
|                          |                       | IV.— <i>Diseases of the Blood and Blood-Forming Organs—contd.</i> |                             |              |        |                      |                             |
| A 66                     | (n)<br>(o)            | Haemophilia ..  | ..                          | 21           | ..     | 21                   | 3                           |
|                          |                       | Purpura and other haemorrhagic con- ditions ..                    | 4                           | 67           | 3      | 71                   | 3                           |
|                          | (p)                   | Agranulocytosis ..  | ..                          | ..           | ..     | ..                   | ..                          |
|                          | (q)                   | Diseases of spleen ..   | ..                          | 14           | 3      | 14                   | ..                          |
|                          | (r)                   | Other diseases of blood and blood- forming organs ..              | ..                          | 21           | 2      | 21                   | ..                          |
|                          |                       | V.— <i>Mental, Psychoneurotic and Personality Disorders</i>       |                             |              |        |                      |                             |
| A 67                     |                       | Psychoses:—   |                             |              |        |                      |                             |
|                          | (a)                   | Schizophrenic disorders (dementia praecox) ..                     | 853                         | 356          | 20     | 1,209                | 590                         |
|                          | (b)                   | Maniac-depressive reaction ..                                     | 558                         | 501          | 16     | 1,059                | 399                         |
|                          | (c)                   | Involuntary melancholia ..  | 40                          | 21           | 2      | 61                   | 27                          |
|                          | (d)                   | Paranoia and paranoid states ..                                   | 34                          | 13           | 1      | 47                   | 16                          |
|                          | (e)                   | Senile psychoses ..   | 108                         | 98           | 14     | 206                  | 184                         |
|                          | (f)                   | Other and unspecified psychoses ..                                | 668                         | 264          | 19     | 932                  | 170                         |
|                          |                       | <i>Carried forward</i> ..   | 3,515                       | 14,962       | 1,046  | 18,477               | 2,966                       |

APPENDIX IV—continued  
 RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—continued

| Intermediate List Number | Detailed List Numbers | Cause Groups (Diseases)  | *Remain-<br>ing<br>at end of<br>1957 | YEARLY TOTAL |        | †Total<br>cases<br>treated | ‡Remain-<br>ing<br>at end of<br>1958 |
|--------------------------|-----------------------|--|--------------------------------------|--------------|--------|----------------------------|--------------------------------------|
|                          |                       |  |                                      | Admissions   | Deaths |                            |                                      |
|                          |                       | <i>Brought forward</i> ..  | 3,515                                | 14,962       | 1,046  | 18,477                     | 2,966                                |
| A 68                     |                       | V.— <i>Mental, Psychoneurotic and Personality Disorders—contd.</i> |                                      |              |        |                            |                                      |
|                          |                       | Psychoneuroses and disorders of per-<br>sonality:—                 |                                      |              |        |                            |                                      |
|                          | 311                   | Hysterical reaction ..   | 3                                    | 85           | 1      | 88                         | 5                                    |
| (a)                      | 314                   | Neurotic-depressive reaction ..                                    | ..                                   | 93           | ..     | 93                         | 75                                   |
| (b)                      | 322                   | Alcoholism ..  | 2                                    | 59           | ..     | 61                         | 1                                    |
| (c)                      | 323                   | Other drug addiction ..  | 30                                   | 1,246        | ..     | 1,276                      | 15                                   |
| (d)                      | 310, 312-313          | Other psychoneuroses and disorders of<br>personality ..            | 2                                    | 93           | ..     | 95                         | 19                                   |
| (e)                      | 315-321, 324<br>326   | Mental deficiency ..   | 7                                    | 242          | 5      | 249                        | 159                                  |
| A 69                     | 325                   | VI.— <i>Diseases of the Nervous System and Sense Organs</i>        |                                      |              |        |                            |                                      |
|                          |                       | Vascular lesions affecting central nervous<br>system:—             |                                      |              |        |                            |                                      |
|                          | 331                   | Cerebral hæmorrhage ..   | 6                                    | 158          | 124    | 164                        | 5                                    |
| (a)                      | 332                   | Cerebral embolism and thrombosis ..                                | 13                                   | 178          | 36     | 191                        | 14                                   |
| (b)                      | 330                   | Other vascular lesions affecting central<br>nervous system ..      | 4                                    | 42           | 10     | 46                         | 2                                    |
| (c)                      | 333-334               | <i>Carried forward</i> ..  | 3,582                                | 17,158       | 1,222  | 20,740                     | 3,261                                |

APPENDIX IV—continued  
RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—continued

| Intermediate List Number | Detailed List Numbers | Cause Groups (Diseases)  | *Remain- ing at end of 1957 | YEARLY TOTAL |        | †Total cases treated | ‡Remain- ing at end of 1958 |
|--------------------------|-----------------------|--|-----------------------------|--------------|--------|----------------------|-----------------------------|
|                          |                       |  |                             | Admissions   | Deaths |                      |                             |
|                          |                       | <i>Brought forward</i> ..  | 3,582                       | 17,158       | 1,222  | 20,740               | 3,261                       |
|                          |                       | <i>VI.—Diseases of the Nervous System and Sense Organs—contid.</i> |                             |              |        |                      |                             |
| A 71                     | 340                   | Non-meningococcal meningitis ..                                    | ..                          | 113          | 41     | 113                  | 9                           |
| A 72                     | 345                   | Multiple sclerosis ..  | ..                          | 4            | ..     | 4                    | ..                          |
| A 73                     | 353                   | Epilepsy ..  | 1                           | 157          | ..     | 158                  | 3                           |
| A 74                     | 370                   | Inflammatory diseases of eye:—                                     | ..                          | 40           | ..     | 40                   | ..                          |
| (a)                      | 371-379               | Conjunctivitis and ophthalmia ..                                   | 16                          | 282          | ..     | 298                  | 8                           |
| (b)                      | 385                   | Other inflammatory diseases of eye ..                              | 17                          | 442          | 1      | 459                  | 20                          |
| A 75                     | 387                   | Cataract ..  | 12                          | 116          | ..     | 128                  | 7                           |
| A 76                     |                       | Glaucoma ..  | ..                          | ..           | ..     | ..                   | ..                          |
| A 77                     | 390                   | Otitis media and mastoiditis:—                                     | ..                          | 35           | ..     | 35                   | 1                           |
| (a)                      | 391-393               | Otitis externa ..  | 4                           | 143          | 5      | 147                  | 3                           |
| (b)                      | 394                   | Otitis media and mastoiditis ..                                    | 3                           | 27           | ..     | 30                   | 2                           |
| (c)                      |                       | Other inflammatory diseases of ear ..                              | ..                          | ..           | ..     | ..                   | ..                          |
| A 78                     |                       | All other diseases of the nervous system and sense organs:—        | 22                          | 270          | ..     | 292                  | 18                          |
| (a)                      | 380-384               | All other diseases and conditions of eye ..                        | ..                          | ..           | ..     | ..                   | ..                          |
|                          | 386, 388              |  | 3,657                       | 18,787       | 1,269  | 22,444               | 3,332                       |
|                          | 389                   | <i>Carried forward</i> ..  |                             |              |        |                      |                             |

APPENDIX IV—continued  
 RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—continued

| Intermediate List Number | Detailed List Numbers | Cause Groups (Diseases)   | *Remain-<br>ing<br>at end of<br>1957 | YEARLY TOTAL |        | †Total<br>cases<br>treated | ‡Remain-<br>ing<br>at end of<br>1958 |
|--------------------------|-----------------------|---|--------------------------------------|--------------|--------|----------------------------|--------------------------------------|
|                          |                       |   |                                      | Admissions   | Deaths |                            |                                      |
|                          |                       | <i>Brought forward</i> ..   | 3,657                                | 18,787       | 1,269  | 22,444                     | 3,332                                |
|                          |                       | <i>VI. Diseases of the Nervous System and<br/>Sense Organs—contd.</i> |                                      |              |        |                            |                                      |
|                          |                       | Intracranial and intraspinal abscess ..                               | 1                                    | 15           | 9      | 16                         | 3                                    |
| A 78                     | (b)                   | Encephalitis, myelitis and encephalo-<br>myelitis ..                  | 6                                    | 228          | 63     | 234                        | 12                                   |
|                          | (c)                   | Paralysis agitans ..  | 4                                    | 14           | 2      | 18                         | 4                                    |
|                          | (d)                   | Other cerebral paralysis ..   | 30                                   | 63           | 1      | 93                         | 34                                   |
|                          | (e)                   | Motor neuron disease and muscular<br>atrophy ..                       | ..                                   | 10           | ..     | 10                         | 2                                    |
|                          | (f)                   | Other diseases of spinal cord ..                                      | 1                                    | 3            | ..     | 4                          | 1                                    |
|                          | (g)                   | Other and unspecified forms of neural-<br>gia and neuritis ..         | 2                                    | 55           | ..     | 57                         | 2                                    |
|                          | (h)                   | Other diseases of cranial nerves ..                                   | ..                                   | 2            | ..     | 2                          | ..                                   |
|                          | (i)                   | Diseases of peripheral autonomic ner-<br>vous system ..               | ..                                   | 2            | ..     | 2                          | ..                                   |
|                          | (j)                   |   |                                      |              |        |                            |                                      |
|                          | (k)                   | All other diseases of the nervous system<br>and sense organs ..       | 5                                    | 119          | 1      | 124                        | 2                                    |
|                          |                       | <i>Carried forward</i> ..   | 3,706                                | 19,298       | 1,345  | 23,004                     | 3,392                                |

APPENDIX IV—continued  
 RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—continued

| Intermediate List Number | Detailed List Numbers | Cause Groups (Diseases)                                       | *Remain- ing at end of 1957 | YEARLY TOTAL |        | †Total cases treated | ‡Remain- ing at end of 1958 |
|--------------------------|-----------------------|---|-----------------------------|--------------|--------|----------------------|-----------------------------|
|                          |                       |   |                             | Admissions   | Deaths |                      |                             |
|                          |                       | <i>Brought forward</i> ..                                     | 3,706                       | 19,298       | 1,345  | 23,004               | 3,392                       |
|                          |                       | <b>VII.—Diseases of the Circulatory System</b>                |                             |              |        |                      |                             |
|                          |                       | Rheumatic fever:—   |                             |              |        |                      |                             |
| A 79                     | (a) 400               | Rheumatic fever without mention of heart involvement ..       | 8                           | 133          | 3      | 141                  | 11                          |
|                          | (b) 401               | Rheumatic fever with heart involvement ..                     | ..                          | 114          | 8      | 114                  | 2                           |
|                          | (c) 402               | Chorea ..   | ..                          | 9            | ..     | 9                    | ..                          |
|                          |                       | Chronic rheumatic heart disease:—                             |                             |              |        |                      |                             |
| A 80                     | (a) 410-413           | Diseases of valves specified as rheumatic ..                  | ..                          | 152          | 17     | 152                  | ..                          |
|                          | (b) 414               | Other endocarditis specified as rheumatic ..                  | ..                          | 6            | 1      | 6                    | ..                          |
|                          | (c) 415               | Other myocarditis specified as rheumatic ..                   | ..                          | 1            | 1      | 1                    | ..                          |
|                          | (d) 416               | Other heart disease specified as rheumatic ..                 | 2                           | 18           | 5      | 20                   | 3                           |
|                          |                       | Arteriosclerotic and degenerative heart disease:—             |                             |              |        |                      |                             |
| A 81                     | (a) 420               | Arteriosclerotic heart disease, including coronary disease .. | 9                           | 336          | 82     | 345                  | 25                          |
|                          | (b) 421               | Chronic endocarditis not specified as rheumatic ..            | 22                          | 215          | 32     | 237                  | 12                          |
|                          |                       | <i>Carried forward</i> ..                                     | 3,747                       | 20,282       | 1,494  | 24,029               | 3,445                       |

APPENDIX IV—continued  
 RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—continued

| Intermediate List Number | Detailed List Numbers | Cause Groups (Diseases)   | *Remain-<br>ing<br>at end of<br>1957 | YEARLY TOTAL |        | †Total<br>cases<br>treated | ‡Remain-<br>ing<br>at end of<br>1958 |
|--------------------------|-----------------------|---|--------------------------------------|--------------|--------|----------------------------|--------------------------------------|
|                          |                       |   |                                      | Admissions   | Deaths |                            |                                      |
|                          |                       | <i>Brought forward</i> ..   | 3,747                                | 20,282       | 1,494  | 24,029                     | 3,445                                |
|                          |                       | VII.— <i>Diseases of the Circulatory System</i><br>— <i>contd.</i>          |                                      |              |        |                            |                                      |
| A 81                     | 422                   | Other myocardial degeneration ..  | ..                                   | 6            | 3      | 6                          | 1                                    |
| A 82                     | 430                   | Other diseases of heart:—   | 1                                    | 29           | 7      | 30                         | ..                                   |
|                          | 431                   | Acute and subacute endocarditis ..  | 1                                    | 17           | 7      | 18                         | ..                                   |
|                          |                       | Acute myocarditis not specified as rheu-<br>matic .. ..                     | ..                                   | ..           | ..     | ..                         | ..                                   |
|                          | 432                   | Pericarditis not specified as rheumatic                                     | ..                                   | 8            | 1      | 8                          | 1                                    |
|                          | 433                   | Functional disease of heart ..  | 1                                    | 23           | 2      | 24                         | ..                                   |
|                          | 434                   | Other and unspecified diseases of heart                                     | 5                                    | 135          | 38     | 140                        | 6                                    |
| A 83                     | 440-443               | Hypertension with heart disease ..  | 11                                   | 275          | 49     | 286                        | 12                                   |
| A 84                     | 444-447               | Hypertension without mention of<br>heart .. ..                              | 10                                   | 366          | 35     | 376                        | 28                                   |
| A 85                     | 450                   | Diseases of arteries:—  | ..                                   | 10           | 2      | 10                         | 1                                    |
|                          | 451                   | General arteriosclerosis .. ..  | ..                                   | ..           | ..     | ..                         | ..                                   |
|                          | 452                   | Aortic aneurysm specified as non-syphi-<br>litic and dissecting aneurysm .. | 2                                    | 15           | 8      | 17                         | ..                                   |
|                          |                       | Other aneurysm, except of heart and<br>aorta .. ..                          | 1                                    | 15           | 2      | 16                         | ..                                   |
|                          | 453                   | Peripheral vascular disease ..  | 3                                    | 33           | ..     | 36                         | 5                                    |
|                          | 454                   | Arterial embolism and thrombosis ..   | ..                                   | 6            | ..     | 6                          | ..                                   |
|                          | 455                   | Gangrene of unspecified cause ..  | 4                                    | 19           | ..     | 23                         | 5                                    |
|                          |                       | <i>Carried forward</i> ..   | 3,786                                | 21,239       | 1,648  | 25,025                     | 3,504                                |

APPENDIX IV—continued

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—continued

| Intermediate List Number | Detailed List Numbers | Cause Groups (Diseases)  | *Remain- ing at end of 1957 | YEARLY TOTAL |        | †Total cases treated | ‡Remain- ing at end of 1958 |
|--------------------------|-----------------------|--|-----------------------------|--------------|--------|----------------------|-----------------------------|
|                          |                       |  |                             | Admissions   | Deaths |                      |                             |
|                          |                       | <i>Brought forward</i> ..  | 3,786                       | 21,239       | 1,648  | 25,025               | 3,504                       |
|                          |                       | <b>VII.—Diseases of the Circulatory System</b><br><i>—contd.</i>                       |                             |              |        |                      |                             |
| A 85                     | 456                   | Other diseases of arteries ..  | ..                          | 19           | 1      | 19                   | ..                          |
| A 86                     | 460, 462              | Other diseases of circulatory system:—   |                             |              |        |                      |                             |
|                          | 461                   | Varicose veins ..  | ..                          | 64           | ..     | 64                   | ..                          |
|                          | 463-464               | Hæmorrhoids ..   | 4                           | 589          | 1      | 593                  | 1                           |
|                          | 465                   | Phlebitis and thrombophlebitis ..  | 1                           | 26           | ..     | 27                   | ..                          |
|                          | 466                   | Pulmonary embolism and infarction ..   | ..                          | 4            | ..     | 4                    | ..                          |
|                          |                       | Other venous embolism and throm-<br>bosis ..   | 1                           | 20           | ..     | 21                   | ..                          |
|                          | 467                   | Other diseases of circulatory system ..  | ..                          | 13           | 2      | 13                   | ..                          |
|                          | 468                   | Adenitis, Lymphadenitis, and other<br>diseases of lymph nodes and lymph<br>channels .. | ..                          | 79           | ..     | 83                   | ..                          |
|                          |                       | <b>VIII.—Diseases of the Respiratory System</b>  |                             |              |        |                      |                             |
| A 87                     | 470                   | Acute upper respiratory infections:—<br>Acute nasopharyngitis (common cold)            | ..                          | 53           | ..     | 53                   | ..                          |
|                          |                       | <i>Carried forward</i> ..  | 3,796                       | 22,106       | 1,652  | 25,902               | 3,516                       |

APPENDIX IV—continued  
 RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—continued

| Intermediate List Number | Detailed List Numbers           | Cause Groups (Diseases)   | *Remain-<br>ing<br>at end of<br>1957 | YEARLY TOTAL           |                           | †Total<br>cases<br>treated | ‡Remain-<br>ing<br>at end of<br>1958 |
|--------------------------|---------------------------------|---|--------------------------------------|------------------------|---------------------------|----------------------------|--------------------------------------|
|                          |                                 |   |                                      | Admissions             | Deaths                    |                            |                                      |
|                          |                                 | <i>Brought forward</i> ..   | 3,796                                | 22,106                 | 1,652                     | 25,902                     | 3,516                                |
|                          |                                 | VIII.— <i>Diseases of the Respiratory System</i><br>—contd.   |                                      |                        |                           |                            |                                      |
| A 87                     | 471<br>472<br>473<br>474<br>475 | Acute sinusitis ..<br>Acute pharyngitis ..<br>Acute tonsillitis ..<br>Acute laryngitis and tracheitis ..<br>Acute upper respiratory infection of multiple or unspecified sites .. | ..<br>3<br>5<br>2<br>2               | 21<br>878<br>645<br>36 | ..<br>..<br>..<br>6<br>.. | 21<br>881<br>650<br>38     | ..<br>2<br>10<br>2                   |
| A 88                     | 480-483                         | Influenza ..  | ..                                   | 23                     | ..                        | 25                         | 1                                    |
| A 89                     | 490                             | Lobar Pneumonia ..  | ..                                   | 73                     | 1                         | 73                         | ..                                   |
| A 90                     | 491                             | Broncho-pneumonia ..  | 12                                   | 315                    | 54                        | 327                        | 1                                    |
| A 91                     | 492-493                         | Primary atypical, other and unspecified pneumonia ..  | 10                                   | 1,410                  | 393                       | 1,420                      | 15                                   |
| A 92                     | 500                             | Acute bronchitis ..   | 1<br>4                               | 85<br>120              | 19<br>3                   | 86<br>124                  | 3<br>..                              |
| A 93                     | 501<br>502<br>510               | Bronchitis, chronic and unqualified:—<br>Bronchitis unqualified ..<br>Chronic bronchitis ..<br>Hypertrophy of tonsils and adenoids ..   | 2<br>2<br>3                          | 312<br>58<br>636       | ..<br>4<br>1              | 314<br>60<br>639           | ..<br>1<br>..                        |
| A 95                     | 518<br>521<br>519               | Empyema and Abscess of lung:—<br>Empyema ..<br>Abscess of lung ..<br>Pleurisy ..  | 4<br>3<br>9                          | 60<br>58<br>130        | 16<br>12<br>1             | 64<br>61<br>139            | 5<br>3<br>22                         |
| A 96                     |                                 | <i>Carried forward</i> ..   | 3,858                                | 26,966                 | 2,162                     | 30,824                     | 3,581                                |

APPENDIX IV—continued

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—continued

| Intermediate List Number | Detailed List Numbers | Cause Groups (Diseases)   | *Remain-<br>ing<br>at end of<br>1957 | YEARLY TOTAL |        | †Total<br>cases<br>treated | †Remain-<br>ing<br>at end of<br>1958 |
|--------------------------|-----------------------|---|--------------------------------------|--------------|--------|----------------------------|--------------------------------------|
|                          |                       |   |                                      | Admissions   | Deaths |                            |                                      |
|                          |                       | <i>Brought forward</i> ..   | 3,858                                | 26,966       | 2,162  | 30,824                     | 3,581                                |
|                          |                       | <b>VIII.—Diseases of the Respiratory System</b><br><i>—contd.</i> |                                      |              |        |                            |                                      |
|                          |                       | All other respiratory diseases:—                                  |                                      |              |        |                            |                                      |
| A 97                     | 517                   | Other diseases of upper respiratory tract .. .. .                 | 1                                    | 59           | 1      | 60                         | 1                                    |
| (a)                      |                       | Spontaneous pneumothorax .. .. .                                  | 1                                    | 53           | 7      | 54                         | 10                                   |
| (b)                      |                       | Pulmonary congestion and hypostasis .. .. .                       | ..                                   | 2            | 2      | 2                          | ..                                   |
| (c)                      |                       | Other chronic interstitial pneumonia .. .. .                      | ..                                   | ..           | ..     | ..                         | ..                                   |
| (d)                      |                       | Pneumoconiosis .. .. .  | ..                                   | 1            | ..     | 1                          | ..                                   |
| (e)                      |                       | Bronchiectasis .. .. .  | 7                                    | 316          | 3      | 323                        | 8                                    |
| (f)                      |                       | All other respiratory diseases .. .. .                            | 3                                    | 407          | 14     | 410                        | 1                                    |
| (g)                      | 511-516<br>524<br>527 |   |                                      |              |        |                            |                                      |
|                          |                       | <b>IX.—Diseases of the Digestive System</b>                       |                                      |              |        |                            |                                      |
|                          |                       | Diseases of teeth and supporting structures:—                     |                                      |              |        |                            |                                      |
| (a)                      | 530                   | Dental caries .. .. .   | ..                                   | 16           | ..     | 16                         | ..                                   |
| (b)                      | 532.0                 | Gingivitis .. .. .  | ..                                   | ..           | ..     | ..                         | ..                                   |
| (c)                      | 531.1, 532.2          | Pyorrhœa .. .. .  | ..                                   | 10           | ..     | 10                         | ..                                   |
|                          |                       | <i>Carried forward</i> ..   | 3,870                                | 27,830       | 2,189  | 31,700                     | 3,601                                |

## APPENDIX IV—continued

## RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—continued

| Intermediate List Number | Detailed List Numbers            | Cause Groups (Diseases)  | *Remain-<br>ing<br>at end of<br>1957 | YEARLY TOTAL |        | †Total<br>cases<br>treated | ‡Remain-<br>ing<br>at end of<br>1958 |
|--------------------------|----------------------------------|--|--------------------------------------|--------------|--------|----------------------------|--------------------------------------|
|                          |                                  |  |                                      | Admissions   | Deaths |                            |                                      |
|                          |                                  | <i>Brought forward</i> ..  | 3,870                                | 27,830       | 2,189  | 31,700                     | 3,601                                |
|                          |                                  | <b>IX.—Diseases of the Digestive System</b><br>—contd.   |                                      |              |        |                            |                                      |
|                          |                                  | Other diseases of teeth and supporting structures ..   | 2                                    | 37           | ..     | 39                         | 1                                    |
| A 98 (d)                 | 531, 533-535                     | Ulcer of stomach ..  | 21                                   | 574          | 22     | 595                        | 29                                   |
| A 99                     | 540                              | Ulcer of duodenum ..   | 8                                    | 286          | 10     | 294                        | 13                                   |
| A 100                    | 541                              | Gastritis and duodenitis ..  | 1                                    | 108          | ..     | 109                        | 3                                    |
| A 101                    | 543                              | Appendicitis ..  | 30                                   | 1,961        | 12     | 1,991                      | 25                                   |
| A 102                    | 550-553                          | Intestinal obstruction and hernia:—  |                                      |              |        |                            |                                      |
| A 103 (a)                | 560                              | Hernia of abdominal cavity without mention of obstruction ..   | 6                                    | 672          | 4      | 678                        | 5                                    |
| (b)                      | 561                              | Hernia of abdominal cavity with obstruction ..   | ..                                   | 159          | 5      | 159                        | ..                                   |
| (c)                      | 570.0                            | Intussusception ..   | 2                                    | 59           | 5      | 61                         | 1                                    |
| (d)                      | 570.3                            | Volvulus ..  | ..                                   | 10           | 5      | 10                         | ..                                   |
| (e)                      | 570.1, 570.2 }<br>570.4, 570.5 } | Other intestinal obstruction ..  | 3                                    | 108          | 24     | 111                        | 3                                    |
| A 104 (a)                | 571.0                            | Gastro-enteritis and colitis, except diarrhoea of the new born:—<br>Gastro-enteritis and colitis, ages between four weeks and two years .. | 1                                    | 1,649        | 144    | 1,650                      | 27                                   |
|                          |                                  | <i>Carried forward</i> ..  | 3,944                                | 33,453       | 2,420  | 37,397                     | 3,708                                |

APPENDIX IV—continued

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—continued

| Intermediate List Number | Detailed List Numbers | Cause Groups (Diseases)                                       | *Remain- ing at end of 1957 | YEARLY TOTAL |        | †Total cases treated | †Remain- ing at end of 1958 |
|--------------------------|-----------------------|---|-----------------------------|--------------|--------|----------------------|-----------------------------|
|                          |                       |   |                             | Admissions   | Deaths |                      |                             |
|                          |                       | <i>Brought forward</i> ..                                     | 3,944                       | 33,453       | 2,420  | 37,397               | 3,708                       |
|                          |                       | <b>IX.—Diseases of the Digestive System</b><br><i>—contd.</i> |                             |              |        |                      |                             |
| A 104                    | (b) 571.1             | Gastro-enteritis and colitis, ages two years and over ..      | 6                           | 350          | 27     | 356                  | 4                           |
|                          | (c) 572               | Chronic enteritis and ulcerative colitis                      | 2                           | 39           | ..     | 41                   | ..                          |
| A 105                    | (a) 581.0             | Cirrhosis of liver:—  | 7                           | 232          | 51     | 239                  | 5                           |
|                          | (b) 581.1             | Cirrhosis of liver without mention of alcoholism ..           | ..                          | 13           | 2      | 13                   | ..                          |
|                          |                       | Cirrhosis of liver with alcoholism ..                         | ..                          | ..           | ..     | ..                   | ..                          |
| A 106                    | (a) 584               | Cholelithiasis and Cholecystitis:—                            | 1                           | 92           | 8      | 93                   | ..                          |
|                          | (b) 585               | Cholelithiasis ..   | 10                          | 314          | 6      | 324                  | 5                           |
|                          |                       | Cholecystitis without mention of calculi ..                   | ..                          | ..           | ..     | ..                   | ..                          |
| A 107                    | (a) 536               | Other diseases of Digestive System:—                          | ..                          | 33           | ..     | 33                   | ..                          |
|                          | (b) 537, 538          | Stomatitis ..   | ..                          | 52           | 1      | 52                   | 1                           |
|                          | (c) 539.0             | Other diseases of buccal cavity ..                            | ..                          | ..           | ..     | ..                   | ..                          |
|                          |                       | Functional disorders of œsophagus ..                          | 1                           | 16           | 4      | 17                   | 3                           |
|                          | (d) 539.1             | Stricture or obstruction of œsophagus                         | 5                           | 35           | 3      | 40                   | 1                           |
|                          | (e) 544               | Disorders of function of stomach ..                           | ..                          | 10           | ..     | 10                   | ..                          |
|                          | (f) 542, 545          | Other diseases of stomach and duode- num ..                   | 3                           | 43           | 2      | 46                   | 2                           |
|                          |                       | <i>Carried forward</i> ..                                     | 3,979                       | 34,682       | 2,524  | 38,661               | 3,729                       |

## APPENDIX IV—continued

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—continued

| Intermediate List Number | Detailed List Numbers | Cause Groups (Diseases)                                       | *Remain-<br>ing<br>at end of<br>1957 | YEARLY TOTAL |        | †Total<br>cases<br>treated | ‡Remain-<br>ing<br>at end of<br>1958 |
|--------------------------|-----------------------|---|--------------------------------------|--------------|--------|----------------------------|--------------------------------------|
|                          |                       |   |                                      | Admissions   | Deaths |                            |                                      |
|                          |                       | <i>Brought forward</i> ..                                     | 3,979                                | 34,682       | 2,524  | 38,661                     | 3,729                                |
|                          |                       | <i>IX.—Diseases of the Digestive System</i><br><i>—contd.</i> |                                      |              |        |                            |                                      |
| A 107                    | 573.0                 | Constipation ..   | ..                                   | 30           | ..     | 30                         | 1                                    |
|                          | 573 except<br>573.0   | Other functional disorders of intestines ..                   | ..                                   | 10           | ..     | 10                         | ..                                   |
|                          | 574                   | Anal fissure and fistula ..                                   | ..                                   | 102          | ..     | 102                        | 2                                    |
|                          | 575                   | Abscess of anal and rectal regions ..                         | 3                                    | 265          | ..     | 268                        | 3                                    |
|                          | 576                   | Peritonitis ..  | 3                                    | 59           | 26     | 62                         | 1                                    |
|                          | 577, 578              | Other diseases of intestines and peri-<br>toneum ..           | 1                                    | 65           | 6      | 66                         | 3                                    |
|                          | 580                   | Acute yellow atrophy of liver ..                              | ..                                   | 8            | 5      | 8                          | ..                                   |
|                          | 582, 583              | Other diseases of liver ..                                    | 1                                    | 32           | 14     | 33                         | 1                                    |
|                          | 586                   | Other diseases of gall-bladder and<br>biliary ducts ..        | 1                                    | 21           | 7      | 22                         | 1                                    |
|                          | 587                   | Diseases of pancreas ..                                       | ..                                   | 18           | 1      | 18                         | ..                                   |
|                          |                       | <i>X.—Diseases of the Genito-Urinary System</i>               |                                      |              |        |                            |                                      |
| A 108                    | 590                   | Acute nephritis ..  | 33                                   | 452          | 3      | 485                        | 14                                   |
| A 109                    |                       | Chronic, other and unspecified nephri-<br>tis:—               |                                      |              |        |                            |                                      |
|                          | 591                   | Nephritis with œdema, including nep-<br>hrosis ..             | 11                                   | 182          | 6      | 193                        | 6                                    |
|                          |                       | <i>Carried forward</i> ..                                     | 4,032                                | 35,926       | 2,592  | 39,958                     | 3,761                                |

APPENDIX IV—continued

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—continued

| Intermediate List Number | Detailed List Numbers | Cause Groups (Diseases)   | *Remain- ing at end of 1957 | YEARLY TOTAL |        | †Total cases treated | †Remain- ing at end of 1958 |
|--------------------------|-----------------------|---|-----------------------------|--------------|--------|----------------------|-----------------------------|
|                          |                       |   |                             | Admissions   | Deaths |                      |                             |
|                          |                       | <i>Brought forward</i> ..   | 4,032                       | 35,926       | 2,592  | 39,958               | 3,761                       |
|                          |                       | <b>X.—Diseases of the Genito-Urinary System</b><br><i>—contd.</i> |                             |              |        |                      |                             |
| A 109                    | 592                   | Chronic nephritis ..  | 12                          | 148          | 72     | 160                  | 7                           |
|                          | 593                   | Nephritis not specified as acute or chronic ..                    | ..                          | 11           | 2      | 11                   | ..                          |
|                          | 594                   | Other renal sclerosis ..  | ..                          | 2            | ..     | 2                    | ..                          |
| A 110                    | 600                   | Infections of kidney ..   | 8                           | 161          | 3      | 169                  | 9                           |
| A 111                    | 602                   | Calculi of urinary system:—                                       | 4                           | 182          | 1      | 186                  | 2                           |
|                          | 604                   | Calculi of kidney and ureter ..                                   | 1                           | 62           | ..     | 63                   | ..                          |
| A 112                    | 610                   | Calculi of other parts of urinary system                          | 2                           | 106          | 2      | 108                  | 3                           |
| A 113                    | 620, 621              | Hyperplasia of prostate ..  | 1                           | 110          | ..     | 111                  | 3                           |
| A 114                    | 603                   | Other diseases of genito-urinary system:—                         | ..                          | 13           | 1      | 13                   | ..                          |
|                          | 605                   | Other diseases of kidney and ureter ..                            | ..                          | 68           | ..     | 68                   | 2                           |
|                          | 606                   | Cystitis ..   | ..                          | 12           | ..     | 12                   | 1                           |
|                          | 608                   | Other diseases of bladder ..                                      | 1                           | 54           | 1      | 55                   | ..                          |
|                          | 609                   | Stricture of urethra ..   | 1                           | 36           | ..     | 37                   | 1                           |
|                          | 612                   | Other diseases of urethra ..                                      | ..                          | 3            | ..     | 3                    | ..                          |
|                          | 613                   | Other diseases of prostate ..                                     | 2                           | 237          | ..     | 239                  | ..                          |
|                          | 614                   | Hydrocele ..  | ..                          | 51           | ..     | 51                   | ..                          |
|                          | 611                   | Orchitis and epididymitis ..                                      | ..                          | 234          | 2      | 234                  | ..                          |
|                          | 615-617               | Other diseases of male genital organs ..                          | ..                          | 56           | ..     | 56                   | ..                          |
|                          | 622-624               | Acute salpingitis and oophoritis ..                               | ..                          | ..           | ..     | ..                   | ..                          |
|                          |                       | <i>Carried forward</i> ..   | 4,064                       | 37,472       | 2,676  | 41,536               | 3,789                       |

APPENDIX IV—continued  
RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—continued

| Intermediate List Number | Detailed List Numbers | Cause Groups (Diseases)   | * Remain-<br>ing<br>at end of<br>1957 | YEARLY TOTAL |        | † Total<br>cases<br>treated | † Remain-<br>ing<br>at end of<br>1958 |
|--------------------------|-----------------------|---|---------------------------------------|--------------|--------|-----------------------------|---------------------------------------|
|                          |                       |   |                                       | Admissions   | Deaths |                             |                                       |
|                          |                       | <i>Brought forward ..</i>   | 4,064                                 | 37,472       | 2,676  | 41,536                      | 3,789                                 |
|                          |                       | <b>X.—Diseases of the Genito-Urinary System</b><br>—contd.                          |                                       |              |        |                             |                                       |
| A 114                    | (k) 625               | Other diseases of ovary and Fallopian tube .. .. .                                  | 4                                     | 93           | 2      | 97                          | ..                                    |
|                          | (l) 626               | Diseases of parametrium and pelviperitoneum (female) .. .. .                        | ..                                    | 55           | 1      | 55                          | 2                                     |
|                          | (m) 630               | Infective disease of uterus, vagina and vulva .. .. .                               | ..                                    | 93           | ..     | 93                          | ..                                    |
|                          | (n) 631-633           | Other diseases of uterus .. .. .  | ..                                    | 206          | ..     | 206                         | 6                                     |
|                          | (o) 634               | Disorders of menstruation .. .. .   | ..                                    | 244          | ..     | 244                         | 1                                     |
|                          | (p) 635-637           | Other diseases of female genital organs .. .. .                                     | 6                                     | 339          | ..     | 345                         | 2                                     |
|                          | (q) 601, 607          | All other diseases of the genito-urinary system .. .. .                             | 1                                     | 87           | 1      | 88                          | 2                                     |
|                          |                       | <b>XI.—Deliveries and Complications of Pregnancy, Childbirth and the Puerperium</b> |                                       |              |        |                             |                                       |
| A 115                    | (a) 640               | Sepsis of pregnancy, childbirth and the puerperium:—                                | ..                                    | 107          | ..     | 107                         | 1                                     |
|                          | (b) 641               | Pyelitis and pyelonephritis of pregnancy  | ..                                    | ..           | ..     | ..                          | ..                                    |
|                          | (c) 681               | Other infections of genito-urinary tract during pregnancy .. .. .                   | ..                                    | 106          | 5      | 106                         | 1                                     |
|                          |                       | Sepsis of childbirth and the puerperium .. .. .                                     | ..                                    | ..           | ..     | ..                          | ..                                    |
|                          |                       | <i>Carried forward ..</i>   | 4,075                                 | 38,802       | 2,685  | 42,877                      | 3,804                                 |

APPENDIX IV—continued  
 RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—continued

| Intermediate List Number | Detailed List Numbers            | Cause Groups (Diseases)   | *Remain- ing at end of 1957 | YEARLY TOTAL           |                   | †Total cases treated   | †Remain- ing at end of 1958 |
|--------------------------|----------------------------------|---|-----------------------------|------------------------|-------------------|------------------------|-----------------------------|
|                          |                                  |   |                             | Admissions             | Deaths            |                        |                             |
|                          |                                  | <i>Brought forward</i> ..   | 4,075                       | 38,802                 | 2,685             | 42,877                 | 3,804                       |
|                          |                                  | XI.— <i>Deliveries and Complications of Pregnancy, Childbirth and the Puerperium</i> —contd.  |                             |                        |                   |                        |                             |
| A 115                    | 682<br>684                       | Puerperal phlebitis and thrombosis ..<br>Puerperal pulmonary embolism ..  | ..<br>..                    | 3<br>..                | ..<br>..          | 3<br>..                | ..<br>..                    |
| A 116                    | 642.2<br>642.3<br>642.4<br>642.5 | Toxaemias of pregnancy and the puerperium:—<br>Pre-eclampsia of pregnancy ..<br>Eclampsia of pregnancy ..<br>Hyperemesis gravidarum ..<br>Acute yellow atrophy of liver of pregnancy .. | 20<br>2<br>..<br>..         | 1,280<br>59<br>95<br>3 | 1<br>5<br>..<br>3 | 1,300<br>61<br>95<br>3 | 26<br>3<br>3<br>..          |
|                          | 642.5<br>652                     | Other toxæmias of pregnancy ..<br>Abortion with toxæmia, without men-<br>tion of sepsis ..  | ..<br>..                    | 1<br>..                | ..<br>..          | 1<br>..                | ..<br>..                    |
|                          | 685                              | Puerperal eclampsia ..  | ..                          | 9                      | ..                | 9                      | ..                          |
|                          | 686                              | Other forms of puerperal toxæmia ..   | ..                          | 1                      | ..                | 1                      | ..                          |
| A 117                    | 643<br>644                       | Hæmorrhage of pregnancy and child-<br>birth:—<br>Placenta prævia ..<br>Other hæmorrhage of pregnancy ..   | ..<br>..                    | 114<br>25              | ..<br>5           | 114<br>25              | ..<br>..                    |
|                          |                                  | <i>Carried forward</i> ..   | 4,097                       | 40,392                 | 2,699             | 44,489                 | 3,836                       |

## APPENDIX IV—continued

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—continued

| Intermediate List Number | Detailed List Numbers | Cause Groups (Diseases)   | *Remain-<br>ing<br>at end of<br>1957 | YEARLY TOTAL |        | †Total<br>cases<br>treated | †Remain-<br>ing<br>at end of<br>1958 |
|--------------------------|-----------------------|---|--------------------------------------|--------------|--------|----------------------------|--------------------------------------|
|                          |                       |   |                                      | Admissions   | Deaths |                            |                                      |
|                          |                       | <i>Brought forward</i> ..   | 4,097                                | 40,392       | 2,699  | 44,489                     | 3,836                                |
|                          |                       | XI.— <i>Deliveries and Complications of Preg-<br/>nancy, Childbirth and the Puerperium</i><br>—contd. |                                      |              |        |                            |                                      |
| A 117                    | (c) 670               | Delivery complicated by placenta præ-<br>via or antepartum hæmorrhage ..                              | 10                                   | 318          | ..     | 328                        | 8                                    |
|                          | (d) 671               | Delivery complicated by retained pla-<br>centa .. .. .  | 4                                    | 613          | ..     | 617                        | 3                                    |
|                          | (e) 672               | Delivery complicated by other post-<br>partum hæmorrhage .. .. .                                      | 6                                    | 2,356        | 14     | 2,362                      | 24                                   |
| A 118                    | 650                   | Abortion without mention of sepsis or<br>toxæmia .. .. .  | 14                                   | 3,164        | 2      | 3,178                      | 12                                   |
| A 119                    | 651                   | Abortion with sepsis .. .. .  | 2                                    | 132          | 4      | 134                        | 2                                    |
| A 120                    |                       | Other complications of pregnancy, child-<br>birth and the puerperium:—                                |                                      |              |        |                            |                                      |
|                          | (a) 645               | Ectopic pregnancy .. .. .   | 1                                    | 158          | ..     | 159                        | 2                                    |
|                          | (b) 646               | Anæmia of pregnancy .. .. .   | ..                                   | 203          | 1      | 203                        | 6                                    |
|                          | (c) 683               | Pyrexia of unknown origin during the<br>puerperium .. .. .  | 4                                    | 159          | ..     | 163                        | 4                                    |
|                          | (d) 688.1             | Puerperal psychoses .. .. .   | 1                                    | 8            | ..     | 9                          | ..                                   |
|                          | (e) 689               | Mastitis and other disorders of lacta-<br>tion .. .. .  | ..                                   | 38           | ..     | 38                         | 1                                    |
|                          |                       | <i>Carried forward</i> ..   | 4,139                                | 47,541       | 2,720  | 51,680                     | 3,898                                |

APPENDIX IV—continued  
 RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—continued

| Intermediate List Number | Detailed List Numbers                             | Cause Groups (Diseases)   | *Remain-<br>ing<br>at end of<br>1957 | YEARLY TOTAL |        | †Total<br>cases<br>treated | ‡Remain-<br>ing<br>at end of<br>1958 |
|--------------------------|---|---|--------------------------------------|--------------|--------|----------------------------|--------------------------------------|
|                          |   |   |                                      | Admissions   | Deaths |                            |                                      |
| A 120 (f)                | 647-649<br>673-680<br>687<br>688.0<br>688.2-688.3 | Brought forward ..<br><br>XI.—Deliveries and Complications of Preg-<br>nancy, Childbirth and the Puerperium<br>—contd.<br><br>Other complications of pregnancy,<br>childbirth and the puerperium .. | 4,139                                | 47,541       | 2,720  | 51,680                     | 3,898                                |
| (g)                      | 660   | Delivery without complications ..   | 169                                  | 21,971       | ..     | 22,140                     | 139                                  |
|                          |   | XII.—Diseases of the Skin and Cellular<br>Tissue  |                                      |              |        |                            |                                      |
|                          |   | XIII.—Diseases of the Bones and Organs<br>of Movement   |                                      |              |        |                            |                                      |
|                          |   | Infections of skin and subcutaneous<br>tissue:—   |                                      |              |        |                            |                                      |
| (a)                      | 690   | Boil and carbuncle .. ..  | 1                                    | 137          | ..     | 138                        | 5                                    |
| (b)                      | 691-693   | Cellulitis and abscess .. ..  | 15                                   | 900          | 3      | 915                        | 21                                   |
| (c)                      | 694-698   | Other infections of skin and subcuta-<br>neous tissue .. ..   | 20                                   | 833          | 1      | 853                        | 33                                   |
|                          |   | Carried forward ..  | 4,371                                | 78,192       | 2,728  | 82,563                     | 4,137                                |

APPENDIX IV—continued  
 RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—continued

| Intermediate List Number | Detailed List Numbers | Cause Groups (Diseases)   | *Remain-<br>ing<br>at end of<br>1957 | YEARLY TOTAL |        | †Total<br>cases<br>treated | †Remain-<br>ing<br>at end of<br>1958 |
|--------------------------|-----------------------|---|--------------------------------------|--------------|--------|----------------------------|--------------------------------------|
|                          |                       |   |                                      | Admissions   | Deaths |                            |                                      |
|                          |                       | <i>Brought forward</i> ..   | 4,371                                | 78,192       | 2,728  | 82,563                     | 4,137                                |
|                          |                       | XIII.— <i>Diseases of the Bones and Organs of Movement—contd.</i> |                                      |              |        |                            |                                      |
|                          |                       | Arthritis and spondylitis:—                                       |                                      |              |        |                            |                                      |
| A 122                    | 720                   | Acute arthritis due to pyogenic organisms ..                      | 2                                    | 26           | 1      | 28                         | 4                                    |
|                          | 721                   | Acute nonpyogenic arthritis ..                                    | ..                                   | 4            | ..     | 4                          | 1                                    |
|                          | 722                   | Rheumatoid arthritis and allied conditions ..                     | 6                                    | 85           | 1      | 91                         | 5                                    |
|                          | 723-725               | Arthritis specified and unspecified ..                            | 10                                   | 74           | 1      | 84                         | 10                                   |
| A 123                    |                       | Muscular rheumatism and rheumatism, unspecified:—                 | 6                                    | 8            | ..     | 14                         | ..                                   |
|                          | 726                   | Muscular rheumatism ..  | ..                                   | 3            | ..     | 3                          | ..                                   |
|                          | 727                   | Rheumatism unspecified ..   | ..                                   | 127          | ..     | 143                        | 14                                   |
| A 124                    | 730                   | Osteomyelitis and periostitis ..                                  | 16                                   | ..           | ..     | ..                         | ..                                   |
| A 125                    |                       | Ankylosis and acquired musculoskeletal deformities:—              | 1                                    | 5            | ..     | 6                          | ..                                   |
|                          | 737                   | Ankylosis of joint ..   | ..                                   | ..           | ..     | ..                         | ..                                   |
|                          | 745-749               | Other acquired musculoskeletal deformities ..                     | ..                                   | 60           | ..     | 60                         | 5                                    |
| A 126                    | 715                   | All other diseases of skin and musculoskeletal system:—           | 5                                    | 64           | ..     | 69                         | 7                                    |
|                          |                       | Chronic ulcer of skin (including tropical ulcer) ..               | ..                                   | ..           | ..     | ..                         | ..                                   |
|                          |                       | <i>Carried forward</i> ..   | 4,417                                | 78,648       | 2,731  | 83,065                     | 4,183                                |

APPENDIX IV—continued

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—continued

| Intermediate List Number | Detailed List Numbers                    | Cause Groups (Diseases)  | *Remain- ing at end of 1957 | YEARLY TOTAL      |                 | †Total cases treated | †Remain- ing at end of 1958 |
|--------------------------|--|--|-----------------------------|-------------------|-----------------|----------------------|-----------------------------|
|                          |  |  |                             | Admissions        | Deaths          |                      |                             |
|                          |  | <i>Brought forward</i> ..  | 4,417                       | 78,648            | 2,731           | 83,065               | 4,183                       |
|                          |  | <b>XIII.—Diseases of the Bones and Organs of Movement—contd.</b>   |                             |                   |                 |                      |                             |
| A 126                    | (b) 700-714 }<br>716 }                   | All other diseases of skin and subcutaneous tissue ..  | 8                           | 269               | 3               | 277                  | 11                          |
|                          | (c) 731-736 }<br>738-744 }               | All other diseases of musculoskeletal system ..  | 5                           | 219               | 1               | 224                  | 1                           |
|                          |  | <b>XIV.—Congenital Malformations</b>   |                             |                   |                 |                      |                             |
| A 127                    | 751                                      | Spina bifida and meningocele ..  | ..                          | 20                | 1               | 20                   | ..                          |
| A 128                    | 754                                      | Congenital malformation of circulatory system ..   | 4                           | 249               | 64              | 253                  | 11                          |
| A 129                    | (a) 750<br>(b) 752<br>(c) 753<br>(d) 755 | All other congenital malformations:—<br>Monstrosity ..<br>Congenital hydrocephalus ..<br>Other congenital malformations of nervous system and sense organs ..<br>Cleft palate and harelip .. | .. 1<br>..<br>.. 12         | .. 26<br>8<br>134 | .. 7<br>1<br>.. | .. 27<br>8<br>146    | .. 2<br>..                  |
|                          |  | <i>Carried forward</i> ..  | 4,447                       | 79,573            | 2,808           | 84,020               | 4,208                       |

## APPENDIX IV—continued

## RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—continued

| Intermediate List Number | Detailed List Numbers | Cause Groups (Diseases)   | *Remain-<br>ing<br>at end of<br>1957 | YEARLY TOTAL |        | †Total<br>cases<br>treated | ‡Remain-<br>ing<br>at end of<br>1958 |
|--------------------------|-----------------------|---|--------------------------------------|--------------|--------|----------------------------|--------------------------------------|
|                          |                       |   |                                      | Admissions   | Deaths |                            |                                      |
|                          |                       | <i>Brought forward</i> ..   | 4,447                                | 79,573       | 2,808  | 84,020                     | 4,208                                |
|                          |                       | <b>XIV.—Congenital Malformations—contd.</b>                                 |                                      |              |        |                            |                                      |
| A 129 (e)                | 756.0                 | Congenital hypertrophic pyloric stenosis ..                                 | 1                                    | 9            | ..     | 10                         | ..                                   |
| (f)                      | 756.1                 | Imperforate anus ..   | 2                                    | 12           | 6      | 14                         | ..                                   |
| (g)                      | 756.2                 | Other congenital malformations of digestive system ..                       | 1                                    | 33           | 5      | 34                         | 1                                    |
| (h)                      | 757                   | Congenital malformations of genitourinary system ..                         | ..                                   | 38           | 1      | 38                         | ..                                   |
| (i)                      | 758                   | Congenital malformations of bone and joint ..                               | 1                                    | 17           | ..     | 18                         | 1                                    |
| (j)                      | 759                   | Other and unspecified congenital malformations, not elsewhere classified .. | 1                                    | 51           | 7      | 52                         | ..                                   |
|                          |                       | <b>XV.—Certain Diseases of Early Infancy</b>                                |                                      |              |        |                            |                                      |
|                          |                       | <b>Birth injuries:—</b>   |                                      |              |        |                            |                                      |
| A 130 (a)                | 760                   | Intracranial and spinal injury at birth ..                                  | ..                                   | 9            | 5      | 9                          | ..                                   |
| (b)                      | 761                   | Other birth injury ..   | ..                                   | 3            | ..     | 3                          | ..                                   |
|                          |                       | <i>Carried forward</i> ..   | 4,453                                | 79,745       | 2,832  | 84,198                     | 4,210                                |

APPENDIX IV—continued

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—continued

| Intermediate List Number | Detailed List Numbers | Cause Groups (Diseases)   | *Remain-<br>ing<br>at end of<br>1957 | YEARLY TOTAL |        | †Total<br>cases<br>treated | †Remain-<br>ing<br>at end of<br>1958 |
|--------------------------|-----------------------|---|--------------------------------------|--------------|--------|----------------------------|--------------------------------------|
|                          |                       |   |                                      | Admissions   | Deaths |                            |                                      |
|                          |                       | <i>Brought forward</i> ..   | 4,453                                | 79,745       | 2,832  | 84,198                     | 4,210                                |
| A 131                    | 762                   | XV.— <i>Certain Diseases of Early Infancy</i><br>— <i>contd.</i>                  | ..                                   | 11           | 7      | 11                         | ..                                   |
| A 132                    | 763                   | Post-natal asphyxia and atelectasis ..  | ..                                   | 86           | 42     | 87                         | ..                                   |
|                          | 764                   | Infections of the newborn:—   | 1                                    | 204          | 31     | 210                        | 1                                    |
| (a)                      | 765                   | Pneumonia of newborn ..   | 6                                    | 2            | ..     | 2                          | ..                                   |
| (b)                      | 766                   | Diarrhoea of newborn ..   | ..                                   | 11           | 1      | 11                         | ..                                   |
| (c)                      | 767                   | Ophthalmia neonatorum ..  | ..                                   | 14           | 3      | 14                         | 2                                    |
| (d)                      | 768                   | Pemphigus neonatorum ..   | ..                                   | 1            | ..     | 1                          | ..                                   |
| (e)                      | 770                   | Umbilical sepsis ..   | ..                                   | 50           | 33     | 50                         | ..                                   |
| (f)                      | 769                   | Other sepsis of newborn ..  | ..                                   | 26           | 8      | 26                         | ..                                   |
| A 133                    | 771, 772              | Haemolytic disease of newborn ..  | ..                                   | ..           | ..     | ..                         | ..                                   |
| A 134                    | 773                   | All other defined diseases of early in-<br>fancy ..                               | ..                                   | ..           | ..     | ..                         | ..                                   |
| A 135                    | 774-776               | Ill-defined diseases peculiar to early in-<br>fancy, and immaturity unqualified:— | ..                                   | 12           | 3      | 12                         | ..                                   |
|                          |                       | Ill-defined diseases peculiar to early in-<br>fancy ..                            | 1                                    | 49           | 14     | 50                         | 4                                    |
|                          |                       | Immaturity and immaturity unqualified ..  | ..                                   | ..           | ..     | ..                         | ..                                   |
|                          |                       | <i>Carried forward</i> ..   | 4,461                                | 80,211       | 2,974  | 84,672                     | 4,217                                |

APPENDIX IV—continued  
 RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—continued

| Intermediate List Number | Detailed List Numbers            | Cause Groups (Diseases)   | *Remain-<br>ing<br>at end of<br>1957 | YEARLY TOTAL |        | †Total<br>cases<br>treated | ‡Remain-<br>ing<br>at end of<br>1958 |
|--------------------------|----------------------------------|---|--------------------------------------|--------------|--------|----------------------------|--------------------------------------|
|                          |                                  |   |                                      | Admissions   | Deaths |                            |                                      |
|                          |                                  | <i>Brought forward</i> ..   | 4,461                                | 80,211       | 2,974  | 84,672                     | 4,217                                |
| A 136                    | 794                              | XVI.— <i>Symptoms, Senility and Ill-Defined Conditions</i>              | ..                                   | 14           | ..     | 14                         | 4                                    |
| A 137                    | 780-789<br>except 788.8          | Senility without mention of psychoses ..                                | ..                                   | 1,090        | 31     | 1,132                      | 36                                   |
|                          | 788.8                            | Ill-defined and unknown causes of morbidity and mortality:—             | 11                                   | 490          | 5      | 501                        | 10                                   |
| (a)                      |                                  | Symptoms referable to systems or organs .. .. .                         | 42                                   | 650          | ..     | 656                        | 14                                   |
| (b)                      |                                  | Pyrexia of unknown origin .. .. .                                       | 11                                   | 15           | ..     | 15                         | ..                                   |
| (c)                      |                                  | Observation, without need for further medical care .. .. .              | 6                                    | ..           | ..     | ..                         | ..                                   |
| (d)                      |                                  | Malingering .. .. .   | ..                                   | ..           | ..     | ..                         | ..                                   |
| (e)                      |                                  | Sudden death (cause unknown) .. .. .                                    | ..                                   | ..           | ..     | ..                         | ..                                   |
| (f)                      |                                  | Found dead (cause unknown) .. .. .                                      | ..                                   | ..           | ..     | ..                         | ..                                   |
| (g)                      | 790-792<br>795.0, 795.4<br>795.5 | Other ill-defined and unknown causes of morbidity and mortality .. .. . | ..                                   | 93           | 2      | 93                         | ..                                   |
|                          |                                  | <i>Carried forward</i> ..   | 4,520                                | 82,563       | 3,012  | 87,083                     | 4,281                                |

APPENDIX IV—continued

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—continued

| Intermediate List Number | Detailed List Numbers | Cause Groups (Diseases)   | *Remain- ing at end of 1957 | YEARLY TOTAL |        | †Total cases treated | ‡Remain- ing at end of 1958 |
|--------------------------|-----------------------|---|-----------------------------|--------------|--------|----------------------|-----------------------------|
|                          |                       |   |                             | Admissions   | Deaths |                      |                             |
|                          |                       | <i>Brought forward</i> ..   | 4,520                       | 82,563       | 3,012  | 87,083               | 4,281                       |
|                          |                       | XVII.— <i>Accidents, Poisonings and Violence</i>  |                             |              |        |                      |                             |
|                          |                       | 'E' Code: <i>Alternative Classification of Accidents, Poisonings and Violence (External Causes)</i> |                             |              |        |                      |                             |
| AE 138                   | E810-E835             | Motor vehicle accidents ..  | 26                          | 1,239        | 140    | 1,265                | 24                          |
| AE 139                   | E800-E802             | Other Transport Accidents:—   | ..                          | 1            | ..     | 1                    | 1                           |
|                          | E850-E858             | Railway accidents ..  | ..                          | 2            | ..     | 2                    | ..                          |
|                          | E860-E866             | Water transport accidents ..  | ..                          | ..           | ..     | ..                   | ..                          |
|                          | E840-E845             | Aircraft accidents ..   | ..                          | ..           | ..     | ..                   | ..                          |
|                          |                       | Other road vehicle accidents ..   | ..                          | 61           | 2      | 61                   | ..                          |
| AE 140                   | E870                  | Accidental poisoning:—  | ..                          | 5            | ..     | 5                    | ..                          |
|                          | E874                  | Accidental poisoning by morphia and other opium derivatives ..                                      | ..                          | 38           | ..     | 38                   | ..                          |
|                          | E878                  | Accidental poisoning by other analgesic and soporific drugs ..                                      | ..                          | 24           | ..     | 24                   | ..                          |
|                          | E883                  | Accidental poisoning by other and unspecified drugs ..  | ..                          | 89           | 11     | 90                   | ..                          |
|                          |                       | Accidental poisoning by corrosive aromatics, acids and caustic alkalis ..                           | 1                           | ..           | ..     | ..                   | ..                          |
|                          |                       | <i>Carried forward</i> ..   | 4,547                       | 84,022       | 3,165  | 88,569               | 4,306                       |

## APPENDIX IV—continued

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—continued

| Intermediate List Number | Detailed List Numbers                       | Cause Groups (Diseases)  | *Remain-<br>ing<br>at end of<br>1957 | YEARLY TOTAL |        | †Total<br>cases<br>treated | ‡Remain-<br>ing<br>at end of<br>1958 |
|--------------------------|---|--|--------------------------------------|--------------|--------|----------------------------|--------------------------------------|
|                          |   |  |                                      | Admissions   | Deaths |                            |                                      |
|                          |   | <i>Brought forward</i> ..  | 4,547                                | 84,022       | 3,165  | 88,569                     | 4,306                                |
|                          |   | XVII.— <i>Accidents, Poisonings and Violence</i><br>—contd.  |                                      |              |        |                            |                                      |
|                          |   | 'E' Code: <i>Alternative Classification of<br/>Accidents, Poisonings and Violence</i><br>( <i>External Causes</i> )—contd. |                                      |              |        |                            |                                      |
| AE 140 (e)               | E884  | Accidental poisoning by mercury and<br>its compounds ..  | ..                                   | 4            | ..     | 4                          | ..                                   |
| (f)                      | E885  | Accidental poisoning by lead and its<br>compounds ..   | ..                                   | 5            | 1      | 5                          | ..                                   |
| (g)                      | E886  | Accidental poisoning by arsenic and<br>antimony and their compounds ..   | ..                                   | ..           | ..     | ..                         | ..                                   |
| (h)                      | E888  | Accidental poisoning by other and un-<br>specified solid or liquid substances ..   | 1                                    | 154          | 2      | 155                        | ..                                   |
| (i)                      | E890-E895                                   | Accidental poisoning by gases and<br>vapours ..  | ..                                   | 4            | ..     | 4                          | ..                                   |
| (j)                      | E871-E873<br>E875-E877<br>E879-E882<br>E887 | Other accidental poisoning ..  | ..                                   | 5            | ..     | 5                          | ..                                   |
| AE 141                   | E900-E904                                   | Accidental falls ..  | 32                                   | 852          | 18     | 884                        | 43                                   |
| AE 142                   | E912  | Accident caused by machinery ..  | ..                                   | 15           | 1      | 15                         | ..                                   |
| AE 143                   | E916  | Accident caused by fire and explosion<br>of combustible material ..  | 9                                    | 181          | 10     | 190                        | 7                                    |
| AE 144                   | E917-E918                                   | Accident caused by hot substance, cor-<br>rosive liquid, steam and radiation ..  | 11                                   | 295          | 2      | 306                        | 8                                    |
|                          |   | <i>Carried forward</i> ..  | 4,600                                | 85,537       | 3,199  | 90,137                     | 4,364                                |

APPENDIX IV—continued

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—continued

| Intermediate List Number | Detailed List Numbers | Cause Groups (Diseases)   | *Remain- ing at end of 1957 | YEARLY TOTAL |        | †Total cases treated | ‡Remain- ing at end of 1958 |
|--------------------------|-----------------------|---|-----------------------------|--------------|--------|----------------------|-----------------------------|
|                          |                       |   |                             | Admissions   | Deaths |                      |                             |
|                          |                       | <i>Brought forward</i> ..   | 4,600                       | 85,537       | 3,199  | 90,137               | 4,364                       |
|                          |                       | XVII.— <i>Accidents, Poisonings and Violence</i><br>—contd.   |                             |              |        |                      |                             |
|                          |                       | 'E' Code: <i>Alternative Classification of Accidents, Poisonings and Violence (External Causes)</i> —contd. |                             |              |        |                      |                             |
| AE 145                   | E919                  | Accident caused by firearms   | ..                          | ..           | ..     | ..                   | ..                          |
| AE 146                   | E929                  | Accidental drowning and submersion  | ..                          | 24           | ..     | 24                   | ..                          |
| AE 147                   | E920                  | All other accidental causes:—   | ..                          | 9            | ..     | 9                    | ..                          |
|                          | E923                  | Foreign body entering eye and adnexa  | ..                          | 81           | 1      | 83                   | 1                           |
|                          | E927                  | Foreign body entering other orifice   | ..                          | 17           | ..     | 18                   | ..                          |
|                          | E928                  | Accidents caused by bites and stings of venomous animals and insects  | ..                          | 8            | ..     | 8                    | ..                          |
|                          | E913                  | Other accidents caused by animals   | ..                          | 79           | 2      | 79                   | 2                           |
|                          | E914                  | Accidents caused by cutting or piercing instruments   | ..                          | 6            | ..     | 6                    | ..                          |
|                          | E924, E925            | Accidents caused by electric current  | ..                          | ..           | ..     | ..                   | ..                          |
|                          | E926                  | Accidental mechanical suffocation   | ..                          | ..           | ..     | ..                   | ..                          |
|                          | E931                  | Lack of care of infants under one year of age   | ..                          | 1            | ..     | 1                    | ..                          |
|                          | E932                  | Excessive heat  | ..                          | ..           | ..     | ..                   | ..                          |
|                          |                       | Excessive cold  | ..                          | ..           | ..     | ..                   | ..                          |
|                          |                       | <i>Carried forward</i> ..   | 4,603                       | 85,762       | 3,202  | 90,365               | 4,367                       |

APPENDIX IV—continued  
RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—continued

| Intermediate List Number | Detailed List Numbers | Cause Groups (Diseases)  | * Remain- ing at end of 1957 | YEARLY TOTAL |        | † Total cases treated | ‡ Remain- ing at end of 1958 |
|--------------------------|-----------------------|--|------------------------------|--------------|--------|-----------------------|------------------------------|
|                          |                       |  |                              | Admissions   | Deaths |                       |                              |
|                          |                       | <i>Brought forward</i> ..  | 4,603                        | 85,762       | 3,202  | 90,365                | 4,367                        |
|                          |                       | <b>XVII.—Accidents, Poisonings and Violence</b><br>—contd.   |                              |              |        |                       |                              |
|                          |                       | <b>'E' Code: Alternative Classification of Accidents, Poisonings and Violence (External Causes)—contd.</b> |                              |              |        |                       |                              |
|                          |                       | Hunger, thirst and exposure ..   | ..                           | ..           | ..     | ..                    | ..                           |
|                          |                       | Cataclysm .. ..  | ..                           | ..           | ..     | ..                    | ..                           |
|                          |                       | Lightning .. ..  | ..                           | 2            | ..     | 2                     | ..                           |
|                          |                       | Other and unspecified accidents ..   | ..                           | 11           | ..     | 11                    | ..                           |
|                          |                       | Vaccinia including post-vaccinal encephalitis .. ..  | ..                           | 5            | ..     | 5                     | 1                            |
|                          |                       | Other complications of small-pox vaccination .. ..   | ..                           | ..           | ..     | ..                    | ..                           |
|                          |                       | Anæsthetic accidents .. ..   | ..                           | ..           | ..     | ..                    | ..                           |
|                          |                       | Accidents due to medical or surgical intervention .. ..  | ..                           | 15           | ..     | 15                    | ..                           |
|                          |                       | <b>All other accidental causes</b> ..  | 13                           | 541          | 12     | 554                   | 18                           |
|                          |                       | <i>Carried forward</i> ..  | 4,616                        | 86,336       | 3,214  | 90,952                | 4,386                        |
| <b>AE 147</b>            | (k) E933              |  |                              |              |        |                       |                              |
|                          | (l) E934              |  |                              |              |        |                       |                              |
|                          | (m) E935              |  |                              |              |        |                       |                              |
|                          | (n) E936              |  |                              |              |        |                       |                              |
|                          | (o) E940, E941        |  |                              |              |        |                       |                              |
|                          | (p) E942              |  |                              |              |        |                       |                              |
|                          | (q) E954              |  |                              |              |        |                       |                              |
|                          | (r) E943-E946         |  |                              |              |        |                       |                              |
|                          | E950-E953             |  |                              |              |        |                       |                              |
|                          | E955-E959             |  |                              |              |        |                       |                              |
|                          | (s) E910, E911        |  |                              |              |        |                       |                              |
|                          | E915                  |  |                              |              |        |                       |                              |
|                          | E921-E922             |  |                              |              |        |                       |                              |
|                          | E930                  |  |                              |              |        |                       |                              |
|                          | E960-E962             |  |                              |              |        |                       |                              |

APPENDIX IV—continued  
RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—continued

| Intermediate List Number | Detailed List Numbers | Cause Groups (Diseases)  | *Remain-<br>ing<br>at end of<br>1957 | YEARLY TOTAL |        | †Total<br>cases<br>treated | ‡Remain-<br>ing<br>at end of<br>1958 |
|--------------------------|-----------------------|--|--------------------------------------|--------------|--------|----------------------------|--------------------------------------|
|                          |                       |  |                                      | Admissions   | Deaths |                            |                                      |
|                          |                       | <i>Brought forward</i> ..  | 4,616                                | 86,336       | 3,214  | 90,952                     | 4,386                                |
|                          |                       | <b>XVII.—Accidents, Poisonings and Violence</b><br>—contd.   |                                      |              |        |                            |                                      |
|                          |                       | <b>'E' Code: Alternative Classification of<br/>Accidents, Poisonings and Violence<br/>(External Causes)—contd.</b> |                                      |              |        |                            |                                      |
| AE 148                   |                       | Suicide and self-inflicted injury:—  |                                      |              |        |                            |                                      |
| (a)                      | E970                  | Suicide and self-inflicted injury by<br>analgesic and soporific substances ..                                      | ..                                   | 8            | 2      | 8                          | ..                                   |
| (b)                      | E971                  | Suicide and self-inflicted injury by<br>other solid and liquid substances ..                                       | ..                                   | 40           | 2      | 40                         | ..                                   |
| (c)                      | E972                  | Suicide and self-inflicted injury by<br>gases in domestic use ..   | ..                                   | 1            | ..     | 1                          | ..                                   |
| (d)                      | E973                  | Suicide and self-inflicted injury by<br>other gases ..   | ..                                   | 2            | 1      | 2                          | ..                                   |
| (e)                      | E974                  | Suicide and self-inflicted injury by<br>hanging or strangulation ..  | ..                                   | 6            | 1      | 6                          | ..                                   |
| (f)                      | E975                  | Suicide and self-inflicted injury by<br>submersion (drowning) ..   | ..                                   | 2            | ..     | 2                          | ..                                   |
| (g)                      | E976                  | Suicide and self-inflicted injury by<br>firearms and explosives ..   | ..                                   | 1            | ..     | 1                          | 1                                    |
| (h)                      | E977                  | Suicide and self-inflicted injury by<br>cutting or piercing instruments ..   | 2                                    | 18           | 3      | 20                         | 3                                    |
|                          |                       | <i>Carried forward</i> ..  | 4,618                                | 86,414       | 3,223  | 91,032                     | 4,390                                |

APPENDIX IV—continued  
RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—continued

| Intermediate List Number | Detailed List Numbers | Cause Groups (Diseases)   | *Remain-<br>ing<br>at end of<br>1957 | YEARLY TOTAL |        | †Total<br>cases<br>treated | †Remain-<br>ing<br>at end of<br>1958 |
|--------------------------|-----------------------|---|--------------------------------------|--------------|--------|----------------------------|--------------------------------------|
|                          |                       |   |                                      | Admissions   | Deaths |                            |                                      |
|                          |                       | <i>Brought forward</i> ..   | 4,618                                | 86,414       | 3,223  | 91,032                     | 4,390                                |
|                          |                       | XVII.— <i>Accidents, Poisonings and Violence</i><br>—contd.   |                                      |              |        |                            |                                      |
|                          |                       | ‘E’ Code: <i>Alternative Classification of Accidents, Poisonings and Violence (External Causes)</i> —contd. |                                      |              |        |                            |                                      |
| AE 48 (i)                | E978                  | Suicide and self-inflicted injury by jumping from high places   | ..                                   | 1            | 1      | 1                          | ..                                   |
| (j)                      | E963, E979            | Suicide and self-inflicted injury by other and unspecified means  | ..                                   | 5            | 2      | 5                          | ..                                   |
| AE 149                   |                       | Homicide and injury purposely inflicted by other persons (not in war):—                                     |                                      |              |        |                            |                                      |
| (a)                      | E980                  | Non-accidental poisoning by another person  | ..                                   | 15           | ..     | 16                         | ..                                   |
| (b)                      | E981                  | Assault by firearms and explosives  | ..                                   | ..           | ..     | ..                         | 2                                    |
| (c)                      | E982                  | Assault by cutting and piercing instruments   | ..                                   | 199          | 2      | 201                        | 3                                    |
| (d)                      | E964, E983            | Assault by other means  | ..                                   | 336          | 8      | 341                        | 6                                    |
| (e)                      | E984                  | Injury by intervention of police  | ..                                   | ..           | ..     | ..                         | ..                                   |
| (f)                      | E985                  | Execution (legal)   | ..                                   | ..           | ..     | ..                         | ..                                   |
| AE 150                   | E990-E999 }<br>E965 } | Injury resulting from operations of war   | ..                                   | ..           | ..     | ..                         | ..                                   |
|                          |                       | <b>Grand Total (Excluding Transfers and Healthy persons)</b> ..   | 4,626                                | 86,970       | 3,236  | 91,596                     | 4,401                                |

APPENDIX IV—continued  
IN-PATIENTS BY RACIAL GROUPS 1958

| Racial Group  | *Remain-<br>ing<br>at end of<br>1957 | YEARLY TOTAL  |              | †Total<br>cases<br>treated | ‡Remain-<br>ing<br>at end of<br>1958 |
|---|--------------------------------------|---------------|--------------|----------------------------|--------------------------------------|
|   |                                      | Admissions    | Deaths       |                            |                                      |
| Europeans   | 42                                   | 1,186         | 25           | 1,228                      | 23                                   |
| Eurasians   | 42                                   | 991           | 33           | 1,033                      | 38                                   |
| Chinese   | 3,764                                | 66,391        | 2,631        | 70,155                     | 3,623                                |
| Indians and Pakistanis  | 416                                  | 11,901        | 323          | 12,317                     | 404                                  |
| Malays  | 336                                  | 4,870         | 177          | 5,206                      | 282                                  |
| Javanese  | 26                                   | 1,631         | 47           | 1,657                      | 31                                   |
| Others  |                                      |               |              |                            |                                      |
| <b>Total</b>  | <b>4,626</b>                         | <b>86,970</b> | <b>3,236</b> | <b>91,596</b>              | <b>4,401</b>                         |
| Healthy persons admitted to hospital to accompany children or friends |                                      | 1             |              | 1                          |                                      |
| Transfers to other Hospitals from General Hospital                    |                                      | 354           |              | 354                        |                                      |

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## APPENDIX V

## SINGAPORE (excluding Christmas and Cocos-Keeling Islands)

DEATHS BY CAUSE, 1953-58

According to the Intermediate List, adapted for use in Singapore, of the Sixth Revision (1948) of the International List of Diseases and causes of Death

| Inter-<br>mediate<br>List<br>Number | Detailed List<br>Numbers                           | CAUSE OF DEATH<br>(Intermediate International List, Sixth Revision, 1948)   | 1958                             | 1957                              | 1956                              | 1955                             | 1954                              | 1953                              |
|-------------------------------------|--|---|----------------------------------|-----------------------------------|-----------------------------------|----------------------------------|-----------------------------------|-----------------------------------|
|                                     |  | I.—INFECTIOUS AND PARASITIC DISEASES  |                                  |                                   |                                   |                                  |                                   |                                   |
| A 1                                 | 001-008  | Tuberculosis of respiratory system .. .. .  | 568                              | 671                               | 673                               | 827                              | 829                               | 811                               |
| A 2                                 | 010  | Tuberculosis of meninges and central nervous system ..  | 22                               | 44                                | 67                                | 106                              | 91                                | 129                               |
| A 3                                 | 011  | Tuberculosis of intestines, peritoneum and mesenteric glands ..   | 9                                | 6                                 | 5                                 | 9                                | 3                                 | 6                                 |
| A 4                                 | 012.0, 013.0<br>012, 013<br>except<br>012.0, 013.0 | Tuberculosis of bones and joints:—<br>Tuberculosis of the vertebral column .. .. .<br>Tuberculosis of other bones and joints .. .. .  | 3<br>—                           | 2<br>1                            | 4<br>1                            | 7<br>1                           | 6<br>1                            | 6<br>—                            |
| A 5                                 | 014<br>015<br>016<br>017<br>018<br>019<br>020      | Tuberculosis, all other forms:—<br>Tuberculosis of skin and sub-cutaneous cellular tissue ..<br>Tuberculosis of lymphatic system .. .. .<br>Tuberculosis of genito-urinary system .. .. .<br>Tuberculosis of adrenal glands .. .. .<br>Tuberculosis of other organs .. .. .<br>Disseminated tuberculosis .. .. .<br>Congenital syphilis .. .. . | —<br>2<br>5<br>—<br>3<br>12<br>5 | —<br>—<br>3<br>—<br>1<br>23<br>11 | —<br>1<br>2<br>—<br>2<br>29<br>12 | 1<br>—<br>1<br>—<br>1<br>36<br>6 | —<br>—<br>1<br>—<br>—<br>28<br>15 | 1<br>1<br>1<br>—<br>1<br>50<br>27 |
| A 7                                 | 021.0, 021.1<br>021.2<br>021.3<br>021.4            | Early Syphilis:—<br>Primary syphilis .. .. .<br>Secondary syphilis .. .. .<br>Early syphilis, relapse following treatment ..<br>Early syphilis (unspecified stage) .. .. .  | —<br>1<br>—<br>—<br>—            | —<br>—<br>—<br>—<br>—             | —<br>—<br>—<br>—<br>—             | —<br>—<br>—<br>—<br>—            | —<br>—<br>—<br>—<br>—             | —<br>—<br>—<br>—<br>—             |
|                                     |  | Carried forward .. .. .   | 630                              | 762                               | 796                               | 995                              | 979                               | 1,033                             |

—means nil.

APPENDIX V—continued

RETURN OF DEATHS BY CAUSES, 1953-58—continued

| Inter-<br>mediate<br>List<br>Number | Detailed List<br>Numbers | CAUSE OF DEATH<br>(Intermediate International List, Sixth Revision, 1948) | 1958 | 1957 | 1956 | 1955  | 1954  | 1953  |
|-------------------------------------|--------------------------|---|------|------|------|-------|-------|-------|
|                                     |                          | <i>Brought forward</i> ..   | 630  | 762  | 796  | 995   | 979   | 1,033 |
| A 8                                 | 024                      | Tabes dorsalis .. .. .  | 1    | 2    | 3    | 3     | 4     | 9     |
| A 9                                 | 025                      | General paralysis of insane .. .. .                                       | 14   | 7    | 7    | 46    | 45    | 28    |
| A 10                                | 022                      | All other syphilis:—  | 18   | 21   | 23   | 14    | 27    | 20    |
|                                     | (a)                      | Aneurysm of aorta .. .. .   | 11   | 9    | 11   | 16    | 28    | 13    |
|                                     | (b)                      | Other cardiovascular syphilis .. .. .                                     | 2    | 4    | 1    | 1     | 4     | 4     |
|                                     | (c)                      | Other syphilis of central nervous system .. .. .                          | 3    | —    | —    | 1     | 1     | 1     |
|                                     | (d)                      | Other forms of late syphilis .. .. .                                      | —    | —    | —    | 1     | —     | —     |
|                                     | (e)                      | Latent Syphilis .. .. .   | —    | 1    | 4    | —     | —     | —     |
|                                     | (f)                      | Syphilis, unqualified .. .. .   | —    | —    | —    | 2     | —     | —     |
| A 11                                | 030                      | Gonococcal infections:—   | —    | —    | —    | —     | —     | —     |
|                                     | (a)                      | Acute or unspecified gonorrhœa .. .. .                                    | —    | —    | —    | —     | —     | —     |
|                                     | (b)                      | Chronic gonococcal infection of genito-urinary system .. .. .             | —    | —    | —    | —     | —     | —     |
|                                     | (c)                      | Gonococcal infection of joint .. .. .                                     | —    | —    | —    | —     | —     | —     |
|                                     | (d)                      | Gonococcal infection of eye .. .. .                                       | —    | —    | —    | —     | —     | —     |
|                                     | (e)                      | Gonococcal infection of other sites .. .. .                               | —    | —    | —    | 1     | —     | —     |
| A 12                                | 040                      | Typhoid fever .. .. .   | 9    | 8    | 8    | 15    | 15    | 12    |
| A 13                                | 041                      | Paratyphoid fever and other Salmonella infections:—                       | —    | —    | —    | —     | —     | —     |
|                                     | (a)                      | Paratyphoid fever A, B, or C .. .. .                                      | —    | —    | —    | —     | —     | —     |
|                                     | (b)                      | Other Salmonella infections .. .. .                                       | 1    | 1    | —    | —     | —     | —     |
| A 14                                | 043                      | Cholera .. .. .   | —    | —    | —    | —     | —     | —     |
| A 15                                | 044                      | Brucellosis (undulant fever) .. .. .                                      | —    | —    | —    | —     | —     | —     |
| A 16                                | 045                      | Dysentery, all forms:—  | 7    | 7    | 4    | 3     | 17    | 7     |
|                                     | (a)                      | Bacillary dysentery .. .. .   | 13   | 12   | 14   | 11    | 15    | 19    |
|                                     | (b)                      | Amoebiasis .. .. .  | 12   | 12   | 5    | 13    | 15    | 18    |
|                                     | (c)                      | Other protozoal and unspecified forms of dysentery .. .. .                | —    | —    | —    | —     | —     | —     |
|                                     | 047-048                  | <i>Carried forward</i> ..   | 721  | 846  | 876  | 1,122 | 1,151 | 1,165 |

— means nil.

## APPENDIX V—continued

RETURN OF DEATHS BY CAUSES, 1953-58—continued

| Inter-<br>mediate<br>List<br>Number | Detailed List<br>Numbers | CAUSE OF DEATH<br>(Intermediate International List, Sixth Revision, 1948)              | 1953        | 1957        | 1956        | 1955        | 1954        | 1953        |
|-------------------------------------|--------------------------|--|-------------|-------------|-------------|-------------|-------------|-------------|
|                                     |                          | <i>Brought forward</i> ..  | 721         | 846         | 876         | 1,122       | 1,151       | 1,165       |
|                                     |                          | <b>I.—INFECTIOUS AND PARASITIC DISEASES—contd.</b>                                     |             |             |             |             |             |             |
| A 17                                | 050                      | Scarlet fever .. .. .  | —           | —           | 1           | —           | —           | 1           |
| A 18                                | 051                      | Streptococcal sore throat .. .. .  | —           | —           | —           | —           | —           | —           |
| A 19                                | 052                      | Erysipelas .. .. .   | —           | 1           | —           | —           | —           | —           |
| A 20                                | 053                      | Septicæmia and pyæmia .. .. .  | 24          | 22          | 17          | 15          | 11          | 32          |
| A 21                                | 055                      | Diphtheria .. .. .   | 40          | 66          | 66          | 49          | 39          | 59          |
| A 22                                | 056                      | Whooping Cough .. .. .   | 3           | 5           | 15          | 1           | 1           | 2           |
| A 23                                | 057                      | Meningococcal infections .. .. .   | 3           | 3           | 2           | 2           | 2           | 1           |
| A 24                                | 058.0<br>058.1<br>058.2  | Plague:—<br>Bubonic Plague .. .. .<br>Pneumonic Plague .. .. .<br>Other Plague .. .. . | —<br>—<br>— | —<br>—<br>— | —<br>—<br>— | —<br>—<br>— | —<br>—<br>— | —<br>—<br>— |
| A 25                                | 060                      | Leprosy .. .. .  | 4           | 4           | 1           | 5           | 6           | 3           |
| A 26                                | 061                      | Tetanus:—<br>Tetanus of the new-born .. .. .<br>Tetanus, other forms .. .. .           | 8<br>33     | 3<br>18     | 11<br>21    | 10<br>20    | 16<br>2     | 17<br>6     |
| A 27                                | 062                      | Anthrax .. .. .  | —           | —           | —           | —           | —           | —           |
| A 28                                | 080                      | Acute Poliomyelitis .. .. .  | 14          | 8           | 2           | 6           | 4           | 4           |
| A 29                                | 082                      | Acute infectious encephalitis .. .. .  | 5           | 9           | 5           | 1           | 15          | 2           |
| A 30                                | 081, 083                 | Late effects of acute poliomyelitis and acute infectious encephalitis..                | —           | 1           | 1           | 1           | —           | 1           |
| A 31                                | 084                      | Small-pox .. .. .  | 1           | —           | —           | —           | —           | —           |
|                                     |                          | <i>Carried forward</i> ..  | 856         | 986         | 1,018       | 1,232       | 1,247       | 1,293       |

— means nil.

APPENDIX V—continued  
RETURN OF DEATHS BY CAUSES, 1953-58—continued

| Inter-<br>mediate<br>List<br>Number | Detailed List<br>Numbers | CAUSE OF DEATH<br>(Intermediate International List, Sixth Revision, 1948) | 1953  | 1954  | 1955  | 1956  | 1957  | 1958 | 1959  |
|-------------------------------------|--------------------------|---|-------|-------|-------|-------|-------|------|-------|
|                                     |                          | <i>Brought forward</i> ..   | 1,293 | 1,247 | 1,232 | 1,018 | 986   | 856  | 1,062 |
|                                     |                          | <b>I.—INFECTIOUS AND PARASITIC DISEASES—contd.</b>                        |       |       |       |       |       |      |       |
| A 32                                | 085                      | Measles .. .. .   | —     | 17    | 23    | 19    | 5     | 30   | —     |
| A 33                                | 091                      | Yellow fever .. .. .  | —     | —     | —     | —     | —     | —    | —     |
| A 34                                | 092                      | Infectious hepatitis .. .. .  | —     | 11    | 12    | 12    | 13    | 27   | —     |
| A 35                                | 094                      | Rabies .. .. .  | —     | —     | —     | —     | —     | —    | —     |
| A 36                                |                          | Typhus and other rickettsial diseases:—                                   |       |       |       |       |       |      |       |
|                                     | 100                      | Louse-borne epidemic typhus .. .. .                                       | —     | —     | —     | —     | —     | —    | —     |
|                                     | 101                      | Flea-borne epidemic typhus (murine) .. .. .                               | —     | —     | —     | —     | —     | —    | —     |
|                                     | 104                      | Tick-borne epidemic typhus .. .. .  | —     | —     | —     | —     | —     | —    | —     |
|                                     | 105                      | Mite-borne typhus .. .. .   | —     | 1     | —     | —     | —     | —    | —     |
|                                     | 102-103<br>106-108       | Other and unspecified typhus .. .. .                                      | —     | —     | —     | —     | —     | —    | —     |
| A 37                                |                          | Malaria:—   |       |       |       |       |       |      |       |
|                                     | 110                      | Vivax malaria (benign tertian) .. .. .                                    | —     | 1     | —     | —     | —     | —    | —     |
|                                     | 111                      | Malariae malaria (quartan) .. .. .  | —     | —     | —     | —     | —     | —    | —     |
|                                     | 112                      | Falciparum malaria (malignant tertian) .. .. .                            | —     | 5     | 1     | 2     | —     | —    | —     |
|                                     | 114                      | Mixed malarial infections .. .. .   | —     | —     | —     | —     | —     | —    | —     |
|                                     | 115                      | Blackwater fever .. .. .  | —     | —     | —     | —     | —     | 1    | —     |
|                                     | 113                      | Other and unspecified forms of malaria .. .. .                            | —     | —     | —     | 8     | —     | 5    | —     |
|                                     | 116-117                  | Schistosomiasis:—   | 38    | 17    | 21    | 8     | 12    | 5    | —     |
| A 38                                | 123.0                    | Schistosomiasis vesical (S. haematobium) .. .. .                          | —     | —     | —     | —     | —     | —    | —     |
|                                     | 123.1                    | Schistosomiasis intestinal (S. Mansoni) .. .. .                           | —     | —     | —     | —     | —     | —    | —     |
|                                     | 123.2                    | Schistosomiasis Pulmonary (S. japonicum) .. .. .                          | —     | —     | —     | —     | —     | —    | —     |
|                                     | 123.3                    | Other and unspecified Schistosomiasis .. .. .                             | —     | —     | —     | —     | —     | —    | —     |
| A 39                                | 125                      | Hydatid disease .. .. .   | —     | —     | —     | —     | —     | —    | —     |
| A 40                                | 127                      | Filariasis .. .. .  | —     | —     | —     | —     | —     | —    | —     |
| A 41                                | 129                      | Ankylostomiasis .. .. .   | —     | 1     | 2     | 3     | 2     | 1    | 2     |
|                                     |                          | <i>Carried forward</i> ..   | 1,359 | 1,300 | 1,291 | 1,062 | 1,018 | 920  | 1,062 |

— means nil.

## APPENDIX V—continued

## RETURN OF DEATHS BY CAUSES, 1953-58—continued

| Inter-<br>mediate<br>List<br>Number | Detailed List<br>Numbers | CAUSE OF DEATH<br>(Intermediate International List, Sixth Revision, 1948) | 1958 | 1957  | 1956  | 1955  | 1954  | 1953  |
|-------------------------------------|--------------------------|---|------|-------|-------|-------|-------|-------|
|                                     |                          | <i>Brought forward</i> ..   | 920  | 1,018 | 1,062 | 1,291 | 1,300 | 1,359 |
| A 42                                |                          | I.—INFECTIOUS AND PARASITIC DISEASES— <i>contid.</i>                      |      |       |       |       |       |       |
|                                     |                          | Other diseases due to helminths:—   |      |       |       |       |       |       |
| (a)                                 | 124                      | Other trematode infestation ..  | 2    | —     | —     | —     | —     | —     |
| (b)                                 | 126                      | Tape worm (infestation) and other cestode infestation ..                  | —    | —     | —     | —     | —     | 2     |
| (c)                                 | 128                      | Trichiniasis ..   | —    | —     | —     | —     | —     | —     |
| (d)                                 | 130.0                    | Ascariasis ..   | 12   | 8     | 7     | 11    | 15    | 30    |
| (e)                                 | 130.1-130.3              | Other diseases due to helminths ..  | 1    | 3     | 3     | —     | 1     | 3     |
| A 43                                |                          | All other diseases classified as infective and parasitic:—                |      |       |       |       |       |       |
| (a)                                 | 036                      | Chancroid ..  | —    | —     | —     | —     | —     | —     |
| (b)                                 | 037                      | Lymphogranuloma venereum ..   | —    | —     | —     | —     | —     | —     |
| (c)                                 | 038                      | Granuloma inguinale, venereal ..  | —    | —     | —     | —     | —     | —     |
| (d)                                 | 039                      | Other and unspecified venereal diseases ..                                | —    | —     | —     | —     | —     | —     |
| (e)                                 | 049                      | Food poisoning (infection and intoxication) ..                            | —    | —     | —     | —     | —     | —     |
| (f)                                 | 059                      | Tularemia ..  | —    | —     | —     | —     | —     | —     |
| (g)                                 | 063                      | Gas Gangrene ..   | 1    | —     | —     | —     | —     | —     |
| (h)                                 | 064.2                    | Glanders ..   | —    | —     | —     | —     | —     | —     |
| (i)                                 | 064.3                    | Melioidosis ..  | —    | —     | —     | —     | —     | —     |
| (j)                                 | 064.0, 064.1, 064.4      | Other bacterial diseases ..   | —    | —     | —     | —     | —     | —     |
| (k)                                 | 070                      | Vincent's infection ..  | —    | —     | —     | —     | —     | —     |
| (l)                                 | 071                      | Relapsing fever ..  | —    | —     | —     | —     | —     | —     |
| (m)                                 | 072                      | Leptospirosis icterohæmorrhagica (Weill's disease) ..                     | —    | 1     | —     | —     | —     | 2     |
| (n)                                 | 073                      | Yaws ..   | —    | —     | —     | —     | —     | —     |
| (o)                                 | 086                      | Rubella (German measles) ..   | 1    | —     | —     | —     | —     | —     |
| (p)                                 | 087                      | Chicken-pox ..  | 1    | —     | —     | —     | —     | —     |
| (q)                                 | 088                      | Herpes Zoster ..  | —    | —     | —     | —     | —     | —     |
| (r)                                 | 089                      | Mumps ..  | —    | —     | —     | —     | —     | —     |
| (s)                                 | 090                      | Dengue ..   | —    | —     | —     | —     | —     | —     |
| (t)                                 | 093                      | Glandular fever ..  | —    | —     | —     | —     | —     | —     |
| (u)                                 | 095                      | Trachoma ..   | —    | —     | —     | —     | —     | —     |
| (v)                                 | 120                      | Leishmaniasis ..  | —    | —     | —     | —     | —     | —     |
|                                     |                          | <i>Carried forward</i> ..   | 938  | 1,031 | 1,072 | 1,302 | 1,316 | 1,397 |

— means nil.

APPENDIX V—continued  
 RETURN OF DEATHS BY CAUSES, 1953-58—continued

| Inter-<br>mediate<br>List<br>Number | Detailed List<br>Numbers | CAUSE OF DEATH<br>(Intermediate International List, Sixth Revision, 1948)             | 1958  | 1957  | 1956  | 1955  | 1954  | 1953  |
|-------------------------------------|--------------------------|---|-------|-------|-------|-------|-------|-------|
| A 43                                |                          | <i>Brought forward</i> ..   | 938   | 1,031 | 1,072 | 1,302 | 1,316 | 1,397 |
|                                     |                          | <i>I.—INFECTIOUS AND PARASITIC DISEASES—contd.</i>                                    |       |       |       |       |       |       |
|                                     | 121                      | Trypanosomiasis ..  | —     | —     | —     | —     | —     | —     |
| (w)                                 | 131                      | Dermatophytosis ..  | —     | —     | —     | —     | —     | —     |
| (x)                                 | 132                      | Actinomycosis ..  | —     | —     | —     | —     | —     | —     |
| (y)                                 | 133,134                  | Other fungus infections ..  | —     | —     | —     | 10    | 3     | 6     |
| (z)                                 | 135                      | Scabies ..  | —     | —     | —     | —     | —     | —     |
| (A)                                 | 054,074                  | All other diseases classified as infective and parasitic ..                           | 5     | 3     | 2     | 3     | 4     | —     |
| (B)                                 | 096,122<br>136-138       |   |       |       |       |       |       |       |
|                                     |                          | <b>SUB-TOTAL I</b> ..   | 943   | 1,034 | 1,074 | 1,315 | 1,323 | 1,403 |
|                                     |                          | <i>II.—NEOPLASMS</i>  |       |       |       |       |       |       |
| A 44                                | 140-148                  | Malignant neoplasm of buccal cavity and pharynx ..                                    | 67    | 52    | 51    | 50    | 33    | 38    |
| A 45                                | 150                      | Malignant neoplasm of œsophagus ..  | 80    | 67    | 52    | 50    | 50    | 37    |
| A 46                                | 151                      | Malignant neoplasm of stomach ..  | 148   | 168   | 144   | 143   | 109   | 124   |
| A 47                                |                          | Malignant neoplasm of intestine except rectum:—                                       |       |       |       |       |       |       |
| (a)                                 | 152                      | Malignant neoplasm of small intestine, including duodenum ..                          | —     | —     | 1     | 1     | —     | —     |
| (b)                                 | 153                      | Malignant neoplasm of large intestine, except rectum ..                               | 28    | 26    | 24    | 18    | 16    | 22    |
| A 48                                | 154                      | Malignant neoplasm of rectum ..   | 26    | 22    | 26    | 14    | 21    | 11    |
| A 49                                | 161                      | Malignant neoplasm of larynx ..   | 13    | 16    | 11    | 9     | 14    | 9     |
| A 50                                | 162-163                  | Malignant neoplasm of trachea, and of bronchus and lung not specified as secondary .. | 95    | 90    | 72    | 72    | 59    | 55    |
| A 51                                | 170                      | Malignant neoplasm of breast ..   | 24    | 27    | 33    | 32    | 25    | 23    |
|                                     |                          | <b>Sub-Total II Carried forward</b> ..  | 481   | 468   | 414   | 389   | 327   | 319   |
|                                     |                          | <i>Carried forward</i> ..   | 1,424 | 1,502 | 1,488 | 1,704 | 1,650 | 1,722 |

— means nil.

APPENDIX V—continued  
 RETURN OF DEATHS BY CAUSES, 1953-58—continued

| Inter-<br>mediate<br>List<br>Number | Detailed List<br>Numbers | CAUSE OF DEATH<br>(Intermediate International List, Sixth Revision, 1948)      | 1953  | 1954  | 1955  | 1956  | 1957  | 1958  | 1959 |
|-------------------------------------|--------------------------|--|-------|-------|-------|-------|-------|-------|------|
|                                     |                          | <i>Brought forward</i> ..  | 1,722 | 1,650 | 1,704 | 1,488 | 1,502 | 1,424 |      |
|                                     |                          | Sub-Total II <i>Brought forward</i> ..   | 319   | 327   | 389   | 414   | 468   | 481   |      |
|                                     |                          | II.—NEOPLASMS—contd.   |       |       |       |       |       |       |      |
| A 52                                | 171                      | Malignant neoplasm of cervix uteri ..  | 29    | 34    | 33    | 25    | 38    | 38    |      |
| A 53                                | 172-174                  | Malignant neoplasm of other and unspecified parts of uterus ..                 | 28    | 27    | 24    | 25    | 19    | 27    |      |
| A 54                                | 177                      | Malignant neoplasm of prostate ..  | 3     | 2     | 2     | 6     | 4     | 7     |      |
| A 55                                | 190-191                  | Malignant neoplasm of skin ..  | 8     | 20    | 12    | 15    | 15    | 11    |      |
| A 56                                | 196-197                  | Malignant neoplasm of bone and connective tissue ..                            | 4     | 9     | 6     | 5     | 6     | 8     |      |
| A 57                                | 155-156                  | Malignant neoplasm of all other and unspecified sites:—                        |       |       |       |       |       |       |      |
| (a)                                 | 157                      | Malignant neoplasm of liver ..   | 75    | 77    | 74    | 84    | 100   | 96    |      |
| (b)                                 | 158                      | Malignant neoplasm of pancreas ..  | 6     | 4     | 4     | 14    | 5     | 10    |      |
| (c)                                 | 159                      | Malignant neoplasm of peritoneum ..  | 6     | 4     | 1     | 4     | 5     | 4     |      |
| (d)                                 | 159                      | Malignant neoplasm of unspecified digestive organs ..                          | —     | —     | —     | —     | 1     | —     |      |
| (e)                                 | 175-176                  | Malignant neoplasm of other and unspecified female genital organs              | 10    | 7     | 13    | 3     | 15    | 15    |      |
| (f)                                 | 178-179                  | Malignant neoplasm of other and unspecified male genital organs                | 1     | 3     | 2     | 1     | 3     | 1     |      |
| (g)                                 | 180-181                  | Malignant neoplasm of kidney, bladder and other urinary organs                 | 11    | 17    | 8     | 10    | 9     | 9     |      |
| (h)                                 | 160                      |  |       |       |       |       |       |       |      |
|                                     | 164-165                  | Malignant neoplasm of all other and unspecified sites                          | —     | 41    | 52    | 48    | 40    | 55    |      |
|                                     | 192-195                  |  |       |       |       |       |       |       |      |
|                                     | 198-199                  |  |       |       |       |       |       |       |      |
| A 58                                | 204                      | Leukæmia and Aleukæmia ..  | 23    | 23    | 27    | 31    | 36    | 47    |      |
| A 59                                | 200                      | Lymphosarcoma and other neoplasms of lymphatic and hæmato-<br>poietic system:— | 7     | 4     | 3     | 5     | 1     | 6     |      |
| (a)                                 | 201                      | Lymphosarcoma and reticulosarcoma ..   | 4     | 4     | 3     | 6     | 1     | 9     |      |
| (b)                                 | 201                      | Hodgkin's disease ..   | 4     | 4     | 3     | 6     | 1     | 9     |      |
|                                     |                          | Sub-Total II <i>Carried forward</i> ..   | 575   | 603   | 653   | 696   | 766   | 824   |      |
|                                     |                          | <i>Carried forward</i> ..  | 1,978 | 1,926 | 1,968 | 1,770 | 1,800 | 1,767 |      |

— means nil.

APPENDIX V—continued  
RETURN OF DEATHS BY CAUSES, 1953-58—continued

| Inter-<br>mediate<br>List<br>Number | Detailed List<br>Numbers                    | CAUSE OF DEATH<br>(Intermediate International List, Sixth Revision, 1948)   | 1953            | 1954             | 1955             | 1956     | 1957        | 1958       | 1953         |
|-------------------------------------|---|---|-----------------|------------------|------------------|----------|-------------|------------|--------------|
| A 59 (c)                            | 202-203<br>205                              | <i>Brought forward</i> ..<br>Sub-Total II <i>Brought forward</i> ..<br>II.—NEOPLASMS— <i>contid.</i><br>Other neoplasm of lymphatic and hæmatopoietic system  | 1,767           | 1,926            | 1,968            | 1,770    | 1,800       | 824        | 1,978        |
| A 60                                | 210-211<br>213-217<br>218<br>212<br>219-229 | Benign neoplasms and neoplasms of unspecified nature:—<br>Benign neoplasm of buccal cavity, pharynx and digestive system...<br>Benign neoplasm of female genital organs ..<br>Benign neoplasm of male genital organs ..<br>Benign neoplasm of other and unspecified organs and tissue | — 2<br>—<br>— 6 | 1 1<br>—<br>— 13 | 2 2<br>—<br>— 19 | —<br>— 8 | 1 1<br>— 10 | 1 1<br>— 6 | 4<br>—<br>27 |
| (e)                                 | 230   | Neoplasm of unspecified nature of digestive organs ..   | 2               | 1                | —                | 2        | —           | —          | —            |
| (f)                                 | 233-235                                     | Neoplasm of unspecified nature of other female genital organs ..  | —               | 1                | —                | —        | 1           | —          | —            |
| (g)                                 | 231-232                                     | Neoplasm of unspecified nature of other unspecified organs ..   | 23              | 5                | 4                | 21       | 26          | —          | 14           |
| (g)                                 | 236-239                                     |   | —               | —                | —                | —        | —           | —          | —            |
|                                     |   | SUB-TOTAL II ..   | 858             | 627              | 682              | 728      | 808         | 858        | 621          |
|                                     |   | III.—ALLERGIC ENDOCRINE SYSTEM, METABOLIC<br>AND NUTRITIONAL DISEASES   |                 |                  |                  |          |             |            |              |
|                                     |   | IV.—DISEASES OF THE BLOOD AND BLOOD-FORMING ORGANS  |                 |                  |                  |          |             |            |              |
| A 61                                | 250-251                                     | Nontoxic goitre .. .. .   | —               | —                | —                | 1        | —           | —          | —            |
| A 62                                | 252   | Thyrototoxicosis with or without goitre .. .. .   | 7               | 5                | 7                | 6        | 5           | 7          | 6            |
| A 63                                | 260   | Diabetes mellitus .. .. .   | 80              | 54               | 73               | 69       | 62          | 80         | 65           |
|                                     |   | Aggregate of Sub-Totals III and IV <i>Carried forward</i> ..  | 87              | 59               | 80               | 76       | 67          | 87         | 71           |
|                                     |   | <i>Carried forward</i> ..   | 1,888           | 2,009            | 2,077            | 1,878    | 1,909       | 1,888      | 2,095        |

— means nil.

APPENDIX V—continued  
RETURN OF DEATHS BY CAUSES, 1953-58—continued

| Inter-<br>mediate<br>List<br>Number | Detailed List<br>Numbers | CAUSE OF DEATH<br>(Intermediate International List, Sixth Revision, 1948)            | 1958  | 1957  | 1956  | 1955  | 1954  | 1953  |
|-------------------------------------|--------------------------|--|-------|-------|-------|-------|-------|-------|
| A 64                                |                          | <i>Brought forward</i> ..  | 1,888 | 1,909 | 1,878 | 2,077 | 2,009 | 2,095 |
|                                     |                          | <i>Aggregate of Sub-Totals III and IV Brought forward</i> ..                         | 87    | 67    | 76    | 80    | 59    | 71    |
|                                     |                          | III.—ALLERGIC ENDOCRINE SYSTEM, METABOLIC AND<br>NUTRITIONAL DISEASES— <i>contd.</i> |       |       |       |       |       |       |
|                                     |                          | IV.—DISEASES OF THE BLOOD AND BLOOD-FORMING ORGANS— <i>contd.</i>                    |       |       |       |       |       |       |
|                                     |                          | Avitaminoses and other deficiency states:—   |       |       |       |       |       |       |
|                                     | 280                      | Beri-beri .. .. .  | 63    | 132   | 99    | 93    | 100   | 129   |
|                                     | 281                      | Pellagra .. .. .   | —     | —     | —     | —     | —     | —     |
|                                     | 282                      | Scurvy .. .. .   | —     | —     | —     | —     | —     | —     |
|                                     | 283-284                  | Rickets .. .. .  | —     | —     | —     | —     | —     | —     |
|                                     | 285                      | Osteomalacia .. .. .   | —     | —     | —     | —     | —     | —     |
|                                     | 286.0                    | Steatorrhœa and sprue .. .. .  | —     | —     | —     | —     | —     | —     |
|                                     | 286.5                    | Malnutrition, unqualified .. .. .  | 68    | 52    | 48    | 32    | 31    | 31    |
|                                     | 286.1-286.4<br>286.6     | Other avitaminoses and nutritional deficiency states .. .. .                         | 8     | 9     | 9     | 16    | 34    | 41    |
| A 65                                |                          | Anæmias:—  |       |       |       |       |       |       |
|                                     | 290                      | Pernicious and other hyperchromic anæmias .. .. .                                    | 1     | 1     | —     | 2     | 1     | 5     |
|                                     | 291                      | Iron deficiency anæmias (hypochromic) .. .. .  | —     | —     | —     | —     | —     | —     |
|                                     | 292-293                  | Other specified and unspecified anæmias .. .. .                                      | 75    | 55    | 58    | 48    | 24    | 26    |
| A 66                                |                          | Allergic disorders; all other endocrine, metabolic and blood diseases:—              |       |       |       |       |       |       |
|                                     | 241                      | Asthma .. .. .   | 146   | 164   | 141   | 155   | 156   | 164   |
|                                     | 240                      | Angioneurotic œdema, urticaria and other allergic disorders .. .. .                  | —     | 2     | 2     | —     | —     | —     |
|                                     | 242-245                  | Myxœdema and cretinism .. .. .   | —     | —     | —     | —     | —     | —     |
|                                     | 253                      | Other diseases of thyroid gland .. .. .  | 1     | —     | 1     | 1     | —     | —     |
|                                     | 254                      | Disorders of pancreatic internal secretion other than diabetes<br>mellitus .. .. .   | —     | —     | —     | —     | —     | —     |
|                                     | 270                      | Diseases of parathyroid gland .. .. .  | —     | —     | —     | —     | —     | —     |
|                                     | 271                      | Diseases of pituitary gland .. .. .  | —     | —     | —     | —     | —     | —     |
|                                     | 272                      | .. .. .  | 1     | —     | —     | —     | —     | —     |
|                                     |                          | <i>Aggregate of Sub-Totals III and IV Carried forward</i> ..                         | 450   | 483   | 436   | 428   | 408   | 469   |
|                                     |                          | <i>Carried forward</i> ..  | 2,251 | 2,325 | 2,238 | 2,425 | 2,358 | 2,493 |

— means nil.

APPENDIX V—continued

RETURN OF DEATHS BY CAUSES, 1953-58—continued

| Inter-<br>mediate<br>List<br>Number | Detailed List<br>Numbers   | 1958  | 1957  | 1956  | 1955  | 1954  | 1953  |
|-------------------------------------|--|-------|-------|-------|-------|-------|-------|
|                                     |  | 2,251 | 2,325 | 2,238 | 2,425 | 2,358 | 2,493 |
|                                     |  | 450   | 483   | 436   | 428   | 408   | 469   |
|                                     | <i>Brought forward</i> ..  |       |       |       |       |       |       |
|                                     | Aggregate of Sub-Totals III and IV <i>Brought forward</i> ..                         |       |       |       |       |       |       |
|                                     | Aggregate of Sub-Totals III and IV <i>Brought forward</i> ..                         |       |       |       |       |       |       |
|                                     | III.—ALLERGIC ENDOCRINE SYSTEM, METABOLIC AND<br>NUTRITIONAL DISEASES— <i>contd.</i> |       |       |       |       |       |       |
|                                     | IV.—DISEASES OF THE BLOOD AND BLOOD-FORMING ORGANS— <i>contd.</i>                    |       |       |       |       |       |       |
| A 66                                | 273  | —     | —     | —     | —     | —     | —     |
| (h)                                 | 274  | 1     | 2     | 1     | —     | 1     | 1     |
| (i)                                 | 275-277  | —     | —     | —     | —     | —     | —     |
| (j)                                 | 288  | —     | 1     | —     | —     | —     | —     |
| (k)                                 | 287, 289   | 2     | —     | 1     | 3     | —     | 2     |
| (l)                                 |  |       |       |       |       |       |       |
| (m)                                 | 294  | —     | —     | —     | —     | —     | —     |
| (n)                                 | 295  | —     | —     | —     | —     | —     | —     |
| (o)                                 | 296  | 4     | 4     | 3     | 6     | 8     | 8     |
| (p)                                 | 297  | 1     | —     | —     | —     | —     | —     |
| (q)                                 | 298  | 1     | 2     | —     | 1     | —     | 1     |
| (r)                                 | 299  | —     | —     | —     | —     | —     | 1     |
|                                     |  | 459   | 492   | 441   | 438   | 417   | 482   |
|                                     | AGGREGATE OF SUB-TOTALS III AND IV ..  |       |       |       |       |       |       |
|                                     | V.—MENTAL, PSYCHONEUROTIC AND PERSONALITY DISORDERS                                  |       |       |       |       |       |       |
|                                     | Psychoses:—  |       |       |       |       |       |       |
| A 67                                | 300  | 1     | —     | 1     | 2     | 6     | 5     |
| (a)                                 | 301  | —     | 3     | 2     | 1     | 7     | 1     |
| (b)                                 | 302  | —     | —     | —     | —     | —     | —     |
| (c)                                 | 303  | —     | —     | —     | —     | —     | —     |
| (d)                                 | 304  | 2     | 2     | 1     | 5     | 5     | 1     |
| (e)                                 |  |       |       |       |       |       |       |
| (f)                                 | 305-309  | 1     | —     | 1     | —     | 3     | 7     |
|                                     |  | 4     | 5     | 5     | 13    | 21    | 14    |
|                                     | Sub-Total V <i>Carried forward</i> ..  |       |       |       |       |       |       |
|                                     | <i>Carried forward</i> ..  | 2,264 | 2,339 | 2,248 | 2,448 | 2,388 | 2,520 |

— means nil.

## APPENDIX V—continued

## RETURN OF DEATHS BY CAUSES, 1953-58—continued

| Inter-<br>mediate<br>List<br>Number | Detailed List<br>Numbers            | CAUSE OF DEATH<br>(Intermediate International List, Sixth Revision, 1948) | 1958  | 1957  | 1956  | 1955  | 1954  | 1953  |
|-------------------------------------|-------------------------------------|---|-------|-------|-------|-------|-------|-------|
|                                     |                                     | <i>Brought forward</i> ..   | 2,264 | 2,339 | 2,248 | 2,448 | 2,388 | 2,520 |
|                                     |                                     | Sub-Total V <i>Brought forward</i> ..                                     | 4     | 5     | 5     | 13    | 21    | 14    |
|                                     |                                     | V.—MENTAL, PSYCHONEUROTIC AND PERSONALITY DISORDERS—contd.                |       |       |       |       |       |       |
|                                     |                                     | Psychoneurosis and disorders of personality:—                             |       |       |       |       |       |       |
| A 68                                | 311                                 | Hysterical reaction ..  | —     | —     | 1     | —     | —     | —     |
| (b)                                 | 314                                 | Neurotic-depressive reaction ..   | —     | —     | —     | —     | —     | —     |
| (c)                                 | 322                                 | Alcoholism ..   | —     | —     | —     | —     | 1     | —     |
| (d)                                 | 323                                 | Other drug addiction ..   | —     | 1     | —     | —     | —     | —     |
| (e)                                 | 310, 312-313<br>315-321, 324<br>326 | Other psychoneurosis and disorders of personality ..                      | —     | 5     | —     | —     | —     | —     |
| A 69                                | 325                                 | Mental deficiency ..  | —     | 2     | 1     | —     | —     | —     |
|                                     |                                     | SUB-TOTAL V ..  | 4     | 13    | 7     | 13    | 22    | 14    |
|                                     |                                     | VI.—DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS                       |       |       |       |       |       |       |
|                                     |                                     | Vascular lesions affecting central nervous system:—                       |       |       |       |       |       |       |
|                                     |                                     | Cerebral hemorrhage ..  | 340   | 334   | 335   | 301   | 257   | 185   |
| (b)                                 | 332                                 | Cerebral embolism and thrombosis ..                                       | 103   | 114   | 88    | 72    | 67    | 28    |
| (c)                                 | 330<br>333-334                      | Other vascular lesions affecting central nervous system ..                | 18    | 11    | 18    | 5     | 14    | 19    |
| A 71                                | 340                                 | Non-meningococcal meningitis ..   | 64    | 65    | 72    | 60    | 53    | 43    |
|                                     |                                     | Sub-Total VI <i>Carried forward</i> ..                                    | 525   | 524   | 513   | 438   | 391   | 275   |
|                                     |                                     | <i>Carried forward</i> ..   | 2,789 | 2,871 | 2,763 | 2,886 | 2,780 | 2,795 |

— means nil.

APPENDIX V—continued  
RETURN OF DEATHS BY CAUSES, 1953-58—continued

| Inter-<br>mediate<br>List<br>Number | Detailed List<br>Numbers | CAUSE OF DEATH<br>(Intermediate International List, Sixth Revision, 1948) | 1958  | 1957  | 1956  | 1955  | 1954  | 1953  |
|-------------------------------------|--------------------------|---|-------|-------|-------|-------|-------|-------|
|                                     |                          | <i>Brought forward</i> ..   | 2,789 | 2,871 | 2,763 | 2,886 | 2,780 | 2,795 |
|                                     |                          | <b>Sub-Total VI Brought forward</b> ..                                    | 525   | 524   | 513   | 438   | 391   | 275   |
|                                     |                          | <b>VI.—DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS—contd.</b>         |       |       |       |       |       |       |
| A 72                                | 345                      | Multiple sclerosis ..   | —     | —     | —     | —     | —     | —     |
| A 73                                | 353                      | Epilepsy ..   | 12    | 3     | 9     | 3     | 16    | 4     |
| A 74                                | 370                      | Inflammatory diseases of eye:—  | —     | —     | —     | —     | —     | —     |
| (a)                                 | 371-379                  | Conjunctivitis and ophthalmia ..  | —     | 1     | —     | —     | —     | —     |
| (b)                                 |                          | Other inflammatory diseases of eye ..                                     | —     | —     | —     | —     | —     | —     |
| A 75                                | 385                      | Cataract ..   | —     | —     | —     | —     | —     | —     |
| A 76                                | 387                      | Glaucoma ..   | —     | —     | —     | —     | —     | —     |
| A 77                                | 390                      | Otitis media and mastoiditis:—  | —     | —     | —     | —     | —     | —     |
| (a)                                 | 391-393                  | Otitis externa ..   | 8     | 7     | 8     | 22    | 16    | 25    |
| (b)                                 |                          | Otitis media and mastoiditis ..   | —     | —     | —     | —     | —     | —     |
| (c)                                 | 394                      | Other inflammatory diseases of ear ..                                     | —     | —     | —     | —     | —     | —     |
| A 78                                | 380-384                  | All other diseases of the nervous system and sense organs:—               | 1     | —     | —     | —     | —     | —     |
| (a)                                 | 386, 388                 | All other diseases and conditions of eye ..                               | 7     | 8     | 6     | 6     | 6     | 5     |
| (b)                                 | 389                      | Intracranial and intraspinal abscess ..                                   | 82    | 49    | 42    | 54    | 43    | 47    |
| (c)                                 | 342                      | Encephalitis, myelitis and encephalomyelitis ..                           | 5     | 5     | 4     | 1     | 2     | 3     |
| (d)                                 | 343                      | Paralysis agitans ..  | 74    | 71    | 94    | 101   | 104   | 77    |
| (e)                                 | 350                      | Other cerebral paralysis ..   | —     | 1     | 1     | —     | —     | —     |
| (f)                                 | 352                      | Motor neurone disease and muscular atrophy ..                             | —     | 1     | —     | 1     | —     | —     |
| (g)                                 | 356                      | Other diseases of spinal cord ..  | 7     | 2     | —     | 1     | 1     | 4     |
| (h)                                 | 357                      | Other and unspecified forms of neuralgia and neuritis ..                  | —     | —     | —     | —     | —     | 1     |
| (i)                                 | 366                      | Other diseases of cranial nerves ..                                       | —     | —     | —     | —     | —     | —     |
| (j)                                 | 367                      | Diseases of peripheral autonomic nervous system ..                        | —     | —     | —     | —     | —     | —     |
|                                     |                          | Diseases of peripheral autonomic nervous system ..                        | —     | —     | —     | —     | —     | —     |
|                                     |                          | <b>Sub-Total VI Carried forward</b> ..                                    | 721   | 672   | 677   | 627   | 579   | 441   |
|                                     |                          | <b>Carried forward</b> ..   | 2,985 | 3,019 | 2,927 | 3,075 | 2,968 | 2,961 |

— means nil.

## APPENDIX V—continued

## RETURN OF DEATHS BY CAUSES, 1953-58—continued

| Inter-<br>mediate<br>List<br>Number | Detailed List<br>Numbers                                 | CAUSE OF DEATH<br>(Intermediate International List, Sixth Revision, 1948)   | 1958                          | 1957                          | 1956                          | 1955                         | 1954                         | 1953                          |
|-------------------------------------|--|---|-------------------------------|-------------------------------|-------------------------------|------------------------------|------------------------------|-------------------------------|
| A 78                                | 341, 344<br>351, 354<br>355<br>360-365<br>368<br>395-398 | Brought forward ..<br>Sub-Total VI Brought forward ..<br><br>VI.—DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS—contd.<br><br>All other diseases of the nervous system and sense organs ..<br><br>SUB-TOTAL VI ..                | 2,985<br>721<br><br>13<br>734 | 3,019<br>672<br><br>10<br>682 | 2,927<br>677<br><br>11<br>688 | 3,075<br>627<br><br>6<br>633 | 2,968<br>579<br><br>7<br>586 | 2,961<br>441<br><br>16<br>457 |
| A 79                                | 400<br>401<br>402  | VII.—DISEASES OF THE CIRCULATORY SYSTEM<br><br>Rheumatic fever:—<br>Rheumatic fever without mention of heart involvement ..<br>Rheumatic fever with heart involvement ..<br>Chorea ..   | 4<br>5<br>—                   | 2<br>5<br>—                   | 1<br>3<br>—                   | 1<br>1<br>—                  | 2<br>6<br>—                  | 1<br>16<br>2                  |
| A 80                                | 410-413<br>414<br>415<br>416                             | Chronic rheumatic heart disease:—<br>Diseases of valves specified as rheumatic ..<br>Other endocarditis specified as rheumatic ..<br>Other myocarditis specified as rheumatic ..<br>Other heart disease specified as rheumatic .. | 61<br>6<br>—<br>16            | 63<br>25<br>1<br>14           | 68<br>32<br>1<br>25           | 53<br>32<br>1<br>40          | 68<br>7<br>1<br>26           | 55<br>21<br>—<br>6            |
| A 81                                | 420<br>421<br>422  | Arteriosclerotic and degenerative heart disease:—<br>Arteriosclerotic heart disease including coronary disease ..<br>Chronic endocarditis not specified as rheumatic ..<br>Other myocardial degeneration ..                       | 267<br>25<br>67               | 226<br>21<br>68               | 215<br>39<br>89               | 189<br>44<br>64              | 159<br>53<br>52              | 140<br>52<br>43               |
|                                     |  | Sub-Total VII Carried forward ..  | 451                           | 425                           | 473                           | 425                          | 374                          | 336                           |
|                                     |  | Carried forward ..  | 3,449                         | 3,454                         | 3,411                         | 3,506                        | 3,349                        | 3,313                         |

—means nil.

APPENDIX V—continued  
 RETURN OF DEATHS BY CAUSES, 1953-58—continued

| Inter-<br>mediate<br>List<br>Number | Detailed List<br>Numbers | CAUSE OF DEATH<br>(Intermediate International List, Sixth Revision, 1948)        | 1953  | 1954  | 1955  | 1956  | 1957  | 1958  | 1953 | 1954 | 1955 | 1956 | 1957 | 1958 |
|-------------------------------------|--------------------------|--|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|
| A 82                                |                          | <i>Brought forward</i> ..  | 3,313 | 3,349 | 3,506 | 3,411 | 3,454 | 3,449 |      |      |      |      |      |      |
|                                     |                          | Sub-Total VII <i>Brought forward</i> ..  | 336   | 374   | 425   | 473   | 425   | 451   |      |      |      |      |      |      |
|                                     |                          | VII.—DISEASES OF THE CIRCULATORY SYSTEM—continued                                |       |       |       |       |       |       |      |      |      |      |      |      |
|                                     |                          | Other diseases of heart:—  |       |       |       |       |       |       |      |      |      |      |      |      |
|                                     | 430                      | Acute and subacute endocarditis ..   | 9     | 10    | 16    | 24    | 32    | 30    |      |      |      |      |      |      |
|                                     | 431                      | Acute myocarditis not specified as rheumatic ..                                  | 8     | 4     | 4     | 1     | 1     | 1     |      |      |      |      |      |      |
|                                     | 432                      | Pericarditis not specified as rheumatic ..                                       | 2     | —     | —     | 1     | 4     | 1     |      |      |      |      |      |      |
|                                     | 433                      | Functional disease of heart ..   | 13    | —     | —     | 6     | 8     | 12    |      |      |      |      |      |      |
|                                     | 434                      | Other and unspecified diseases of heart ..                                       | 179   | 196   | 229   | 179   | 319   | 191   |      |      |      |      |      |      |
| A 83                                | 440-443                  | Hypertension with heart disease ..   | 113   | 86    | 50    | 54    | 48    | 38    |      |      |      |      |      |      |
| A 84                                | 444-447                  | Hypertension without mention of heart ..   | 63    | 75    | 130   | 134   | 106   | 143   |      |      |      |      |      |      |
| A 85                                |                          | Disease of arteries:—  |       |       |       |       |       |       |      |      |      |      |      |      |
|                                     | 450                      | General arteriosclerosis ..  | 24    | 8     | 21    | 15    | 16    | 20    |      |      |      |      |      |      |
|                                     | 451                      | Aortic aneurysm specified as non-syphilitic and dissecting aneurysm ..           | 4     | 2     | 1     | 1     | —     | 2     |      |      |      |      |      |      |
|                                     | 452                      | Other aneurysm, except of heart and aorta ..                                     | 7     | 4     | 3     | —     | 4     | 1     |      |      |      |      |      |      |
|                                     | 453                      | Peripheral vascular disease ..   | —     | —     | 1     | —     | —     | —     |      |      |      |      |      |      |
|                                     | 454                      | Arterial embolism and thrombosis ..  | —     | —     | —     | —     | —     | —     |      |      |      |      |      |      |
|                                     | 455                      | Gangrene of unspecified cause ..   | 3     | —     | —     | 4     | 4     | 2     |      |      |      |      |      |      |
|                                     | 456                      | Other diseases of arteries ..  | 2     | 1     | —     | 1     | —     | 1     |      |      |      |      |      |      |
| A 86                                |                          | Other diseases of circulatory system:—   |       |       |       |       |       |       |      |      |      |      |      |      |
|                                     | 460, 462                 | Varicose veins ..  | —     | 3     | 5     | 1     | 7     | 3     |      |      |      |      |      |      |
|                                     | 461                      | Hæmorrhoids ..   | —     | 1     | —     | —     | —     | —     |      |      |      |      |      |      |
|                                     | 463-464                  | Phlebitis and thrombophlebitis ..  | —     | 1     | —     | —     | —     | —     |      |      |      |      |      |      |
|                                     | 465                      | Pulmonary embolism and infarction ..   | 5     | 3     | 2     | 4     | 6     | 3     |      |      |      |      |      |      |
|                                     | 466                      | Other venous embolism and thrombosis ..  | —     | —     | —     | 1     | 1     | —     |      |      |      |      |      |      |
|                                     | 467                      | Other diseases of circulatory system ..  | 12    | —     | —     | 3     | 4     | 1     |      |      |      |      |      |      |
|                                     | 468                      | Adenitis, Lymphadenitis, and other diseases of lymph nodes and lymph channels .. | 1     | 1     | —     | —     | —     | —     |      |      |      |      |      |      |
|                                     |                          | SUB-TOTAL VII ..   | 781   | 786   | 898   | 902   | 986   | 901   |      |      |      |      |      |      |
|                                     |                          | <i>Carried forward</i> ..  | 3,758 | 3,761 | 3,979 | 3,840 | 4,015 | 3,899 |      |      |      |      |      |      |

—means nil.

APPENDIX V—continued  
RETURN OF DEATHS BY CAUSES, 1953-58—continued

| Inter-<br>mediate<br>List<br>Number | Detailed List<br>Numbers | CAUSE OF DEATH<br>(Intermediate International List, Sixth Revision, 1948) | 1958  | 1957  | 1956  | 1955  | 1954  | 1953  |
|-------------------------------------|--------------------------|---|-------|-------|-------|-------|-------|-------|
|                                     |                          | <i>Brought forward</i> ..   | 3,899 | 4,015 | 3,840 | 3,979 | 3,761 | 3,758 |
|                                     |                          | VIII.—DISEASES OF THE RESPIRATORY SYSTEM                                  |       |       |       |       |       |       |
|                                     |                          | Acute upper respiratory infections:—                                      |       |       |       |       |       |       |
| A 87                                | 470                      | Acute nasopharyngitis (common cold) ..                                    | 1     | —     | 1     | 2     | 2     | 1     |
|                                     | 471                      | Acute sinusitis ..  | —     | —     | —     | 1     | —     | —     |
|                                     | 472                      | Acute pharyngitis ..  | 7     | 3     | 3     | 9     | 9     | 7     |
|                                     | 473                      | Acute tonsillitis ..  | 4     | 2     | 1     | 9     | 2     | 3     |
|                                     | 474                      | Acute laryngitis and tracheitis ..  | —     | 3     | 1     | 3     | 3     | 4     |
|                                     | 475                      | Acute upper respiratory infection of multiple or unspecified sites ..     | —     | —     | —     | —     | 10    | —     |
| A 88                                | 480-483                  | Influenza ..  | 36    | 87    | 37    | 25    | 30    | 39    |
| A 89                                | 490                      | Lobar Pneumonia ..  | 91    | 147   | 163   | 176   | 119   | 169   |
| A 90                                | 491                      | Broncho-pneumonia ..  | 816   | 700   | 610   | 667   | 732   | 909   |
| A 91                                | 492-493                  | Primary atypical, other and unspecified pneumonia ..                      | 159   | 187   | 248   | 187   | 215   | 259   |
| A 92                                | 500                      | Acute bronchitis ..   | 19    | 22    | 20    | 13    | 36    | 25    |
| A 93                                | 501                      | Bronchitis, chronic and unqualified:—                                     | 42    | 32    | 16    | 19    | 22    | 5     |
|                                     | 502                      | Bronchitis unqualified ..   | 128   | 124   | 97    | 109   | 151   | 161   |
| A 94                                | 510                      | Chronic bronchitis ..   | —     | —     | —     | —     | —     | —     |
|                                     |                          | Hypertrophy of tonsils and adenoids ..                                    | —     | —     | —     | —     | —     | —     |
| A 95                                | 518                      | Empyema and Abscess of lung:—   | 19    | 8     | 9     | 14    | 8     | 18    |
|                                     | 521                      | Empyema ..  | 22    | 21    | 14    | 7     | 11    | 10    |
|                                     |                          | Abscess of lung ..  | —     | —     | —     | —     | —     | —     |
|                                     |                          | Sub-Total VIII Carried forward ..   | 1,344 | 1,336 | 1,220 | 1,241 | 1,350 | 1,610 |
|                                     |                          | Carried forward ..  | 5,243 | 5,351 | 5,060 | 5,220 | 5,111 | 5,368 |

—means nil.

APPENDIX V—continued  
 RETURN OF DEATHS BY CAUSES, 1953-58—continued

| Inter-<br>mediate<br>List<br>Number | Detailed List<br>Numbers | CAUSE OF DEATH<br>(Intermediate International List, Sixth Revision, 1948)           | 1958  | 1957  | 1956  | 1955  | 1954  | 1953  |
|-------------------------------------|--------------------------|---|-------|-------|-------|-------|-------|-------|
|                                     |                          | <i>Brought forward</i> ..   | 5,243 | 5,351 | 5,060 | 5,220 | 5,111 | 5,368 |
|                                     |                          | Sub-Total VIII <i>Brought forward</i> ..  | 1,344 | 1,336 | 1,220 | 1,241 | 1,350 | 1,610 |
|                                     |                          | VIII.—DISEASES OF THE RESPIRATORY SYSTEM—continued                                  |       |       |       |       |       |       |
| A 96                                | 519                      | Pleurisy .. .. .  | 1     | 3     | 4     | 6     | 4     | 3     |
| A 97                                | 517                      | All other respiratory diseases:—  |       |       |       |       |       |       |
|                                     | 520                      | Other diseases of upper respiratory tract ..  | 4     | 1     | 3     | 6     | 7     | 1     |
|                                     | 522                      | Spontaneous pneumothorax .. .. .  | 5     | —     | 2     | 3     | 1     | 1     |
|                                     | 525                      | Pulmonary congestion and hypostasis ..  | 28    | 27    | 15    | 14    | 5     | 8     |
|                                     | 523                      | Other chronic interstitial pneumonia ..   | 4     | 2     | 3     | 4     | 5     | 2     |
|                                     | 526                      | Pneumoconiosis .. .. .  | —     | —     | —     | —     | —     | —     |
|                                     |                          | Bronchiectasis .. .. .  | 50    | 39    | 21    | 27    | 22    | 25    |
| (g)                                 | 511-516<br>524<br>527    | All other respiratory diseases .. .. .  | 27    | 20    | 18    | 10    | 15    | 32    |
|                                     |                          | SUB-TOTAL VIII ..   | 1,463 | 1,428 | 1,286 | 1,311 | 1,409 | 1,682 |
|                                     |                          | IX.—DISEASES OF THE DIGESTIVE SYSTEM  |       |       |       |       |       |       |
|                                     |                          | Diseases of teeth and supporting structures:—                                       |       |       |       |       |       |       |
| A 98                                | 530                      | Dental caries .. .. .   | —     | —     | —     | —     | —     | —     |
|                                     | 531, 532                 | Abscesses and other inflammatory diseases of supporting structures of teeth .. .. . | —     | —     | —     | —     | —     | —     |
|                                     | 533-535                  | Other diseases of teeth and supporting structures .. .. .                           | 1     | —     | —     | —     | —     | —     |
| A 99                                | 540                      | Ulcer of stomach .. .. .  | 64    | 53    | 67    | 72    | 69    | 66    |
|                                     |                          | Sub-Total IX <i>Carried forward</i> ..  | 65    | 53    | 67    | 72    | 69    | 66    |
|                                     |                          | <i>Carried forward</i> ..   | 5,427 | 5,496 | 5,193 | 5,362 | 5,239 | 5,506 |

—means nil.

## APPENDIX V—continued

## RETURN OF DEATHS BY CAUSES, 1953-58—continued

| Inter-<br>mediate<br>List<br>Number | Detailed List<br>Numbers        | CAUSE OF DEATH<br>(Intermediate International List, Sixth Revision, 1948)   | 1958             | 1957             | 1956             | 1955              | 1954               | 1953              |
|-------------------------------------|---------------------------------|---|------------------|------------------|------------------|-------------------|--------------------|-------------------|
|                                     |                                 | <i>Brought forward</i> ..   | 5,427            | 5,496            | 5,193            | 5,362             | 5,239              | 5,506             |
|                                     |                                 | Sub-Total IX <i>Brought forward</i> ..  | 65               | 53               | 67               | 72                | 69                 | 66                |
|                                     |                                 | IX.—DISEASES OF THE DIGESTIVE SYSTEM—continued  |                  |                  |                  |                   |                    |                   |
| A 100                               | 541                             | Ulcer of duodenum ..  | 8                | 10               | 6                | 29                | 16                 | 10                |
| A 101                               | 543                             | Gastritis and duodenitis ..   | 16               | 12               | 7                | 38                | 31                 | 10                |
| A 102                               | 550-553                         | Appendicitis ..   | 14               | 16               | 23               | 17                | 23                 | 20                |
| A 103                               | (a)<br>(b)<br>(c)<br>(d)<br>(e) | Intestinal obstruction and hernia:—<br>Hernia of abdominal cavity without mention of obstruction<br>Hernia of abdominal cavity with obstruction<br>Intussusception ..<br>Volvulus ..  | 3<br>4<br>4<br>5 | 4<br>8<br>8<br>1 | 2<br>6<br>7<br>2 | 6<br>10<br>3<br>1 | 1<br>10<br>12<br>4 | 7<br>10<br>7<br>1 |
|                                     | 570.1, 570.2<br>570.4, 570.5    | Other intestinal obstruction without mention of hernia ..   | 26               | 15               | 19               | 18                | 27                 | 19                |
| A 104                               | (a)<br>(b)<br>(c)               | Gastro-enteritis and colitis, except diarrhoea of the newborn:—<br>Gastro-enteritis and colitis, ages between 4 weeks and 2 years*<br>Gastro-enteritis and colitis, ages 2 years and over ..<br>Chronic enteritis and ulcerative colitis .. | 552<br>95<br>6   | 439<br>125<br>16 | 456<br>142<br>5  | 531<br>137<br>4   | 662<br>173<br>14   | 743<br>193<br>12  |
| A 105                               | (a)<br>(b)                      | Cirrhosis of liver:—<br>Cirrhosis of liver without mention of alcoholism ..<br>Cirrhosis of liver with alcoholism ..  | 100<br>1         | 92<br>—          | 116<br>1         | 77<br>—           | 92<br>—            | 78<br>—           |
| A 106                               | (a)<br>(b)                      | Cholelithiasis and Cholecystitis:—<br>Cholelithiasis ..<br>Cholecystitis without mention of calculi ..  | 3<br>10          | 2<br>14          | 5<br>16          | 6<br>15           | 17<br>5            | 9<br>7            |
|                                     |                                 | Sub-Total IX <i>Carried forward</i> ..  | 912              | 815              | 880              | 964               | 1,156              | 1,192             |
|                                     |                                 | <i>Carried forward</i> ..   | 6,274            | 6,258            | 6,006            | 6,254             | 6,326              | 6,632             |

—means nil.

APPENDIX V—continued  
RETURN OF DEATHS BY CAUSES, 1953-58—continued

| Inter-<br>mediate<br>List<br>Number | Detailed List<br>Numbers | CAUSE OF DEATH<br>(Intermediate International List, Sixth Revision, 1948) | 1958  | 1957  | 1956  | 1955  | 1954  | 1953  |
|-------------------------------------|--------------------------|---|-------|-------|-------|-------|-------|-------|
| A 107                               |                          | <i>Brought forward</i> ..   | 6,274 | 6,258 | 6,006 | 6,254 | 6,326 | 6,632 |
| (a)                                 | 536                      | Sub-Total IX <i>Brought forward</i> ..                                    | 912   | 815   | 880   | 964   | 1,156 | 1,192 |
| (b)                                 | 537, 538                 | IX.—DISEASES OF THE DIGESTIVE SYSTEM—contd.                               |       |       |       |       |       |       |
| (c)                                 | 539.0                    | Other diseases of Digestive System:—                                      |       |       |       |       |       |       |
| (d)                                 | 539.1                    | Stomatitis ..   | 1     | —     | 1     | 2     | 3     | 1     |
| (e)                                 | 544                      | Other diseases of buccal cavity ..  | —     | 1     | —     | —     | —     | —     |
| (f)                                 | 542, 545                 | Functional disorders of oesophagus ..                                     | —     | —     | —     | —     | —     | —     |
| (g)                                 | 583.0                    | Other diseases of oesophagus ..   | 5     | 1     | 2     | 1     | 5     | 1     |
| (h)                                 | 573 except 573.0         | Disorders of function of stomach ..                                       | 1     | 5     | 1     | 3     | —     | 3     |
| (i)                                 | 574                      | Other diseases of stomach and duodenum ..                                 | 8     | 20    | 14    | 14    | 12    | 17    |
| (j)                                 | 575                      | Constipation ..   | —     | —     | —     | —     | —     | —     |
| (k)                                 | 576                      | Other functional disorders of intestines ..                               | —     | —     | —     | 1     | —     | —     |
| (l)                                 | 577, 578                 | Anal fissure and fistula ..   | —     | —     | —     | —     | —     | —     |
| (m)                                 | 580                      | Abscess of anal and rectal regions ..                                     | —     | —     | —     | —     | 1     | —     |
| (n)                                 | 582, 583                 | Peritonitis ..  | 37    | 25    | 26    | 24    | 15    | 18    |
| (o)                                 | 586                      | Other diseases of intestines and peritoneum ..                            | 9     | 4     | 1     | 2     | 3     | 6     |
| (p)                                 | 587                      | Acute yellow atrophy of liver ..  | 5     | 11    | 12    | 22    | 13    | 14    |
|                                     |                          | Other diseases of liver ..  | 23    | 20    | 21    | 21    | 25    | 24    |
|                                     |                          | Other diseases of gall-bladder and biliary ducts ..                       | 7     | 6     | 3     | 3     | 3     | 3     |
|                                     |                          | Diseases of pancreas ..   | 6     | 4     | 7     | 9     | 3     | 1     |
|                                     |                          | SUB-TOTAL IX ..   | 1,014 | 912   | 968   | 1,066 | 1,239 | 1,280 |
| A 108                               | 590                      | X.—DISEASES OF THE GENITO-URINARY SYSTEM                                  |       |       |       |       |       |       |
|                                     |                          | Acute nephritis ..  | 11    | 9     | 10    | 16    | 23    | 19    |
|                                     |                          | Sub-Total X <i>Carried forward</i> ..                                     | 11    | 9     | 10    | 16    | 23    | 19    |
|                                     |                          | <i>Carried forward</i> ..   | 6,387 | 6,364 | 6,104 | 6,372 | 6,432 | 6,739 |

—means nil.

## APPENDIX V—continued

## RETURN OF DEATHS BY CAUSES, 1953-58—continued

| Inter-<br>mediate<br>List<br>Number | Detailed List<br>Numbers | CAUSE OF DEATH<br>(Intermediate International List, Sixth Revision, 1948) | 1958  | 1957  | 1956  | 1955  | 1954  | 1953  |
|-------------------------------------|--------------------------|---|-------|-------|-------|-------|-------|-------|
|                                     |                          | <i>Brought forward</i> ..   | 6,387 | 6,364 | 6,104 | 6,372 | 6,432 | 6,739 |
|                                     |                          | Sub-Total X <i>Brought forward</i> ..                                     | 11    | 9     | 10    | 16    | 23    | 19    |
|                                     |                          | X.—DISEASES OF THE GENITO-URINARY SYSTEM—contd.                           |       |       |       |       |       |       |
| A 109                               | 591                      | Chronic, other and unspecified nephritis:—                                |       |       |       | 6     | 6     | 6     |
|                                     | 592                      | Nephritis with œdema, including nephrosis                                 | 10    | 18    | 15    | 125   | 168   | 176   |
|                                     | 593                      | Chronic nephritis   | 111   | 117   | 117   | 98    | 68    | 53    |
|                                     | 594                      | Nephritis not specified as acute or chronic                               | 76    | 87    | 96    | —     | —     | —     |
| A 110                               | 600                      | Other renal sclerosis   | —     | —     | —     | 47    | —     | —     |
|                                     |                          | Infections of kidney ..   | 60    | 52    | 36    | —     | 19    | 15    |
| A 111                               | 602                      | Calculi of urinary system:—   | 5     | 5     | 4     | 6     | 2     | 2     |
|                                     | 604                      | Calculi of kidney and ureter ..   | —     | 1     | —     | —     | —     | 1     |
|                                     |                          | Calculi of other parts of urinary system ..                               | —     | —     | —     | —     | —     | —     |
| A 112                               | 610                      | Hyperplasia of prostate   | 9     | 2     | 3     | 5     | 6     | 3     |
| A 113                               | 620-621                  | Diseases of breast ..   | —     | —     | —     | —     | —     | —     |
| A 114                               | 603                      | Other diseases of genito-urinary system:—                                 | 1     | —     | 3     | 1     | 1     | —     |
|                                     | 605                      | Other diseases of kidney and ureter                                       | 3     | 3     | 2     | 3     | 5     | 2     |
|                                     | 606                      | Cystitis  | 3     | 2     | 1     | 4     | 1     | 2     |
|                                     | 608                      | Other diseases of bladder   | —     | 1     | —     | 1     | 3     | 2     |
|                                     | 607, 609                 | Stricture of urethra  | —     | 1     | —     | —     | —     | 1     |
|                                     | 612                      | Other diseases of urethra   | 1     | 1     | —     | —     | —     | 3     |
|                                     | 613                      | Other diseases of prostate  | —     | —     | —     | —     | —     | —     |
|                                     | 614                      | Hydrocele   | —     | —     | —     | —     | —     | —     |
|                                     | 611                      | Orchitis and epididymitis   | —     | 1     | —     | —     | —     | —     |
|                                     | 615-617                  | Other diseases of male genital organs                                     | 2     | —     | 2     | 2     | 2     | —     |
|                                     | 622-624                  | Salpingitis and oophoritis  | 2     | —     | 1     | 2     | 4     | 1     |
|                                     |                          | Sub-Total X <i>Carried forward</i> ..                                     | 294   | 299   | 291   | 316   | 309   | 286   |
|                                     |                          | <i>Carried forward</i> ..   | 6,670 | 6,654 | 6,385 | 6,672 | 6,718 | 7,006 |

—means nil.

APPENDIX V—continued  
RETURN OF DEATHS BY CAUSES, 1953-58—continued

| Inter-<br>mediate<br>List<br>Number | Detailed List<br>Numbers | CAUSE OF DEATH<br>(Intermediate International List, Sixth Revision, 1948)        | 1958  | 1957  | 1956  | 1955  | 1954  | 1953  |
|-------------------------------------|--------------------------|--|-------|-------|-------|-------|-------|-------|
| A 114                               |                          | <i>Brought forward</i> ..  | 6,670 | 6,654 | 6,385 | 6,672 | 6,718 | 7,006 |
|                                     |                          | Sub-Total X <i>Brought forward</i> ..  | 294   | 299   | 291   | 316   | 309   | 286   |
|                                     |                          | X.—DISEASES OF THE GENITO-URINARY SYSTEM— <i>contd.</i>                          |       |       |       |       |       |       |
|                                     | 625                      | Other diseases of ovary and Fallopian tube ..                                    | —     | —     | —     | —     | —     | —     |
|                                     | 626                      | Diseases of parametrium and pelvic peritoneum (female) ..                        | 1     | —     | —     | 1     | 2     | —     |
|                                     | 630                      | Infective disease of uterus, vagina and vulva ..                                 | 3     | —     | 1     | 5     | 1     | 1     |
|                                     | 631-633                  | Other diseases of uterus ..  | —     | 1     | —     | —     | 2     | —     |
|                                     | 634                      | Disorders of menstruation ..   | 1     | —     | 1     | —     | —     | —     |
|                                     | 635-637                  | Other diseases of female genital organs ..                                       | —     | —     | —     | —     | —     | —     |
|                                     | 601                      | All other diseases of the genito-urinary system ..                               | —     | —     | —     | 1     | —     | —     |
|                                     |                          | SUB-TOTAL X ..   | 299   | 301   | 294   | 323   | 314   | 288   |
| A 115                               |                          | XI.—DELIVERIES AND COMPLICATIONS OF PREGNANCY,<br>CHILD-BIRTH AND THE PUERPERIUM |       |       |       |       |       |       |
|                                     | 640                      | Sepsis of pregnancy, childbirth and the puerperium:—                             | —     | —     | —     | —     | —     | —     |
|                                     | 641                      | Pyelitis and pyelonephritis of pregnancy ..                                      | 1     | —     | —     | —     | 1     | —     |
|                                     | 681                      | Other infections of genito-urinary tract during pregnancy ..                     | 4     | 3     | 1     | 4     | 8     | 4     |
|                                     | 682                      | Sepsis of childbirth and the puerperium ..                                       | —     | —     | —     | —     | —     | —     |
|                                     | 684                      | Puerperal phlebitis and thrombosis ..  | —     | —     | —     | —     | —     | —     |
|                                     |                          | Puerperal pulmonary embolism ..  | —     | —     | —     | —     | —     | 1     |
|                                     | 642.2                    | Toxæmia of pregnancy and the puerperium:—  | 2     | 4     | —     | 3     | 4     | —     |
|                                     | 642.3                    | Pre-eclampsia of pregnancy ..  | 5     | —     | 5     | 4     | 8     | 7     |
|                                     |                          | Eclampsia of pregnancy ..  | —     | —     | —     | —     | —     | —     |
|                                     |                          | Sub-Total XI <i>Carried forward</i> ..   | 12    | 7     | 6     | 11    | 21    | 12    |
|                                     |                          | <i>Carried forward</i> ..  | 6,687 | 6,663 | 6,394 | 6,690 | 6,744 | 7,020 |

— means nil.

APPENDIX V—continued  
 RETURN OF DEATHS BY CAUSES, 1953-58—continued

| Inter-<br>mediate<br>List<br>Number | Detailed List<br>Numbers                                     | CAUSE OF DEATH:<br>(Intermediate International List, Sixth Revision, 1948)  | 1958  | 1957  | 1956  | 1955  | 1954  | 1953  |
|-------------------------------------|--|---|-------|-------|-------|-------|-------|-------|
| A 116                               | 642.4<br>642.5<br>642.5<br>652<br>685<br>642.0, 642.1<br>686 | Brought forward ..<br>Sub-Total XI Brought forward ..<br>XI.—DELIVERIES AND COMPLICATIONS OF PREGNANCY,<br>CHILD BIRTH AND THE PUERPERIUM— <i>contid.</i><br>Hyperemesis gravidarum ..<br>Acute yellow atrophy of liver of pregnancy ..<br>Other toxæmias of pregnancy ..<br>Abortion with toxæmia, without mention of sepsis ..<br>Puerperal eclampsia ..<br>Other forms of puerperal toxæmia ..<br>Hæmorrhage of pregnancy and childbirth:—<br>Placenta prævia ..<br>Other hæmorrhage of pregnancy ..<br>Delivery complicated by placenta prævia or antepartum hæmorrhage ..<br>Delivery complicated by retained placenta ..<br>Delivery complicated by other postpartum hæmorrhage ..<br>Abortion without mention of sepsis or toxæmia ..<br>Abortion with sepsis ..<br>Other complications of pregnancy, childbirth and the puerperium:—<br>Ectopic pregnancy ..<br>Anæmia of pregnancy ..<br>Delivery without complications ..<br>Pyrexia of unknown origin during the puerperium ..<br>Mastitis and other disorders of lactation ..<br>Other complications of pregnancy, childbirth and the puerperium .. | 6,687 | 6,663 | 6,394 | 6,690 | 6,744 | 7,020 |
|                                     |  |   | 12    | 7     | 6     | 11    | 21    | 12    |
|                                     |  |   | 2     | 4     | 6     | 6     | 11    | 10    |
|                                     |  |   | 1     | 1     | 1     | —     | —     | 1     |
|                                     |  |   | —     | —     | —     | —     | —     | 2     |
|                                     |  |   | 1     | —     | —     | —     | 1     | 1     |
|                                     |  |   | 4     | —     | —     | —     | —     | 4     |
|                                     |  |   | 3     | 3     | 1     | 5     | 4     | 1     |
|                                     |  |   | 1     | 7     | 3     | 3     | 6     | 3     |
|                                     |  |   | 11    | 17    | 12    | 12    | 17    | 18    |
|                                     |  |   | 3     | —     | —     | 4     | —     | 1     |
|                                     |  |   | 1     | 2     | 1     | 1     | —     | 2     |
|                                     |  |   | —     | 4     | 2     | 2     | 2     | 5     |
|                                     |  |   | —     | —     | —     | 1     | 1     | 1     |
|                                     |  |   | 1     | 2     | 2     | 1     | 2     | 1     |
|                                     |  |   | 2     | —     | 3     | —     | 2     | 1     |
|                                     |  |   | —     | —     | —     | —     | —     | —     |
|                                     |  |   | 8     | 8     | 8     | 6     | 20    | 6     |
|                                     |  | SUB-TOTAL XI ..   | 50    | 55    | 45    | 52    | 88    | 68    |
|                                     |  | Carried forward ..  | 6,725 | 6,711 | 6,433 | 6,731 | 6,811 | 7,076 |

—means nil.

APPENDIX V—continued

RETURN OF DEATHS BY CAUSES, 1953-58—continued

| Inter-<br>mediate<br>List<br>Number | Detailed List<br>Numbers | CAUSE OF DEATH<br>(Intermediate International List, Sixth Revision, 1948) | 1958  | 1957  | 1956  | 1955  | 1954  | 1953  |
|-------------------------------------|--------------------------|---|-------|-------|-------|-------|-------|-------|
|                                     |                          | <i>Brought forward</i> ..   | 6,725 | 6,711 | 6,433 | 6,731 | 6,811 | 7,076 |
|                                     |                          | XII.—DISEASES OF THE SKIN AND CELLULAR TISSUE                             |       |       |       |       |       |       |
|                                     |                          | XIII.—DISEASES OF THE BONES AND ORGANS OF MOVEMENT                        |       |       |       |       |       |       |
|                                     |                          | Infections of skin and subcutaneous tissue:—                              |       |       |       |       |       |       |
| A 121                               | 690                      | Boil and carbuncle ..   | 2     | 1     | 1     | 3     | 3     | 3     |
|                                     | 691-693                  | Cellulitis and abscess ..   | 4     | 10    | 9     | 11    | 21    | 29    |
|                                     | 694-698                  | Other infections of skin and subcutaneous tissue ..                       | 1     | 3     | —     | —     | —     | 3     |
| A 122                               | 720                      | Arthritis and spondylitis:—   |       |       |       |       |       |       |
|                                     | 721                      | Acute arthritis due to pyogenic organisms ..                              | 2     | —     | 1     | —     | 1     | —     |
|                                     | 722                      | Acute nonpyogenic arthritis ..  | —     | —     | —     | —     | —     | —     |
|                                     | 723-725                  | Rheumatoid arthritis and allied conditions ..                             | 4     | 1     | 2     | 5     | 1     | 1     |
|                                     |                          | Arthritis specified and unspecified ..                                    | —     | 1     | 3     | 2     | —     | —     |
| A 123                               | 726                      | Muscular rheumatism and rheumatism, unspecified:—                         |       |       |       |       |       |       |
|                                     | 727                      | Muscular rheumatism ..  | —     | —     | —     | 1     | 1     | —     |
|                                     |                          | Rheumatism unspecified ..   | 2     | 1     | 1     | —     | —     | 1     |
| A 124                               | 730                      | Osteomyelitis and periostitis ..  | 4     | 5     | —     | 2     | 1     | 3     |
| A 125                               | 737                      | Ankylosis and acquired musculoskeletal deformities:—                      |       |       |       |       |       |       |
|                                     | 745-749                  | Ankylosis of joint ..   | —     | —     | —     | —     | —     | —     |
|                                     |                          | Other acquired musculoskeletal deformities ..                             | —     | —     | —     | —     | —     | —     |
| A 126                               | 715                      | All other diseases of skin and musculoskeletal system:—                   |       |       |       |       |       |       |
|                                     | 700-714                  | Chronic ulcer of skin (including tropical ulcer) ..                       | 6     | 2     | 2     | 2     | 2     | 1     |
|                                     | 716                      | All other diseases of skin and subcutaneous tissue ..                     | 6     | 9     | 6     | 9     | 8     | 10    |
|                                     | 731-736                  | All other diseases of musculoskeletal system ..                           | 1     | 3     | —     | 1     | —     | 3     |
|                                     | 738-744                  |   |       |       |       |       |       |       |
|                                     |                          | Aggregate of Sub-Totals XII and XIII ..                                   | 32    | 36    | 25    | 36    | 38    | 54    |
|                                     |                          | <i>Carried forward</i> ..   | 6,757 | 6,747 | 6,458 | 6,767 | 6,849 | 7,130 |

—means nil.

APPENDIX V—continued  
 RETURN OF DEATHS BY CAUSES, 1953-58—continued

| Inter-<br>mediate<br>List<br>Number | Detailed List<br>Numbers | CAUSE OF DEATH<br>(Intermediate International List, Sixth Revision, 1948)               | 1953    | 1954    | 1955    | 1956     | 1957     | 1958     | 1959 |
|-------------------------------------|--------------------------|---|---------|---------|---------|----------|----------|----------|------|
|                                     |                          | <i>Brought forward</i> ..   | 7,130   | 6,849   | 6,767   | 6,458    | 6,747    | 6,757    | 109  |
|                                     |                          | <b>XIV.—CONGENITAL MALFORMATIONS</b>  |         |         |         |          |          |          |      |
| A 127                               | 751                      | Spina bifida and meningocele ..   | 6       | 13      | 7       | 9        | 7        | 5        |      |
| A 128                               | 754                      | Congenital malformations of circulatory system ..                                       | 41      | 75      | 55      | 83       | 69       | 122      |      |
| A 129                               | 750<br>752<br>753        | All other congenital malformations:—<br>Monstrosity ..<br>Congenital hydrocephalus ..   | 8<br>5  | 13<br>6 | 5<br>6  | 16<br>14 | 13<br>10 | 6<br>8   |      |
|                                     |                          | Other congenital malformations of nervous system and sense organs ..                    | 1       | 1       | 3       | 2        | 2        | 5        |      |
|                                     | 755                      | Cleft palate and harelip ..   | 1       | 3       | 2       | 2        | 1        | —        |      |
|                                     | 756.0                    | Congenital hypertrophic pyloric stenosis ..   | 1       | 4       | 1       | —        | 1        | —        |      |
|                                     | 756.1                    | Imperforate anus ..   | 5       | 4       | 8       | 3        | 4        | 7        |      |
|                                     | 756.2                    | Other congenital malformations of digestive system ..                                   | 12      | 4       | 17      | 25       | 15       | 17       |      |
|                                     | 757                      | Congenital malformations of genito-urinary system ..                                    | 16      | 17      | 17      | 2        | 5        | 4        |      |
|                                     | 758                      | Congenital malformations of bone and joint ..   | 5       | 3       | 2       | —        | 3        | 2        |      |
|                                     | 759                      | Other and unspecified congenital malformations, not elsewhere classified ..             | —       | —       | —       | —        | 3        | 18       |      |
|                                     |                          | <b>SUB-TOTAL XIV</b> ..   | 109     | 143     | 115     | 164      | 142      | 194      |      |
|                                     |                          | <b>XV.—CERTAIN DISEASES OF EARLY INFANCY</b>  |         |         |         |          |          |          |      |
| A 130                               | 760<br>761               | Birth injuries:—<br>Intracranial and spinal injury at birth ..<br>Other birth injury .. | 84<br>5 | 51<br>2 | 34<br>5 | 121<br>2 | 165<br>2 | 206<br>8 |      |
| A 131                               | 762                      | Postnatal asphyxia and atelectasis ..   | 127     | 135     | 109     | 127      | 157      | 141      |      |
|                                     |                          | <b>Sub-Total XV Carried forward</b> ..  | 216     | 188     | 148     | 250      | 324      | 355      |      |
|                                     |                          | <b>Carried forward</b> ..   | 7,455   | 7,180   | 7,030   | 6,872    | 7,213    | 7,306    |      |

— means nil.

APPENDIX V—continued

RETURN OF DEATHS BY CAUSES, 1953-58—continued

| Inter-<br>mediate<br>List<br>Number | Detailed List<br>Numbers | CAUSE OF DEATH<br>(Intermediate International List, Sixth Revision, 1948)    | 1958  | 1957  | 1956  | 1955  | 1954  | 1953  |
|-------------------------------------|--------------------------|--|-------|-------|-------|-------|-------|-------|
|                                     |                          | <i>Brought forward</i> ..  | 7,306 | 7,213 | 6,872 | 7,030 | 7,180 | 7,455 |
|                                     |                          | Sub-Total XV <i>Brought forward</i> ..                                       | 355   | 324   | 250   | 148   | 188   | 216   |
|                                     |                          | XV.—CERTAIN DISEASES OF EARLY INFANCY—continued.                             |       |       |       |       |       |       |
|                                     |                          | Infections of the newborn:—  |       |       |       |       |       |       |
| A 132                               | 763                      | Pneumonia of newborn ..  | 140   | 103   | 102   | 78    | 99    | 184   |
| (b)                                 | 764                      | Diarrhoea of newborn ..  | 58    | 50    | 76    | 114   | 123   | 251   |
| (c)                                 | 765                      | Ophthalmia neonatorum ..   | —     | —     | —     | —     | —     | 4     |
| (d)                                 | 766                      | Pemphigus neonatorum ..  | 1     | —     | —     | —     | —     | —     |
| (e)                                 | 767                      | Umbilical sepsis ..  | 9     | 1     | 1     | 3     | 3     | 2     |
| (f)                                 | 768                      | Other sepsis of newborn ..   | 4     | 3     | —     | 1     | —     | 3     |
| A 133                               | 770                      | Hæmolytic disease of newborn ..  | 87    | 97    | 93    | 109   | 50    | 146   |
| A 134                               | 769<br>771-772           | All other defined diseases of early infancy ..                               | 15    | 18    | 11    | 14    | 22    | 35    |
| A 135                               | 773                      | Ill-defined diseases peculiar to early infancy, and immaturity unqualified:— | 23    | 44    | 38    | 30    | 47    | 89    |
| (a)                                 |                          | Ill-defined diseases peculiar to early infancy ..                            | 321   | 306   | 404   | 558   | 637   | 514   |
| (b)                                 | 774-776                  | Immaturity and immaturity unqualified ..                                     |       |       |       |       |       |       |
|                                     |                          | SUB-TOTAL XV ..  | 1,013 | 946   | 975   | 1,055 | 1,169 | 1,444 |
|                                     |                          | XVI.—SYMPTOMS, SENILITY AND ILL-DEFINED CONDITIONS                           |       |       |       |       |       |       |
| A 136                               | 794                      | Senility without mention of psychoses ..                                     | 983   | 1,029 | 937   | 876   | 722   | 781   |
|                                     |                          | Sub-Total XVI <i>Carried forward</i> ..                                      | 983   | 1,029 | 937   | 876   | 722   | 781   |
|                                     |                          | <i>Carried forward</i> ..  | 8,947 | 8,864 | 8,534 | 8,813 | 8,883 | 9,464 |

— means nil.

APPENDIX V—continued  
RETURN OF DEATHS BY CAUSES, 1953-58—continued

| Inter-mediate List Number | Detailed List Numbers            | CAUSE OF DEATH<br>(Intermediate International List, Sixth Revision, 1948)  | 1958           | 1957           | 1956           | 1955           | 1954           | 1953          |
|---------------------------|----------------------------------|--|----------------|----------------|----------------|----------------|----------------|---------------|
| A 137 (a)                 | 780-789<br>except 788.8          | Brought forward ..<br>Sub-Total XVI Brought forward ..   | 8,947<br>983   | 8,864<br>1,029 | 8,534<br>937   | 8,813<br>876   | 8,883<br>722   | 9,464<br>781  |
| (b)                       | 788.8                            | XVI.—SYMPTOMS, SENILITY AND ILL-DEFINED CONDITIONS—continued.  | 69             | 601            | 672            | 877            | 964            | 1,077         |
| (c)                       | 780.2                            | Ill-defined and unknown causes of morbidity and mortality:—  |                |                |                |                |                |               |
| (d)                       | 782.4                            | Symptoms referable to systems or organs ..   | 391            | 457            | 279            | 179            | 200            | 320           |
| (e)                       | 793                              | Pyrexia of unknown origin ..   | 377            | —              | —              | —              | —              | —             |
| (f)                       | 795.1                            | Convulsions ..   | 93             | —              | —              | —              | —              | —             |
| (g)                       | 795.2                            | Acute heart failure undefined ..   | —              | —              | —              | —              | —              | —             |
| (h)                       | 795.3                            | Observation, without need for further medical care..   | —              | —              | —              | 1              | —              | —             |
| (i)                       | 790-792<br>795.0, 795.4<br>795.5 | Malingering ..<br>Sudden death (cause unknown) ..<br>Found dead (cause unknown) ..<br>Other ill-defined and unknown causes of morbidity and mortality ..<br>Cases pending Coroner's Inquest .. | 5<br>152<br>61 | 13<br>186<br>— | 12<br>257<br>— | 19<br>168<br>— | 20<br>234<br>— | 1<br>159<br>— |
|                           |                                  | SUB-TOTAL XVI ..   | 2,131          | 2,286          | 2,157          | 2,120          | 2,140          | 2,361         |
| AE 138                    | E810-E835                        | XVII.—ACCIDENTS, POISONINGS AND VIOLENCE   |                |                |                |                |                |               |
| AE 139 (a)                | E800-E802                        | “E” Code: Alternative Classification of Accidents, Poisonings and Violence (External Cause)  |                |                |                |                |                |               |
| (b)                       | E850-E858                        | Motor vehicle accidents ..   | 183            | 164            | 122            | 60             | 98             | 124           |
|                           |                                  | Other transport accidents:—  |                |                |                |                |                |               |
|                           |                                  | Railway accidents ..   | 2              | 5              | 2              | 2              | 1              | —             |
|                           |                                  | Water transport accidents ..   | 2              | 4              | 4              | 1              | 7              | 10            |
|                           |                                  | Sub-Total XVII Carried forward ..  | 187            | 173            | 128            | 63             | 106            | 134           |
|                           |                                  | Carried forward ..   | 10,282         | 10,294         | 9,882          | 10,120         | 10,407         | 11,178        |

— means nil.

APPENDIX V—continued  
RETURN OF DEATHS BY CAUSES, 1953-58—continued

| Inter-mediate List Number | Detailed List Numbers  | CAUSE OF DEATH<br>(Intermediate International List, Sixth Revision, 1948)  | 1958  | 1957  | 1956  | 1955  | 1954  | 1953   |   |
|---------------------------|--|--|---|---|---|---|---|--|---|
| AE 139                    | E860-E866<br>E840-E845   | Brought forward ..<br>Sub-Total XVII Brought forward ..  | 10,282<br>187   | 10,294<br>173                                       | 9,882<br>128  | 10,120<br>63  | 10,407<br>106                                       | 11,178<br>134  |   |
| AE 140                    | E870<br>E874<br>E878<br>E883<br>E884<br>E885<br>E886<br>E888<br>E890-E895<br>E871-E873<br>E875-E877<br>E879-E882<br>E887 | XVII.—ACCIDENTS, POISONINGS AND VIOLENCE—continued.<br>Aircraft accidents ..<br>Other road vehicle accidents ..<br>Accidental poisoning:—<br>Accidental poisoning by morphine and other opium derivatives ..<br>Accidental poisoning by other analgesic and soporific drugs ..<br>Accidental poisoning by other and unspecified drugs ..<br>Accidental poisoning by corrosive aromatics, acids and caustic alkalies ..<br>Accidental poisoning by mercury and its compounds ..<br>Accidental poisoning by lead and its compounds ..<br>Accidental poisoning by arsenic and antimony and their compounds ..<br>Accidental poisoning by other and unspecified solid or liquid substances ..<br>Accidental poisoning by gases and vapours ..<br>Other accidental poisoning .. | — 1<br>—<br>—<br>—<br>—<br>—<br>—<br>—<br>5<br>—<br>4 | 8<br>2<br>1<br>—<br>—<br>—<br>—<br>—<br>—<br>—<br>3 | —<br>—<br>—<br>—<br>—<br>—<br>—<br>—<br>—<br>—<br>6 | —<br>—<br>—<br>—<br>—<br>—<br>—<br>—<br>—<br>—<br>1 | —<br>—<br>—<br>—<br>—<br>—<br>—<br>—<br>—<br>—<br>3 | —<br>—<br>—<br>—<br>—<br>—<br>—<br>—<br>—<br>—<br>26 | —<br>—<br>—<br>—<br>—<br>—<br>—<br>—<br>—<br>—<br>— |
| AE 141                    | E900-E904  | Accidental falls ..  | 15  | 23  | 27  | 60  | 4   | 2  |   |
| AE 142                    | E912   | Accident caused by machinery ..  | —   | 2   | 1   | —   | 4   | —  |   |
| AE 143                    | E916   | Accident caused by fire and explosion of combustible material ..   | 2   | —   | —   | —   | 9   | 1  |   |
| AE 144                    | E917-E918  | Accident caused by hot substance, corrosive liquid, steam and radiation ..   | 19  | 13  | 23  | 28  | 14  | 8  |   |
|                           |  | Sub-Total XVII Carried forward ..  | 233   | 225   | 189   | 158   | 181   | 174  |   |
|                           |  | Carried forward ..   | 10,328  | 10,346  | 9,943   | 10,215  | 10,482  | 11,218   |   |

— means nil.

APPENDIX V—continued  
RETURN OF DEATHS BY CAUSES, 1953-58—continued

| Inter-<br>mediate<br>List<br>Number | Detailed List<br>Numbers            | CAUSE OF DEATH<br>(Intermediate International List, Sixth Revision, 1948)    | 1958   | 1957   | 1956   | 1955   | 1954   | 1953   |
|-------------------------------------|-------------------------------------|--|--------|--------|--------|--------|--------|--------|
|                                     |                                     | <i>Brought forward</i> ..  | 10,328 | 10,346 | 9,943  | 10,215 | 10,482 | 11,218 |
|                                     |                                     | <i>Sub-Total XVII Brought forward</i> ..                                     | 233    | 225    | 189    | 158    | 181    | 174    |
| AE 145                              | E919                                | XVII.—ACCIDENTS, POISONINGS AND VIOLENCE—continued.                          |        |        |        |        |        |        |
| AE 146                              | E929                                | Accident caused by firearm .. .. .   | 1      | 4      | 5      | 1      | 1      | 1      |
| AE 147                              | E929                                | Accidental drowning and submersion .. .. .                                   | 54     | 64     | 56     | 63     | 60     | 48     |
|                                     |                                     | All other accidental causes:—  |        |        |        |        |        |        |
| (a)                                 | E913                                | Accidents caused by cutting or piercing instruments .. .. .                  | 1      | 1      | —      | —      | —      | —      |
| (b)                                 | E914                                | Accidents caused by electric current .. .. .                                 | 3      | 6      | 5      | 5      | 5      | 3      |
| (c)                                 | E920                                | Foreign body entering eye and adnexa .. .. .                                 | —      | —      | —      | —      | —      | —      |
| (d)                                 | E923                                | Foreign body entering other orifice .. .. .                                  | —      | 2      | —      | —      | 1      | —      |
| (e)                                 | E924, E925                          | Accidental mechanical suffocation .. .. .                                    | —      | 1      | —      | 1      | —      | —      |
| (f)                                 | E926                                | Lack of care of infants under one year of age .. .. .                        | —      | —      | —      | —      | —      | —      |
| (g)                                 | E927                                | Accidents caused by bites and stings of venomous animals and insects .. .. . | —      | —      | 1      | —      | —      | 2      |
| (h)                                 | E928                                | Other accidents caused by animals .. .. .                                    | —      | —      | —      | —      | 1      | —      |
| (i)                                 | E931                                | Excessive heat .. .. .   | —      | —      | —      | —      | —      | —      |
| (j)                                 | E932                                | Excessive cold .. .. .   | —      | —      | —      | —      | —      | —      |
| (k)                                 | E933                                | Hunger, thirst and exposure .. .. .  | —      | —      | —      | —      | —      | —      |
| (l)                                 | E934                                | Cataclysm .. .. .  | —      | —      | —      | —      | —      | —      |
| (m)                                 | E935                                | Lightning .. .. .  | —      | 5      | —      | —      | —      | —      |
| (n)                                 | E936                                | Other and unspecified accidents .. .. .                                      | —      | —      | 1      | 2      | 2      | —      |
| (o)                                 | E940, E941                          | Vaccinia including post-vaccinal encephalitis .. .. .                        | —      | —      | —      | —      | 94     | —      |
| (p)                                 | E942                                | Other complications of small-pox vaccination .. .. .                         | —      | —      | —      | —      | —      | —      |
| (q)                                 | E954                                | Anæsthetic accidents .. .. .   | —      | —      | —      | —      | —      | 7      |
| (r)                                 | E943-E946<br>E950-E953<br>E955-E959 | Accidents due to medical or surgical intervention .. .. .                    | 1      | —      | —      | 1      | 2      | 1      |
|                                     |                                     | <i>Sub-Total XVII Carried forward</i> ..                                     | 293    | 308    | 257    | 231    | 348    | 236    |
|                                     |                                     | <i>Carried forward</i> ..  | 10,388 | 10,429 | 10,011 | 10,288 | 10,649 | 11,280 |

— means nil.

APPENDIX V—continued  
 RETURN OF DEATHS BY CAUSES, 1953-58—continued

| Inter-<br>mediate<br>List<br>Number | Detailed List<br>Numbers   | CAUSE OF DEATH<br>(Intermediate International List, Sixth Revision, 1948) | 1953   | 1954   | 1955   | 1956   | 1957   | 1958   | 1959   |
|-------------------------------------|--|---|--------|--------|--------|--------|--------|--------|--------|
| AE 147                              | (c)<br>E910-E911<br>E915   | Brought forward ..  | 11,280 | 10,649 | 10,288 | 10,011 | 10,429 | 10,388 |        |
|                                     |  | Sub-Total XVII Brought forward ..   | 236    | 348    | 231    | 257    | 308    | 293    |        |
| AE 148                              | (a)<br>(b)<br>(c)<br>(d)<br>(e)<br>(f)<br>(g)<br>(h)<br>(i)<br>(j) | XVII.—ACCIDENTS, POISONINGS AND VIOLENCE—continued.                       |        |        |        |        |        |        |        |
|                                     |  | All other accidental causes ..  | 95     | 2      | 126    | 69     | 110    | 100    |        |
|                                     |  | Suicide and self-inflicted injury:—                                       |        |        |        |        |        |        |        |
|                                     |  | Suicide and self-inflicted injury by analgesic and soporific substances   |        | 1      | 6      | 7      | 3      | 3      |        |
|                                     |  | Suicide and self-inflicted injury by other solid and liquid substances    |        | 63     | 44     | 44     | 37     | 33     | 20     |
|                                     |  | Suicide and self-inflicted injury by gases in domestic use                |        | 1      | —      | —      | 1      | —      | —      |
|                                     |  | Suicide and self-inflicted injury by other gases                          |        | —      | 1      | —      | —      | —      | 1      |
|                                     |  | Suicide and self-inflicted injury by hanging or strangulation             |        | —      | 51     | 60     | 44     | 75     | 56     |
|                                     |  | Suicide and self-inflicted injury by submersion (drowning)                |        | —      | 7      | 6      | 11     | 8      | 17     |
|                                     |  | Suicide and self-inflicted injury by firearms and explosives              |        | —      | 4      | 2      | 3      | 3      | 1      |
|                                     |  | Suicide and self-inflicted injury by cutting or piercing instruments      |        | —      | 2      | 3      | 5      | 2      | 5      |
|                                     |  | Suicide and self-inflicted injury by jumping from high places             |        | —      | 8      | 9      | 12     | 19     | 17     |
|                                     |  | Suicide and self-inflicted injury by other and unspecified means ..       |        | 4      | 3      | 9      | 7      | 3      | 1      |
| AE 149                              | (a)<br>(b)<br>(c)<br>(d)<br>(e)<br>(f)                             | Homicide and injury purposely inflicted by other persons (not in war):—   |        |        |        |        |        |        |        |
|                                     |  | Non-accidental poisoning by another person                                |        | —      | 2      | —      | —      | —      | —      |
|                                     |  | Assault by firearms and explosives  |        | —      | 5      | 2      | 3      | —      | —      |
|                                     |  | Assault by cutting and piercing instruments                               |        | —      | 7      | 4      | 6      | 12     | 15     |
|                                     |  | Assault by other means ..   |        | —      | 3      | 12     | 10     | 11     | 13     |
|                                     |  | Injury by intervention of police  |        | —      | —      | —      | 6      | 1      | 2      |
|                                     |  | Execution (legal) ..  |        | —      | 2      | —      | 2      | —      | —      |
|                                     |  | Injury resulting from operations of war ..                                |        | —      | 1      | —      | —      | —      | —      |
|                                     |  | Sub-Total XVII  |        | 512    | 489    | 516    | 484    | 589    | 544    |
|                                     |  | Grand Total   |        | 11,556 | 10,790 | 10,573 | 10,238 | 10,710 | 10,639 |

— means nil.

