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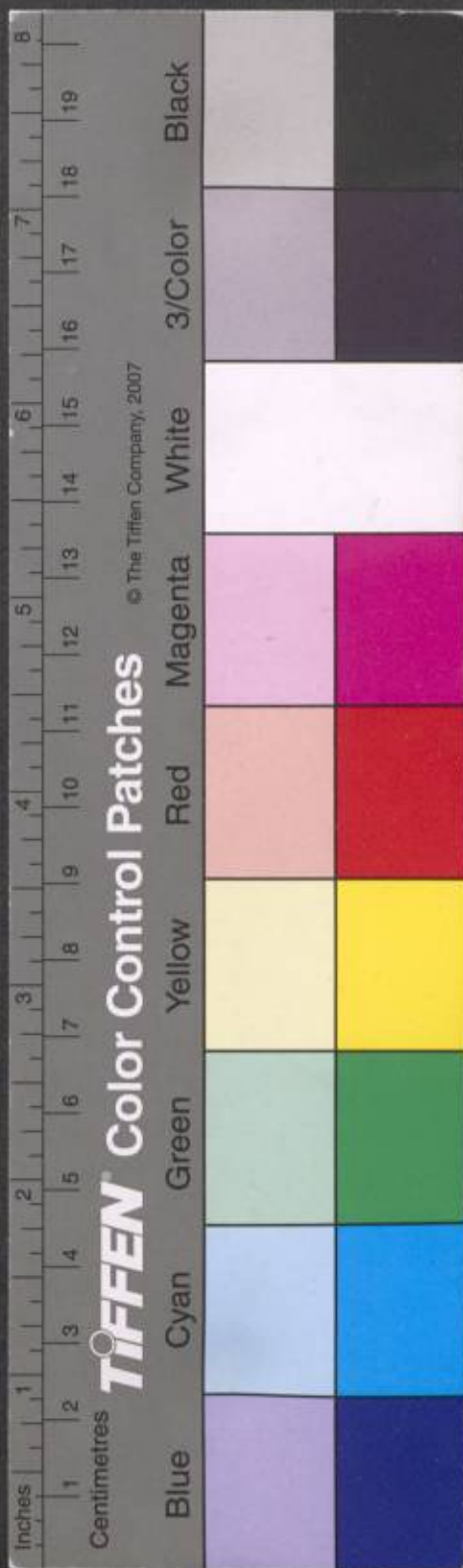


ANNUAL  
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1962-63

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DIRECTOR OF MEDICAL  
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HONG KONG  
ANNUAL DEPARTMENTAL REPORT  
BY THE  
DIRECTOR OF MEDICAL AND HEALTH SERVICES  
D. J. M. MacKENZIE  
FOR THE  
FINANCIAL YEAR 1962 - 63

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## I. GENERAL REVIEW

THE estimated mid-year population of Hong Kong in 1962 was 3,400,300 of whom some 40% are aged 15 years or younger. Living under conditions of average densities of 1,800 - 2,000 to the acre in the urban areas with intermittent water supplies and some 25% of the urban population depending on a night soil conservancy service for sanitation, environmental conditions inevitably predispose to the transmission of the communicable diseases. The standard of nutrition is generally good, there is relatively full employment and standards of living are rising steadily as the rehousing programme develops.

2. Despite the conditions of over-crowding, the necessity to store water in tenement houses and the environmental conditions in the older tenement houses along the waterfronts and in the central districts of Hong Kong Island and the Kowloon Peninsula, the community health record during the year was remarkably good. The crude death rate remained low at 5.9 per 1,000 and the infant mortality rate declined further to 36.9 per 1,000 live births. The neo-natal mortality rate has remained relatively constant over the past four years ranging between 20.9 and 21.3 per 1,000 live births. The birth rate fell from 34.2 per 1,000 in 1961 to 32.8 per 1,000 in 1962 and the maternal mortality rate continued low at 0.48 per 1,000.

3. There were three important events which posed a definite threat to the public health. The first was the sudden and unexpected influx of illegal immigrants numbering some 140,000 in May and June. Later, in August, cholera *El Tor* again re-appeared and on the 1st of September, typhoon *Wanda*, which was the worst typhoon the Colony had experienced since 1937, rendered many thousands homeless and made necessary many emergency centres for their reception and feeding. Despite these events, there were no related outbreaks of epidemic disease.

4. The large influx of illegal immigrants at a time when cholera might be expected to recur had apparently no influence on the outbreak which began at the end of August. A number of immigrants were examined during the influx and the night soil from latrines at the reception centre where illegal immigrants were detained was investigated bacteriologically with entirely negative results.

5. The most important medical finding amongst these immigrants was the high incidence of active tuberculosis in the older age groups; some 68,000, who were permitted to stay in the Colony, were required to undergo a chest X-ray during the process of registration and the issue of identity cards. The findings are described in some detail later in this report, under the section dealing with tuberculosis.

6. There is reason to believe that among the motives prompting individuals to come to Hong Kong from China is a need for medical treatment. Certainly many of those who do come legally or illegally are very soon to be found at Government clinics. The impact falls most heavily on the Government tuberculosis, leprosy and mental health services.

7. A very significant and important event during the year was the visit by Professor F. HEAF, C.M.G. and Dr. Wallace FOX who came at the invitation of Government to make an assessment of the current status of tuberculosis as a community health problem. Their report and recommendations concerned the provision of enhanced facilities and staff for the Government Tuberculosis Service, the development of additional case finding, bacteriological and B.C.G. vaccination services, the ratio to population of hospital beds for the inpatient treatment of tuberculosis and the urgent need for research to guide policy planning for the future.

8. The Report was accepted in principle during October by Executive Council, subject to detailed examination of the implementation of the recommendations. The Report was then referred to the Medical Advisory Board which consulted the various voluntary agencies engaged in tuberculosis control and it was still under consideration by the Board at the end of the year.

9. On the 22nd August, cholera re-appeared in the Colony and over the next six weeks, a total of eleven clinical cases occurred. The only fatality was in a man who had been ill for three days before being sent to hospital and who died on admission, before treatment could be started. The whole Colony was declared an infected local area on the 23rd of August and the last case in the urban districts occurred on 20th September. One further case, the last in 1962, appeared in a village community in the New Territories on the 12th October.

10. Again there was a very widespread distribution of cholera vibrios throughout the community with remarkably few clinical cases presenting as a result. Strict quarantine measures were applied to all contacts of clinical cases and the appropriate environmental preventive precautions

strictly enforced. Nevertheless, using the communal night soil as an indicator, the only conclusion to be reached was that there were large numbers of undetected carriers, excreting cholera vibrios, at large in the Colony.

11. A mass immunization campaign using cholera vaccine prepared in the Government Institute of Pathology had been conducted in February, March and April 1962, when 53% of the total population received vaccine. During the outbreak itself a further million people were inoculated. In assessing the epidemiology, it appears probable that the immunity induced by wide scale vaccination greatly reduced the attack rate of the disease in the face of the widespread distribution of the cholera vibrios.

12. During the outbreak, the routine sampling of night soil was intensified and from the 29th October, 1962 to the end of March 1963, no further cholera vibrios were isolated.

13. Of the other communicable diseases of importance, poliomyelitis and measles showed unusually high incidence. The notifications of paralytic poliomyelitis during the year were the highest on record and the vaccination campaign using a Sabin type oral vaccine, which was conducted in two phases in January and March 1963, is believed to have cut short an epidemic of some proportions in which Type II and Type III polioviruses were playing a predominant part. In previous years, Type I virus had been almost exclusively the agent responsible for paralytic disease.

14. An epidemic of measles of considerable size and virulence occurred in the winter months of the year under review following a period of 18 months during which the incidence was unusually low. The common fatal complication was broncho-pneumonia and an investigation carried out by the Paediatric Unit in Kowloon Hospital showed that the age group most vulnerable to this complication was that of 6 months to 2 years of age.

15. The Working Party set up to advise Government on the organization and scope of a comprehensive School Medical Service began work in May 1962 under the Chairmanship of Dr. the Hon. A. M. RODRIGUES, O.B.E., E.D. The intention is to establish a voluntary contributory scheme whereby the school children participating will receive physical examinations at prescribed intervals by private medical practitioners who will also supply curative treatment for ailments normally dealt with in a practitioner's consulting room. The Report of the Working Party was

submitted to Government in March, 1963. Government will continue to provide for all schools the existing services for the prevention and control of communicable disease, including immunization programmes and environmental health services.

16. The pressure on general hospital beds continued unabated, and, in fact, increased. This was barely contained by the use of camp beds in wards, on verandahs and wherever else they could be fitted in. The rapid rate of turnover of patients in the acute wards was also maintained by utilizing subsidiary convalescent beds wherever they could be found. In meeting this pressure, the Tung Wah Group of Hospitals played a significant complementary role, particularly in Kowloon where, from February 1963 onwards, the Kwong Wah Hospital accepted direct, from the Kowloon Hospital Casualty Department, up to 25 emergencies each day.

17. The Castle Peak Mental Hospital of 1,000 beds, opened in March 1961, was also under heavy pressure. By the end of 1962, it had been necessary by rearrangement of ward accommodation to increase the nominal bed strength to 1,119 beds. Despite this increase, the parole system continued to be extensively used as well as the day out-patient centres on Hong Kong Island and, later, at the Queen Elizabeth Hospital Specialist Clinic in Kowloon.

18. The general hospital building programme is going ahead rapidly and some temporary easing of the pressure on acute beds in Kowloon is hoped for in 1964 when the new Kwong Wah Hospital re-development plan for 1,270 beds and the new Queen Elizabeth Hospital have been completed.

19. The Queen Elizabeth Hospital of 1,338 beds is to be formally opened early in September 1963, and with this in view a Commissioning Unit consisting of the designate Medical Superintendent, Senior Matron and Senior Hospital Secretary was formed in January 1963. The greater part of the equipment for the hospital which had been ordered from outside the Colony had arrived by the beginning of 1963 and it is anticipated that all patients will have been moved from the existing Kowloon Hospital to the Queen Elizabeth Hospital by the end of December 1963. Kowloon Hospital will then be renovated and modified, to function as a general rehabilitation centre of 304 beds complementary to the Queen Elizabeth Hospital and as a medical and surgical tuberculosis centre of 184 beds.

20. During March 1963 site works started at the Queen Mary Hospital preparatory to the extensions necessary to modernize this Govern-

ment Hospital which was first opened in 1938 and which is also the Teaching Hospital for the University Medical School. The extensions will include new operating theatre suites, a new radiology department, ward units for an additional 180 beds and enhanced teaching facilities designed to accommodate an increased intake of medical students.

21. Voluntary agencies are also engaged in general hospital development projects. The Tung Wah Hospitals Board opened an extension of 180 beds at the Sandy Bay Infirmary on Hong Kong Island in December, 1962, and plans were in hand to build an Infirmary of 210 beds at Wong Tai Sin in Kowloon. In Tsuen Wan, work had started on the 72 bed Seventh Day Adventist Hospital and the Yan Chai Hospital Board was incorporated by statute, preparatory to raising funds to build, initially, an hospital of 100 general beds, also in Tsuen Wan. Proposals submitted by the Protestant Churches to build a general hospital of 600 beds in Kowloon, to be known as the United Protestant Hospital, were also under consideration by Government.

22. The Government outpatient clinic building programme is also going ahead. In North Point on Hong Kong Island, the Anne Black Health Centre was opened in September 1962 by Lady Black, the wife of His Excellency the Governor. Named after Lady Black as a tribute to her practical concern for the welfare of the people of Hong Kong, half the cost of construction was donated by Dr. TANG Shiu-kin, C.B.E., LL.D., and a group of his friends. Government met the other half of the building costs and equipped the clinic which is also being staffed and maintained by Government.

23. The Royal Hong Kong Jockey Club also donated two further clinics, the Queen Elizabeth Hospital Specialist Clinic and the Wang Tau Hom Clinic. The former is in the grounds of the Hospital and is designed to provide outpatient consultant and follow-up services maintained by the clinical Specialist Units in the Queen Elizabeth Hospital. The latter is a standard urban type clinic which serves a new and rapidly growing resettlement estate. Both have been equipped by Government and are maintained from public funds.

24. At San Po Kong on the outskirts of the Wong Tai Sin Resettlement Estate, the foundation stone of another standard urban clinic was laid by His Excellency the Governor Sir Robert Brown BLACK, G.C.M.G., O.B.E., in February 1963. To be named the Robert Black Health Centre, this clinic has been built as the result of a generous personal donation of half the construction cost by Dr. TANG Shiu-kin,

and the architect, Mr. W. SZETO, has given his professional services free as his contribution. The remainder of the cost of the construction, the equipment and the maintenance is being provided by Government.

25. A feature of Hong Kong has always been the philanthropy of her citizens. Another notable event was the inauguration of the Li Shu Fan Foundation for Medical Education and Research. This inauguration took place in March 1963 during a meeting of the Hong Kong Chapter of the American College of Chest Physicians. His Excellency the Governor performed the Inauguration Ceremony which was attended by the President of the American College of Chest Physicians and a group of eminent physicians and surgeons from that College. Modelled on the Mayo Foundation, Dr. Li Shu-fan, M.B., F.R.C.S., LL.D., has made over to the Li Shu-fan Foundation assets to the value of HK\$18,000,000, the interest from which will be used to make grants for scholarships for medical and nursing undergraduate and postgraduate education, for medical research and for hospital treatment of the sick poor.

26. No report on the Medical and Health Services would be complete without an acknowledgment of the many and varied complementary activities carried out by a number of voluntary agencies. These activities range from the maintenance of large hospitals to assistance to individual patients who are handicapped by disease or disability. The major voluntary agencies which assist the Medical and Health Department in the care, rehabilitation and social aid of the sick and handicapped are listed in Appendix 5 and their services are gratefully acknowledged.

#### ADMINISTRATION OF THE MEDICAL AND HEALTH SERVICES

27. Statutory responsibility for the administration of the services safeguarding the public health in Hong Kong lies jointly with the Director of Medical and Health Services, the Urban Council, the Director of Urban Services, the Commissioner of Labour and the District Commissioner, New Territories. Executive functions in connexion with curative medical services and a number of aspects of preventive medicine throughout Hong Kong are the responsibility of the Medical and Health Department. The Urban Council is concerned with environmental sanitation in the urban areas of Hong Kong Island and Kowloon, through the Urban Services Department. The Director of Urban Services has executive functions as the Health Authority for certain of the townships in the New Territories and administers their environmental sanitary services. Medical Officers of Health are seconded in an advisory capacity

to the Urban Services Department and the Labour Department has an Industrial Health section staffed by personnel of the Medical and Health Department.

#### STAFF

28. The Director of Medical and Health Services is the Head of the Department, the chief adviser to Government on medical and health policy, and an appointed Official Member of the Legislative Council. He is a member of a number of the Boards and Committees of voluntary organizations engaged in medical and health work whose activities receive substantial support by way of Government subventions. He is also the Chairman of the Radiation Board and of the Statutory Councils or Boards dealing with the registration and disciplinary control of Medical Practitioners, Dentists, Pharmacists, Nurses and Midwives.

29. The Deputy Director of Medical and Health Services is the chief executive medical and health officer, who co-ordinates the work of the Medical and Health Divisions, each of these divisions being in charge of an Assistant Director. The Deputy Director is also Vice-Chairman of the Urban Council and is the principal adviser to that body on environmental health matters. The Principal Matron is the Chief Nursing Officer and administers the Nursing Division which provides general and psychiatric nursing, midwifery and health visitor services. She is also a member of the Nursing Board and the Midwives Board.

30. The Health Division, which is the administrative responsibility of the Assistant Director, Health, is concerned with infectious disease control, personal health services, rural hygiene and certain ancillary services. The Medical Division is the responsibility of the Assistant Director, Medical, and is concerned with the provision of curative and specialist clinical services. Each Assistant Director is assisted by a Principal Medical and Health Officer at Headquarters, and each division is divided into units which are individually under the charge of a Specialist or of a Medical and Health Officer with special experience and training. The respective spheres of responsibility of the two Divisions are outlined in Appendix 2.

31. The Principal Medical and Health Officer (Planning) assisted by a Senior Hospital Secretary, is responsible for the co-ordination of all requests for accommodation and equipment for new Medical and Health Department institutions, for the processing of building plans and for the detail of the forward planning of the Department's activities. In addition,

advice and assistance are given on request to voluntary and private organizations engaged in the planning and erection of medical institutions.

32. The Auxiliary Medical Service, which is a branch of the Civil Defence Service, is administered by the Medical Defence Staff Officer who is a member of the Medical and Health Department Headquarters staff. The Director of Medical and Health Services is the Unit Controller.

33. The routine administrative, secretarial, establishment and clerical work of the Department is under the general direction of the Secretary, while the Principal Accountant and his staff deal with the financial and accounting duties. The work of the Boards section is co-ordinated by the Boards Secretary.

34. The pharmaceutical and dispensing activities are the responsibility of the Chief Pharmacist, who also has inspectorate duties in connexion with the Dangerous Drugs and Pharmacy and Poisons Ordinances.

35. The Government Chemist is responsible for the work of the Government Chemical Laboratory which undertakes the analytical, forensic chemistry and standards work in the Colony.

36. The Chief Hospital Secretary and his staff undertake the supply of equipment and the day-to-day lay administration of the hospital and clinic services. The hospitals and clinics are at present grouped into two large units each of which is the responsibility of a Hospital Secretary. Assistant Hospital Secretaries are posted to the larger and more important institutions within these groups.

37. Appendix 1 shows the establishment of the Department at 31st March, 1963.

#### FINANCE

38. The actual expenditure of the Medical and Health Department for the financial year ended 31st March, 1963 was \$68,541,015 to which should be added a further \$26,386,405 disbursed in the form of subventions. Capital expenditure on medical projects under the Public Works Non-Recurrent head totalled \$28,262,729. These amounts represent 11.07% of the Colony's total expenditure during the year, and do not include expenditure on environmental sanitation by the Urban Services Department and the District Administration of the New Territories.

39. A Statement of Expenditure for the five years from 1958-59 to 1962-63 is shown at Appendix 3.

40. The total revenue collected from all sources by the Department totalled \$5,119,102.

41. The largest subvention was made to the Tung Wah Group of Hospitals which received \$13,799,169. In addition, a further capital grant of \$3,982,752 was made towards the cost of continuing work on the redevelopment of the Kwong Wah Hospital. Other large subventions were \$1,180,000 to the Alice Ho Miu Ling Nethersole Hospital, \$3,264,324 to the Grantham Hospital, \$1,132,890 to the Hong Kong Anti-Tuberculosis Association, \$743,179 to the Mission to Lepers, Hong Kong Auxiliary and \$579,931 to the Pok Oi Hospital.

#### LEGISLATION

42. The following legislation dealing with medical and health matters was enacted during the year 1962-63. Mention is made of the purpose of the more important ordinances in the body of this report.

##### *Ordinances:*

- (i) Medical Registration (Amendment) Ordinance, 1962.
- (ii) Penicillin (Amendment) Ordinance, 1962.
- (iii) Dentists Registration (Amendment) Ordinance, 1962.
- (iv) Mental Health (Amendment) Ordinance, 1962.

##### *Rules and Regulations:*

- (a) Poisons (Amendment) Regulations, 1962, (G.N.A. 60/62).
- (b) Poisons List (Amendment) Regulations, 1962, (G.N.A. 61/62).
- (c) Poisons List (Amendment) (No. 2) Regulations, 1962, (G.N.A. 62/62).
- (d) Dentists (Registration and Disciplinary Procedure) (Amendment) Regulations, 1962, (G.N.A. 70/62).
- (e) Dangerous Drugs (Amendment) Regulations, 1962, (G.N.A. 112/62).

#### PROFESSIONAL REGISTERS

43. There are five statutory bodies dealing respectively with the registration of medical practitioners, dentists, pharmacists, nurses and midwives. The Hong Kong Medical Council has statutory powers governing the registration of medical practitioners and has duties in connexion with disciplinary proceedings and offences; it is not an examining body. The Dental Council, Pharmacy Board, Nursing Board and Midwives Board all maintain registers, regulate training, hold examinations leading to registration or enrolment and have disciplinary powers.

44. At the 31st March, 1963, the number of persons on the statutory registers were as follows:

Register of Medical Practitioners	1,135
Register of Dentists	412
Register of Pharmacists	108
Register of Nurses—General (Female)	2,146
(Male)	123
—Mental (Male)	2
Register of Midwives	2,068

#### WORK OF THE STATUTORY COUNCILS AND BOARDS

##### *Medical Council*

45. There were six ordinary meetings of the Council and five inquiries were held during the year. Of the inquiries, two were in respect of disciplinary charges and two concerned the use of dangerous drugs by certain medical practitioners. One disciplinary inquiry, referred by the Preliminary Investigation Committee in March 1962, was heard by the Council during May 1962. A verdict of 'guilty' was returned and a sentence of three months erasure recorded; the sentence was however suspended for a period of two years on the condition that no further disciplinary offence was committed during this period.

46. The revised edition of the Council's Warning Notice was received from the printer during the year and was issued to medical practitioners during the month of November, 1962.

47. The Preliminary Investigation Committee met twice to consider disciplinary charges and both were referred to the Medical Council for inquiry. The first case referred to a charge of advertising and was scheduled for hearing by the full Council during April 1963. The second case referred to the issue of international certificates of inoculation against cholera without having inoculated the persons concerned. The Medical Council commenced this latter hearing during the month of March 1963, but the meeting was later adjourned to a date in April 1963.

48. During the year there were 79 applications accepted for full registration and 2 applications for reinstatement were granted; 43 applications for provisional registration were also accepted. A total of 8 names were erased from the register during the year as a result of death, departure from the Colony or failure to notify changes of address.

49. The fees payable in respect of full registration were increased during the year.

##### *Dental Council*

50. The Council met five times during the year to attend to routine business. Fees for first admission to the register were increased during the year and, in addition, an entrance fee was imposed for any examination conducted in the Colony by examiners appointed by the Council.

51. There were 31 applications accepted for registration with the Council, of which 3 were for re-inclusion in the Register of Dentists; a further 12 applicants had qualifications acceptable without examination and were registered. Of the remaining 16 applicants, two sat the Council's examinations, passed and their names were entered in the Register. Six others were accepted for examination, five applications were rejected and three were under consideration at the end of the year.

##### *Pharmacy Board*

52. The Board met four times for the transaction of routine business. There were twenty-nine applications for registration of which only one was accepted without examination; six applicants successfully passed the Board's examination and were admitted to the Register. Sixteen applicants were required to undergo further practical training before attempting the Board's examination and a further three applicants granted direct access to the Board's examinations to be held in 1963-64. Three applications were rejected.

53. Under the Governmental scholarship scheme, a further two scholarships were awarded for the study of pharmacy in Australia.

##### *Nursing Board*

54. The Board met four times during the year. The requirements for the approval of Nurses Training Schools in Hong Kong were reviewed and brought into line with those to be introduced by the General Nursing Council of England and Wales as from the 1st January, 1964. After an exchange of letters with the General Nursing Council it has been agreed that all the existing approved Training Schools in the Colony will continue to be recognized for the purposes of reciprocity. Further consideration was also given to the revision of the general nursing examination syllabus by a sub-committee of the Nursing Board. Examinations in general and psychiatric nursing were held in June and December, the results of which were as follows:

<i>General Nursing</i>		<i>Entered</i>	<i>Passed</i>
Preliminary Examination	...	352	285
Final Examination	...	213	189
<i>Psychiatric Nursing</i>			
Preliminary Examination	...	21	18
Final Examination	...	2	2

55. The training in psychiatric nursing, which started in 1959, is now well established at the Castle Peak Hospital and the first two locally trained psychiatric nurses had their names entered in the relevant part of the Nurses Register following on the final examination held in December 1962.

56. Of 230 nurses applying for registration in the general nursing part of the Register, 215 were accepted of whom 181 were from the approved Training Schools in the Colony and 27 were nurses who had trained outside Hong Kong. Some of the latter were required before registration to sit and pass the Board's examination and others were referred for further training before being accepted. Seven nurses were re-admitted to the Register whose registration had lapsed during absence from the Colony. Three names were deleted from the Register, two on account of death and one on departure from the Colony.

57. No disciplinary investigations or inquiries took place during the year.

#### *Midwives Board*

58. The Board met quarterly and examinations were held during the months of April, July, October and January. A total of 186 candidates entered for the Board's examinations, of whom 170 were successful.

59. There were 173 applications for registration and 171 were accepted; 169 of the applicants had completed their training in Hong Kong and 2 who qualified in Australia were accepted without further examination. Of the remainder, one was rejected and the other, who had completed Part I of the Central Midwives Board examination held in the United Kingdom, was required to undergo six months further training before sitting the Board's examination. Three applications for restoration were granted and 2 names deleted from the register on account of death.

60. The Preliminary Investigation Committee met once to consider a disciplinary charge but found no grounds for an inquiry by the Board.

61. During the year, a revised edition of the Handbook for Midwives was approved by the Board and later issued to practising midwives and to Training Schools.

#### *Radiation Board*

62. The full Board did not meet during the year as the main business pending was the enactment of the proposed Radiation (Control of Radioactive Substances) Regulations and the Radiation (Control of Irradiating

Apparatus) Regulations. These draft regulations were being studied in the United Kingdom and were not received until towards the end of the year, when they were forwarded to the drafting sub-committee for consideration of the amendments proposed.

#### *Medical Advisory Board*

63. The Board met four times during the year and had under consideration the draft Medical Clinics Bill, the problem of cigarette smoking and lung cancer and the Report on Tuberculosis in Hong Kong by Professor F. HEAF, C.M.G. and Dr. Wallace FOX. Advice was given regarding certain amendments to the Medical Clinics Bill, which was otherwise supported in principle, and on the problem of lung cancer. The Heaf/Fox Report was still under consideration by the Board at the end of the year.

## II. PUBLIC HEALTH

### GENERAL COMMENTS

64. The general level of the public health was well maintained throughout the year despite increasing densities of population in the urban areas, inadequate housing in the most congested areas, limited water supplies and some 25% of the population depending on a night soil collection service for sanitation.

65. During May and June 1962 there was a sudden influx of illegal immigrants from China estimated to number 140,000. In the following September typhoon *Wanda* rendered many thousands of residents homeless who were crowded together in emergency reception centres at a time when cholera was occurring in the urban areas. However despite these potential dangers no epidemic of serious proportions occurred.

66. Cholera *El Tor* re-appeared in August 1962, after a complete absence of any evidence of cholera vibrios persisting after the end of the 1961 outbreak when the last case had occurred during the first week of November. A severe epidemic of measles occurred during the winter months following on a period of 18 months of low endemicity. Notifications of poliomyelitis during the year under review were the highest on record and a change in the epidemiological pattern was noted towards the end of the year, there being an unusually high incidence of paralytic disease during December and January (normally the months of lowest incidence) and a shift from Type I virus infections to Types II and III. There was a rise in morbidity from tuberculosis which appeared to be

directly related to the influx of illegal immigrants, particularly to cases in the older age groups amongst them. The incidence of chickenpox also increased but there were lower incidences of diphtheria, malaria and amoebiasis.

67. There was an overall rise in the notifications of infectious diseases but the mortality resulting declined. The crude death rate remained at the same level as the previous year, namely 5.9 per 1000 of population.

#### VITAL STATISTICS

68. The registration of all deaths and live births occurring in the Colony is compulsory under the Births and Deaths Registration Ordinance. Still-births are not registrable but the number of still-born children received by cemeteries and crematoria are recorded. Table 1 shows the annual returns for births and deaths during the past five year period.

TABLE 1  
BIRTHS AND DEATHS 1958-62

Year	Estimated Mid-Year Population	Total Live Births	Crude Live Birth Rate (per 1,000 Population)	Still Births Recorded	Total Deaths	Crude Death Rate (per 1,000 Population)
1958 ...	2,748,000	106,624	38.8	1,297	20,554	7.5
1959 ...	2,857,000	104,579	36.6	1,393	20,250	7.1
1960 ...	2,981,000	110,667	37.1	1,680	19,146	6.4
1961 ...	3,177,700	108,726	34.2	1,683	18,738	5.9
1962 ...	3,400,300	111,905	32.8	1,560	20,324	5.9

69. The total of live births showed a slight increase on the figures for 1961 but the crude live birth rate dropped slightly by 1.4 per 1,000 of population and the crude death rate remained constant at 5.9. There was a natural increase of 91,581 persons, this being the highest ever recorded.

70. The mortality pattern continues to show the same trends observed during previous years, namely decreasing mortality from the communicable diseases and an increase in deaths from diseases of later life, particularly neoplasms and cerebro-vascular disorders. An analysis of mortality for the years 1958-62 can be found in Appendix 4.

TABLE 2  
INFANTILE AND MATERNAL MORTALITY 1958-62

Year	Infantile Mortality rate (per 1,000 live births)	Neo-natal Mortality rate (per 1,000 live births)	Maternal Mortality rate (per 1,000 total births)
1958 ...	54.3	23.4	0.85
1959 ...	48.3	21.3	0.73
1960 ...	41.5	20.9	0.49
1961 ...	37.7	21.0	0.45
1962 ...	36.9	21.2	0.48

71. Table 2 shows the recent trends in infantile and maternal mortality. The infant mortality rate has continued to fall but the maternal and neonatal mortality rates have remained more or less stationary.

72. An analysis of maternal mortality over the past 5 years is shown in Table 3. Toxaemias and haemorrhages of pregnancy were the principal fatal complications although there have been marked reductions in deaths from these causes in recent years.

TABLE 3  
ANALYSIS OF MATERNAL MORTALITY 1958-62

Year	Sepsis (excluding Septic Abortions)	Toxaemias	Haemorrhages	Abortions	Ectopic Pregnancies	Others
1958 ..	.028	.269	.250	.037	.111	.158
1959 ..	N/A	.340	.226	.028	.066	.056
1960 ..	.010	.179	.143	.045	.072	.045
1961 ..	.009	.09	.027	.036	.027	.072
1962 ..	0.18	.141	.185	.026	.044	.062

### III. WORK OF THE HEALTH DIVISION

#### HYGIENE AND SANITATION

##### Urban Areas

73. The Urban Council is responsible through the Urban Services Department for environmental sanitation in Hong Kong, Kowloon and New Kowloon. The Deputy Director of Medical and Health Services, in his capacity of Vice-Chairman of the Urban Council, is the co-ordinating link between the two Departments for the control of communicable disease by measures of environmental sanitation, food hygiene and pest

control. Medical and Health Officers are seconded to the Urban Services Department from the Medical and Health Department and work under the direction of an Assistant Director of Medical and Health Services who is posted to the Urban Services Department as Assistant Director, Hygiene. He is responsible for the guidance of the Health Inspectorate in particular and for advice to the Urban Services Department as a whole on the day to day management of environmental health problems.

74. Medical and Health Officers in the urban areas, in addition to their duties connected with the maintenance of satisfactory standards of environmental sanitation and food hygiene, are responsible for the co-ordination of all epidemiological measures to control the transmission of infectious diseases. Exceptions are tuberculosis, venereal disease, leprosy, and malaria, which are the concern of specialized branches of the Medical and Health Department. Through the media of routine house inspections and regular visits to licensed food premises carried out by the Health Inspectorate, much health education is possible in connexion with immunization campaigns and with the control of intestinal infections. With the assistance of qualified Health Visitors, the Health Officers maintain investigations into the sources of known cases of diphtheria, tetanus neonatorum, poliomyelitis, typhoid and certain other diseases.

75. These activities are closely co-ordinated with the activities of teams of inoculators from the Epidemiological Section of the Medical and Health Department, working under the immediate direction of area Health Officers and offering prophylactic immunization against smallpox, diphtheria, cholera and enteric fever.

#### *Rural Areas*

76. The Director of Urban Services has statutory powers controlling sanitation, food hygiene, cleansing, amenity and allied services in the townships and the more developed villages in the New Territories, while the District Commissioner is the licensing authority for all hawkers and premises where food is handled. The Medical and Health Department provides the curative and personal health services and the Principal Medical Officer of Health, New Territories, advises the respective authorities on all health matters affecting the area. The Medical and Health Department is also responsible for environmental health in rural areas. The main emphasis is on health education stemming from the curative services and designed to stimulate self-help in the villages through the development of simple measures which will improve environmental sanitation.

#### *Quarantinable Diseases*

77. The whole Colony was declared a cholera infected local area in terms of the International Sanitary Regulations on the 23rd August on the laboratory confirmation of a case of Cholera El Tor and was declared free of infection on the 8th October, 18 days after the occurrence of the tenth and last case in the urban areas. Five days later another case of Cholera El Tor was bacteriologically confirmed in the New Territories in the District of Yuen Long which district was declared an infected local area on the 13th October. No further cases occurred in the District and it was declared free of infection on the 29th October. There was a total of 11 cases with one death. No other case of quarantinable disease occurred during the year.

#### *Cholera*

78. Following on the outbreak in 1961 and the continuing incidence of cholera in nearby countries, special preventive measures were taken throughout the year. These consisted of the routine bacteriological investigation for cholera vibrios of all specimens sent to the laboratory from cases of gastro-enteritis and the routine sampling of night soil, sea water, well water and foodstuffs liable to be sources of persistence or transmission of cholera vibrios. In addition a mass cholera immunization campaign was carried out during February, March and April, during which 53% of the total population received the appropriate one dose of standard vaccine of 8,000 million organisms per ml. Particular attention was paid to the boat people who live afloat, the residents in the New Territories, the waterfront communities, food handlers and school children. In these population groups the percentage inoculated ranged between 85% and 95%. In all, over 1,600,000 inoculations were given.

79. Quarantine restrictions were maintained throughout the year in respect of the infected local areas in the Philippines and the whole of Kwangtung Province. They were applied to Taiwan when it was declared infected in July 1962.

80. The first isolation of cholera vibrios in Hong Kong during 1962 was from a case of suspected cholera admitted to the Lai Chi Kok Hospital on the afternoon of the 22nd August. This was not an imported case and no contact with individuals coming recently from infected areas could be traced. Laboratory confirmation showed that *vibrio cholerae* El Tor was again responsible, the strain being in all respects similar to the strains isolated in 1961. Thereafter, between the 22nd August and

the 20th September, there was a total of ten clinical cases of cholera, nine of which were confirmed bacteriologically. All cases were typical and the majority were severely ill. There was one death, the third patient, who died on arrival at the hospital after an illness lasting three days.

81. All house contacts of the ten clinical cases were isolated at the Chatham Road Quarantine Centre and, amongst the total of 126 contacts accommodated at the Centre, only 4 contact carriers were detected. These were all contacts of the first case.

82. The usual environmental preventive measures were applied, such as increased chlorination of the public water supply, the chlorination of all wells in the urban areas and the vigorous inspection of public eating places, food premises, markets and the control of itinerant food hawkers. Particular attention was paid to the collection and disposal of night soil and to the bacteriological sampling of the night soil conservancy tankers. All inoculation centres were re-opened for cholera immunization and just over one million people were inoculated during the period of the outbreak.

83. It was possible to conduct a detailed epidemiological investigation of each case that occurred and the results were consistently baffling. Specimens of foodstuffs in the infected premises were all cultured and were all negative for cholera. Positive swabs were, however, obtained from certain of the latrine buckets, from a chopping block used for the preparation of food in one instance, and in several cases from water in kitchen drains and on floors. One roof tank used for flushing a water closet yielded vibrios but the well which supplied the tank was negative.

84. On the night of the 10th September, nearly three weeks after the first case occurred, the first positive culture of cholera vibrios was obtained from a tanker containing communal night soil. This was in the course of routine random sampling and thereafter all night soil tankers in use in the urban areas of Kowloon and Hong Kong Island were sampled twice nightly. An interesting picture emerged. Within the next 10 days positive cultures of cholera vibrios were obtained from tankers serving 12 collection routes in Kowloon and 10 districts on the Island. It was possible in three instances to trace the infection back through the hoppers serving the tankers to latrine buckets. One bucket came from a public latrine and further investigation was not possible. However, in the two other instances, one in a tenement building and the other in a roof top squatter community, it was possible to obtain rectal swabs from the residents using the infected pail. All these swabs

proved to be negative. Positive cultures continued to be obtained from the communal night soil over a period of twenty-six days.

85. On Monday the 8th of October, no case having occurred since the 20th of September, the Colony was declared free of infection. The following Saturday, the 13th of October, another case of cholera was confirmed; this occurred in a fishing village in the district of Yuen Long in the New Territories. In view of the fact that vibrios had disappeared from the communal night soil in the urban areas and that this particular village community could be readily controlled from a quarantine point of view, only the District of Yuen Long was declared an infected local area.

86. Epidemiological investigations again revealed a very interesting situation. The community consisting of 410 people were all rectally swabbed and a total of 16 contact carriers were confirmed and placed in quarantine. Two of the contact carriers were members of the patient's family and of the others ten were children below the age of 10 years, all of whom had close physical contact in the home or at play.

87. Intensive sampling of the water of the tidal river by which the village was situated and of the surrounding ponds used for the rearing of fresh water fish produced no cholera vibrios either agglutinable or non-agglutinable. All foodstuffs, particularly fish and fish fry, and other possible sources of infection were also consistently negative. The only common source of infection appeared to be the child contact carriers who played together on the mud banks and swam in the river.

88. The contact carriers were all treated with oral streptomycin and isolated until three successive negative specimens of stool had been obtained. No further clinical cases appeared and the district was declared free of infection on the 29th October.

89. It is believed that Hong Kong was free of cholera vibrios during the period November 1961 to August 1962. Throughout this time, on a routine basis, all specimens sent to the Government Institute of Pathology from cases of gastro-enteritis were investigated for cholera vibrios. The first positive culture obtained was from the first case of cholera which appeared on the 22nd of August. The sampling of communal night soil tankers, which had been carried out three times each week throughout this period, gave entirely negative results until after the first case of cholera had been confirmed. It was only some 18 days later that cholera vibrios began to appear in the night soil and over the next two weeks there was a very widespread dissemination of the infection

throughout the night soil collected from the urban areas. Yet a total of only 10 sporadic clinical cases appeared, of which 9 were confirmed in the laboratory. The tenth case was clinically a moderately severe cholera but the bacteriological investigations were consistently negative.

90. The appearance thereafter of one confirmed case in a rural area with a total of 16 contact carriers, none of whom had symptoms suggestive of cholera, in a group of 410 persons indicated an highly infectious organism but of limited invasive powers.

91. The sporadic appearance of relatively few clinical cases despite the widespread distribution of cholera vibrios in the community is believed to be due to the fact that the infection was re-introduced into a population well vaccinated against cholera many of whom had received vaccine on more than one occasion. Some 76% of a total population of 3,250,000 had received vaccine in August and September 1961. The following spring 53% of the whole population was again vaccinated. During the outbreak in August 1962 a further one million doses of cholera vaccine were given.

92. From October 1962 to March 31st 1963 routine laboratory investigations continued, during which particular attention was given to night soil tankers. All tankers in use were sampled twice each night and not one positive culture of cholera vibrios was obtained during this time. Similarly, cases of gastro-enteritis and specimens taken from samples of water and foodstuffs which could be possible sources of persistence of the infection were all negative. Further, non-agglutinable vibrios were only recovered rarely.

93. From experience gained during the cholera outbreaks in 1961 and 1962 three important tentative conclusions have been reached. The first is that the source of persistence of cholera is the human bowel and that the symptomless contact carrier is the essential agent in the transmission of the disease either in an endemic area or from an endemic area to an uninfected area when epidemic conditions may arise as a result. The second is that the organism is an highly infectious one but has limited invasive powers in a well-vaccinated community. This would explain the sporadic appearance of the disease either in the endemic areas where cholera is constantly occurring and the community has some degree of herd immunity as a result, or in a well-vaccinated population where cholera vaccine has had sufficiently wide acceptance to produce a degree of artificial immunity equivalent to that produced by the natural occurrence of the disease. The third is that standard cholera vaccine

sufficiently comprehensively applied is an important epidemiological tool which should not be discarded. The important factors here are that the vaccination cover must be sufficiently comprehensive and mass inoculation campaigns repeated at regular intervals.

94. These conclusions are necessarily tentative but future experience of cholera in the region, which is to be expected for some time to come, may well give the opportunity to study further the evidence that appears to support them.

#### NOTIFIABLE DISEASES

95. During 1962, there was an increase of 12.62% in the incidence of the notifiable diseases, particularly tuberculosis, measles, chickenpox and poliomyelitis. The rise in tuberculosis notifications is, however, attributable to the large number of cases discovered by the examination of illegal immigrants who entered the Colony during the year and a substantial increase in the total notified by private practitioners. Diseases such as diphtheria, malaria and amoebiasis showed a decrease and the total mortality from all notifiable infectious diseases declined by 5.4%.

96. Free immunization against smallpox, enteric fever, diphtheria and cholera continued to be available to all members of the public at all Government Hospitals, clinics, Port Health Inoculation Centres and District Health Offices. In addition, inoculation teams visited schools, resettlement estates and other densely populated areas in conjunction with mass immunization campaigns.

97. A summary of the prophylactic immunizations given is at Appendix 6.

#### *Amoebiasis*

98. A further decrease in the incidence was recorded, a total of 195 cases with 9 deaths being notified as against 215 and 12 deaths in the preceding year. The case fatality rate remained low at 4.6%.

#### *Bacillary Dysentery*

99. There were 795 cases of bacillary dysentery with 13 deaths during the year as against 742 cases and 8 deaths in 1961.

100. Much intensive health education in the prevention of the dysenteric infections is carried out, by Health Officers, amongst those connected with the handling, preparation and sale of food. There were 148

carriers detected amongst case contacts and all were given treatment and not allowed to return to work until three consecutive stool specimens had been obtained. The common organisms isolated were *S. flexneri* and *S. sonnei*.

#### *Chickenpox*

101. A widespread outbreak of chickenpox occurred during the first quarter of 1963 with the incidence peak occurring in March. The total number of cases notified during the year was 707 as against 498 in 1961. The mortality remained low, there being 5 deaths recorded as against 7 deaths in the previous year.

102. The intensive immunization against diphtheria which commenced in the autumn of 1959 was interrupted for the second year in succession by an anti-cholera vaccination campaign. The incidence of diphtheria, however, continued to decline, a total of 1,022 cases being notified during the year as compared with 1,334 in 1961, 1,450 in 1960 and 2,087 in 1959 when the number of cases notified was the highest recorded in any year. Over 75% of the cases in 1962 were in children under the age of 10 years, with more than 50% occurring under the age of five. There were 154 carriers detected amongst the case contacts as compared with 95 in 1961 and 35 in 1960. All carriers were isolated in hospital until they were proved free of infection.

103. The case fatality rate for diphtheria, which had been showing a continuing decline in recent years, rose from 8.2% in 1961 to 10% in 1962.

104. *C. diphtheriae mitis* continued to be the predominant causative organism and only in rare instances was an 'intermedius' or 'gravis' strain isolated.

#### *Enteric Fever*

105. A total of 826 cases was notified compared with 742 in 1961 and again the peak of the incidence was in July. The number of deaths due to enteric fever was 21 compared with 24 in the previous year giving a case fatality rate of 2.5% as against 3.2% in 1961. Twenty-eight carriers were detected as against 26 in 1961 and all were treated and rendered negative. Facilities for inoculation remained freely available to the public and the annual campaign was maintained in schools. Food handlers and the staff of licensed restaurants, eating houses and water boats are required by law to submit to inoculation with TAB annually.

#### *Malaria*

106. There were 794 cases notified of which 434 or 54.6% were recorded in the Sai Kung District of the New Territories.

#### *Measles*

107. The incidence of measles remained low, after the extensive epidemic in the winter and spring of 1960-61, until September, 1962 when the increase in notifications heralded the start of another major epidemic. The number of deaths, mainly due to broncho-pneumonia, remained high, reflecting the incomplete notification of this disease. There were 2,317 cases notified with 326 deaths.

#### *Tuberculosis*

108. Tuberculosis remains the major public health problem in Hong Kong. The control programme has so far shown results mainly in the prevention of tuberculosis amongst children and in the reduction of mortality at all ages. The problem is considered in detail in paragraphs 124 to 180 below.

#### *Poliomyelitis*

109. There were 363 cases of paralytic poliomyelitis notified during the year which is the highest incidence recorded since 1948. During July of peak of 78 cases occurred followed by a gradual decline, with 12 cases being reported in November. Thereafter there was again a sharp increase with 27 cases occurring in December and 35 during January. This was contrary to all previous experience as these are normally the months of lowest incidence.

110. During the summer months, as in past years, Type I poliovirus was predominant but in November, December and January, Type II and Type III were the predominant strains isolated. It appeared that the epidemiological pattern was changing.

111. A mass vaccination campaign, using a Sabin trivalent oral vaccine, had been planned to take place in two phases in January and March 1963. The first phase in the urban areas covered ten days from 2nd to 11th January, and oral vaccine was given to children in the age group most at risk, namely those aged between 6 months and 5 years. The campaign in the New Territories was extended to the 31st March to cover the small and more isolated village communities, the aim being to 'seed' the virus in each group within as short a time as possible. After the first phase, the incidence of paralytic disease declined sharply

and a committee of clinicians and pathologists investigated fully all cases notified as poliomyelitis which occurred thereafter to ensure that the causative strain was not related to the vaccine virus.

112. The second phase started on the first of March and was again continued for 10 days with an extension to the end of the month for the rural village communities.

113. During these two phases a total of 389,992 children received the oral vaccine which represents 66% of the child population aged 5 years and under.

114. Notifications of poliomyelitis fell sharply after the first feeding of the oral vaccine and during February and March only 13 and 4 cases respectively were reported.

115. This vaccination campaign had been planned some six months ahead to take place early in 1963, during the months of minimal circulation of the entero-viruses as gauged by surveys carried out during the two previous years. It seems certain that there was a change in the epidemiology and that a most unexpected outbreak of poliomyelitis due to Type II and Type III strains was halted by the oral vaccination campaign. The results of the campaign are now being assessed and it is hoped to publish a paper in the scientific press later in 1963.

116. In order to assess the antibody response to the vaccine, blood specimens were taken before vaccination from 194 children. Of these, 79 with no polio-antibodies were selected for follow up, all being in the age group 6 to 12 months. Rectal swabs were taken from the children prior to the feeding of the vaccine and out of 71 tested only 2 were positive for poliovirus. The overall percentage of triple negatives for polio antibodies in the age group 6 to 12 months was 40.5% and the most susceptible age group was below 9 months. Conversion rates were very satisfactory for Type II (98.5%) and Type III (95%) but for Type I the rate was only 66%, which may have been due to interference by other viruses at a time of year when the enterovirus carrier rate is known to be rising.

117. These same children were further investigated to ascertain the establishment of the vaccine in the intestinal tract. The average duration of excretion of vaccine poliovirus after feeding was found to be about 4 to 5 weeks. In general Type II was dominant and grew first in most of the children, followed by Type III. In the majority of these children Type I poliovirus appeared after the second feeding of vaccine. This is in accordance with previous world experience.

#### *Ophthalmia Neonatorum*

118. 310 cases were reported as compared with 250 in 1961.

#### *Puerperal Fever*

119. Two cases, both fatal, were again recorded during the year and both occurred following delivery in the home without the help of a doctor or a qualified midwife.

#### *Scarlet Fever*

120. Sporadic cases occurred throughout the year. 19 cases were reported as against 29 in 1961.

#### *Whooping Cough*

121. 98 cases with no deaths were notified as against 47 with 1 death in the previous year.

#### OTHER COMMUNICABLE DISEASES WHICH ARE NOT NOTIFIABLE

#### *Influenza*

122. The notification of influenza is entirely voluntary. Cases reported during the year numbered 6,374 with 39 deaths compared with 6,223 and 39 in 1961. The A2/57 (A/Asian 57) strain was active during the year as indicated by twelve isolates obtained at intervals from throat washings.

#### *Tetanus*

123. There were 139 cases notified during the year of which 82 occurred in new-born infants, mostly among those delivered at home, in villages situated in the New Territories. In such cases, assistance by an untrained person, the use of unsterile material and instruments and the common practice of applying raw ground ginger root to the umbilicus as a styptic combine to give a grave risk of tetanus neonatorum. Children attending Maternal and Child Health Centres are given routine immunization against tetanus using the toxoid preparations. The health education of parents and others in the areas most affected is a slow process, despite the very considerable efforts of the health staff of the New Territories.

TABLE 4  
SPECIFIC MORTALITY RATES OF SOME NOTIFIABLE INFECTIOUS DISEASES 1962

Disease	Cases	Deaths	Case fatality rates %	Proportional Mortality rates per 100 deaths from all causes	Specific death rates per 100,000
Cholera .. .. .	11	1	9.09	0.005	0.029
Amoebiasis .. .. .	195	9	4.62	0.044	0.264
Dysentery	Bacillary ..	789	1.64	0.64	0.381
	Unspecified ..	6			
Enteric Fever	Typhoid ..	772	2.33	0.089	0.528
	Paratyphoid ..	54	5.55	0.015	0.088
Poliomyelitis .. .. .	363	52	14.33	0.256	1.525
Cerebrospinal Meningitis .. .. .	50	35	70.00	0.172	1.026
Diphtheria .. .. .	1,022	102	9.98	0.502	2.991
Measles .. .. .	2,317	326	14.07	1.604	9.561
Puerperal Fever .. .. .	2	2	100.00	0.010	0.058
Tuberculosis .. .. .	14,263	1,881	13.19	9.255	55.166

Notes: 1. Total deaths from 1.1.62 to 31.12.62 were 20,324.  
2. Estimated population for mid-1962 was 3,409,700.

#### TUBERCULOSIS

124. Mention has already been made of the visit of Professor F. HEAF, C.M.G., the Adviser on Tuberculosis to the Secretary of State for the Colonies and of Dr. Wallace FOX of the Medical Research Council Tuberculosis Research Unit in London. The pattern for the existing Government Tuberculosis Service was determined in 1952 and a review of the organization which has developed over the past 10 years for the control of tuberculosis and the results of that policy was timely. The Report submitted and the recommendations made are still under consideration by Government.

125. Broadly speaking, the policy has been to protect those most vulnerable to the fatal post-primary manifestations of the disease by vaccination with B.C.G., to provide outpatient facilities for the ambulatory treatment of as many tuberculosis patients as possible and to reserve the limited hospital accommodation for the care and treatment of those patients not responding to ambulatory treatment or in need of surgical operations to hasten recovery. With the magnitude of the problem presented by an incidence of active disease of 2% of the adult population it has been physically and financially impossible to provide institutional care of the order entailed if all infectious cases were to be isolated.

126. The measurements that can be applied to assess the results of this policy have been largely in connexion with mortality rates. The total morbidity and the pattern of morbidity have not yet been detailed and will not be until a scientifically based investigation can be carried out on a comprehensive scale. However, certain morbidity trends are emerging which indicate a pronounced shift in the distribution of the disease within the various age groups affected. In short, the youngest age groups now show a definite response to the preventive measures applied, while morbidity and mortality are heaviest in the adult population. Accordingly, while the general incidence of the disease remains about the same level, the heaviest morbidity and the categories of disease most resistant to treatment tend to be concentrated in the age group of 45 years and above. That this is a legacy of the influx of refugees some twelve years ago, who are living longer with well established fibro-caeous disease, which is partially or wholly resistant to treatment with first line drugs, there seems to be no doubt.

#### Tuberculosis Mortality

127. The number of deaths recorded from all forms of tuberculosis during 1962 was 1,881 compared to 1,907 in 1961 although the deaths recorded from all pulmonary manifestations of the disease actually increased from 1,592 in 1961 to 1,654 in 1962. The mortality rate has nevertheless continued its downward trend and there has again been a substantial fall in the percentage of tuberculosis deaths under the age of five years related to the total tuberculosis deaths.

TABLE 5  
DEATH RATES FROM TUBERCULOSIS 1952-62

Year	Population	TUBERCULOSIS		
		Death rate per 100,000	Percentage of Total deaths	Percentage of tuberculosis deaths below 5 years
1952 .. .. .	2,250,000	158.8	18.4	34.3
1953 .. .. .	2,250,000	130.6	16.0	36.2
1954 .. .. .	2,277,000	126.3	14.9	31.2
1955 .. .. .	2,340,000	120.0	14.7	28.0
1956 .. .. .	2,440,000	107.0	13.6	25.0
1957 .. .. .	2,583,000	103.6	13.9	21.2
1958 .. .. .	2,748,000	83.8	11.2	19.6
1959 .. .. .	2,857,000	76.2	10.7	19.2
1960 .. .. .	2,981,000	69.9	10.8	10.5
1961 .. .. .	3,177,700	60.0	10.2	11.5
1962 .. .. .	3,400,300	55.3	9.25	5.74

128. The marked reduction in the tuberculosis mortality in children under five is attributed to the vaccination of new-born babies with B.C.G. This practice, started in 1952, now has wide acceptance both by parents and by all agencies engaged in midwifery. In 1952 only 4.33% of new-born babies received B.C.G. but with increasing co-operation by all persons engaged in midwifery this has now risen to 81.59% of all births registered in 1962.

129. In the adult age groups, between 1952 and 1962, the average age of death from tuberculosis has risen from 25 years to 46 years, and this shift of mortality has been most obvious in relation to pulmonary disease which accounts for 87.9% of all tuberculosis deaths. During the same period, the total deaths from pulmonary tuberculosis have fallen by 32.7% and the change in the pattern is illustrated in Table 6 below.

TABLE 6  
AGE VARIATION IN TUBERCULOSIS MORTALITY 1952-62  
(Expressed as percentage of 1952 figures)

All Ages	Under 5 years	5-44 years	45-59 years	Over 60
Minus 32.7%	Minus 96.5%	Minus 61.2%	Plus 20.7%	Plus 130.3%

130. In addition to the ageing of the population of Hong Kong, there are two further factors which have a bearing on this situation. The first is that the introduction of effective chemotherapy is prolonging substantially the life of patients with chronic fibro-caseous disease, and the other is the prevalence of the disease among the older people coming into Hong Kong from China.

#### *Tuberculosis Morbidity*

131. During the past decade, the annual notifications of cases suffering from tuberculosis have varied in number between 12,000 and 15,000. The origin of such notifications during 1962 was as detailed in Table 7.

TABLE 7  
NOTIFICATIONS OF TUBERCULOSIS (ALL AGES) 1962

Government Chest Clinics	...	...	...	...	10,691
Other Government Institutions	...	...	...	...	1,680
Tung Wah Group of Hospitals	...	...	...	...	801
Other Non-Government Institutions and Private Practitioners	...	...	...	...	1,091
					<u>14,263</u>

132. The total of 14,263 notifications is some 1,679 more than that of the previous year and can be attributed to the large influx of immigrants during the months of April and May and to the increasing co-operation by private practitioners in notification.

133. The morbidity rate of the disease, as measured by the ratio of notifications for each 100,000 of population, has declined from the peak figure of 689 in 1951 to 419 in 1962, the lowest figure have been 396 in 1961. As in the mortality figures, there has been a marked change in the age distribution of reported cases; since 1954, the incidence rate amongst children under five years of age has declined by 83.6%, while that for all persons over that age has fallen by only 15%.

134. The decline in the incidence of the disease in children under five is attributed to the increasing acceptance of B.C.G. vaccination. Despite the fact that a considerable proportion of these young children lose their tuberculin sensitivity within a period of two years after vaccination, it does appear that some degree of protection nevertheless persists. In Hong Kong an investigation has shown that, in common with experience elsewhere, the actual drop in sensitivity over a period of 18 months amongst previously known reactors was 33%. Revaccination with B.C.G. on entry to school is at present being considered and preliminary investigations regarding the procedures to be adopted, and their extent, are under way.

135. According to the notifications received, tuberculous meningitis in children under five has been slow to respond to control measures and it was thought that one reason may be that the total may have been inflated by errors in diagnosis. During the year a system of cross-checking of the notifications and the diagnosis was introduced, since when the total number of deaths recorded as due to tuberculous meningitis has fallen from 165 to 79.

136. In the past, when an individual attended a Government Chest Clinic for the first time, no inquiries as to origin have been made. Early in 1962, it appeared that the proportion of patients recently arrived in the Colony who were attending had increased considerably and an investigation into the incidence of imported disease was started. From this survey it appeared to be reasonable to conclude that attendances at Chest Clinics were relatively heavy among those who had resided in the Colony for six months or less, and that among this group there was a greater proportion of extensive disease, and a higher proportion of drug resistant disease.

137. Following on this investigation, there occurred the mass entry of illegal immigrants in April and May and between June and September over 68,000 of this group applying for registration were submitted to a chest X-ray. This group had a much more average age and sex distribution than the previous group of arrivals investigated early in the year and they were more preoccupied with getting work than with medical treatment. Preliminary assessments indicate that in the younger age groups of the illegal immigrants, tuberculosis was less prevalent than in the urban population of Hong Kong, but that in the elderly immigrants some 15% had active tuberculosis. Also amongst the immigrants 81% of the active disease was resistant to one or more of the drugs in standard use, namely streptomycin, INAH and P.A.S.

138. The major problem now facing the tuberculosis control services is the detection and treatment of pulmonary disease in the elderly, many of whom are suffering from extensive and drug resistant disease.

#### *Work of the Government Tuberculosis Service*

139. All cases attending the Government Chest Clinics are given treatment free, irrespective of origin. The increasing volume of work undertaken at the Government Chest Clinics during the past five years is detailed in Table 8.

TABLE 8  
WORK OF GOVERNMENT CHEST CLINICS 1958-62

	1958	1959	1960	1961	1962
First attendances .. .. .	39,454	39,008	35,991	40,146	43,519
Cases of tuberculosis discovered ..	12,270	14,406	12,937	15,270	16,541
Total attendances for treatment ..	803,326	1,655,100	2,001,960	2,204,058	1,901,425
Under treatment from previous year	9,132	13,733	16,062	16,433	17,714
Started treatment during the year ..	11,546	11,357	12,617	12,381	12,190
Completed treatment .. .. .	1,048	2,064	3,724	3,776	4,935
Failed to attend .. .. .	3,048	5,391	4,975	4,987	5,371
Admitted to hospital from chest clinics .. .. .	1,511	1,587	1,592	889	921
Still on treatment at end of year ..	13,733	16,062	16,433	17,714	17,372

140. Treatment at the Chest Clinics is by ambulatory chemotherapy, which includes daily injections of streptomycin six days each week combined with oral PAS and INAH, for a period of six months. At the end of this period, the oral therapy is continued for a period of up to two years from the start of treatment. Some chronic cases with positive sputum are maintained for long periods on INAH with the

intention of ultimately rendering them 'catalase negative'. Hospital admission is arranged for those patients whose treatment can be expedited by surgical or other means or who, for medical or very pressing social reasons, require in-patient treatment.

141. There are four full-time Government Chest Clinics which, in addition to normal day-time working, offer one evening diagnostic session each week. Part-time clinics are maintained at twelve other centres and a sessional advisory service is provided at four other centres maintained by voluntary agencies. In addition to these specialized sessions, routine sessions are provided for the daily injections of streptomycin at a number of centres, for the convenience of patients who cannot travel regularly to the full-time clinics.

142. Case-finding is not practised on any scale as the available services are already heavily committed to the care of those patients who present with active disease. All Government employees undergo an annual X-ray examination and similar surveys are undertaken, on request, of employees in industrial concerns and private institutions, subject to certain conditions concerning sick-leave and re-employment for persons found suffering from active disease. Otherwise, little case-finding is performed, but this aspect of the control programme will require detailed consideration in the near future. The results of surveys undertaken during the year are shown in Table 9.

TABLE 9  
X-RAY SURVEYS—1962

	Government Employees	Conditional Surveys	Prisoners
Total examined ....	39,232	20,019	5,852
Clinically re-examined ...	5,311	2,009	1,036
Active tuberculosis ...	408	412	323
Percentage active tuberculosis	1.04	2.06	5.52

143. Following the diagnosis of a case of tuberculosis, Tuberculosis Workers visit the patient's home and arrange for the examination of the family and other close household contacts; those under eight years of age are tuberculin tested and those over that age are X-rayed. During the year a total of 17,353 contacts were fully investigated, the findings being detailed in Table 10.

TABLE 10

CONTACT EXAMINATIONS 1961-62

<i>Under 8 years of age</i>		1961	1962
Tuberculin Tests	{ Negative ... ..	831	611
	{ Positive ... ..	3,102	3,493
Clinical findings of contacts showing Positive Mantoux	{ Active T.B. ... ..	92	95
	{ Inactive T.B. ... ..	125	200
	{ Suspicious T.B. ... ..	510	453
	{ Free of T.B. ... ..	2,375	2,803
Percentage of Contacts found to have active tuberculosis	...	2.34%	2.31%
<i>Over 8 years of age</i>			
Result of clinical examination following 'Contact' X-rays	{ Active T.B. ... ..	421	289
	{ Inactive T.B. ... ..	665	374
	{ Suspicious T.B. ... ..	1,002	753
	{ Free of T.B. ... ..	12,390	11,775
Percentage of contacts found to have active tuberculosis	...	2.91%	2.11%

*Tuberculin Testing and B.C.G. Vaccination*

144. Mention has been made previously of the effect of B.C.G. vaccination of the new-born. However, some 20,000 unvaccinated infants are added to the community each year, but this number is appreciably reduced through the Maternal and Child Health and School Health Services where tuberculin testing is carried out on children not known to have received B.C.G. vaccination at birth. During the year, 52,634 children were tuberculin tested in Maternal and Child Health Centres and schools of whom 25,996 were negative and received B.C.G. vaccination.

145. Children under three years of age who have not had B.C.G. but who show a positive tuberculin reaction are given INAH for one year in an effort to minimize the risks of a progressive primary tuberculosis. During the year 88 such children were discovered at the chest clinics and a further 100 through the Maternal and Child Health Service. There were thus 188 under treatment during 1962 as compared to 147 during 1960.

*Surgical Tuberculosis**Thoracic Surgery*

146. Outpatient sessions for patients who need or have had chest surgery are held at the Wan Chai Chest Clinic by the Government Specialist in Thoracic Surgery and the Thoracic Surgeon from the Grantham Hospital. These sessions are held weekly and fortnightly respectively. In consultation with the staff of the Clinic, cases undergoing ambulatory chemotherapy who require surgical investigation or treatment are seen by the Thoracic Surgeons and the lines of investigation and treatment are planned. Thereafter, the patients are admitted to the Grantham Hospital; on discharge the subsequent follow-up takes place at the Wan Chai Clinic.

147. The numbers of cases seen during the past 3 years have been:

	<i>Government Thoracic Surgeon</i>			<i>Grantham Thoracic Surgeon</i>		
	1960	1961	1962	1960	1961	1962
First attendances	103	112	137	147	125	108
Subsequent attendances	803	891	926	262	321	355
Total	906	1,003	1,063	409	446	463

*Orthopaedic Surgery*

148. Outpatient sessions are conducted at the Sai Ying Pun and Kowloon Chest Clinics for patients with bone and joint tuberculosis and are maintained jointly by the University Consulting Orthopaedic Surgeon, who is the Professor of Orthopaedic Surgery, and the Government Orthopaedic Specialist. Additional sessions are also held by the permanent staff at these two centres for patients requiring routine treatment and supervision. The surgery is carried out at the Grantham Hospital. Thereafter, routine medical treatment and ancillary services such as physiotherapy, the fitting of appliances and medical social work are carried out by the personnel attached to the relevant clinic.

149. Attendances at these sessions over the past four years have been:

	1959	1960	1961	1962
First visits	617	441	415	397
Subsequent attendances	3,503	4,001	4,618	3,685
Total	4,120	4,442	5,033	4,082

150. The analysis of the location of bone and joint disease in the new cases presenting has been:

	1959	1960	1961	1962
Spine ... ..	303	202	197	197
Hip ... ..	125	94	115	109
Other bones and joints ... ..	189	145	103	91
Total ... ..	<u>617</u>	<u>441</u>	<u>415</u>	<u>397</u>

151. The number of cases presenting with orthopaedic tuberculosis has again shown a reduction. This is mainly a post-primary disease with a predilection for children between the ages of 6 and 12 years. Although post-primary tuberculosis in Hong Kong is diminishing rapidly, its incidence in this particular age group has not yet been materially affected. It is expected that the total of cases of orthopaedic tuberculosis will decline markedly within the next four years when children vaccinated with B.C.G. during the period 1957 to 1959 move into this susceptible age range.

#### Radiology

152. The total number of examinations carried out during 1962 on behalf of the Tuberculosis service by the Radiology Branch of the Department was 263,982 as compared with 305,088 in 1961, and almost one-third of these were performed by the use of 35 mm. or 70 mm. films. The static and mobile X-ray units attached to the Tuberculosis Service are maintained and operated by the Government Senior Radiological Specialist and his staff. There is a very close co-operation and consultation between the Tuberculosis and the Radiological Services in all aspects of the diagnostic and routine supervisory radiology.

#### Bacteriology

153. The Government Institute of Pathology undertakes all bacteriology for the Tuberculosis Service. The number of direct smear examinations rose from 47,984 in 1961 to 86,281 during 1962, while culture and resistance examinations accounted for a further 13,710 procedures as against 12,000 in the previous year. In addition an investigation was carried out during the year on the sensitivity of the organisms from new patients attending the tuberculosis clinics for the first time. This survey is as yet incomplete, but preliminary results indicate a very high level of primary drug resistance, i.e. a large percentage of patients who deny previous treatment for tuberculosis are found to be excreting resistant bacilli.

#### Medical Social Work

154. One Senior Almoner, eleven Almoners and 55 Tuberculosis Workers are attached to the Tuberculosis Service. Their responsibilities include the interviewing of patients and their families, arranging hospital admission, hospital visiting, the home visiting and supervision of patients on ambulatory chemotherapy, assistance in money and in kind and rehabilitation.

155. As soon as the diagnosis of tuberculosis is confirmed all patients requiring treatment or supervision are interviewed. The original interview is a comprehensive one and is based as far as possible on all future requirements while under treatment. During the year 11,754 new patients were interviewed, a slight increase on the previous year's figure although the total number of interviews was 33,412, being a fall of 10% as compared to 1961. Much additional interviewing is done subsequently by the Almoners' Clerks, who also maintain treatment record cards and distribute drugs to be taken routinely by mouth.

156. Admissions and re-admissions to hospital from the chest clinics are arranged by the Almoners and this involves documentation, the financial aspects, advice to employers of patients being admitted to hospital and the maintenance of waiting lists. While the majority of patients still express a preference for hospital treatment, there is a growing number who express preference for out-patient treatment. Due to increased pressure, the reasons for which have been outlined previously, the beds available for hospital treatment were in greater demand during the year and the number of persons on the waiting list at the end of 1962 was 374 as compared to 273 in December, 1961.

157. Ward rounds by Almoners, in company with the medical staff, are carried out as a routine and each patient is normally seen individually at least once each month as well as by appointment if required.

158. The Almoners' Section is responsible for the preparation and maintenance of attendance registers of patients on outpatient therapy. After the initial interview by an Almoner, a Tuberculosis Worker pays a visit to the home, gives advice on hygiene and makes arrangements for contact examinations. In addition, irregularity of treatment or non-attendance is followed up by home visits. However, because of limited staff, much of the routine regular visiting has to give place to visits connected with irregular attendances or default from treatment. Patients are allocated on a district basis and the Tuberculosis Worker is attached more or less permanently to her district and works from the relevant

full-time chest clinic. At the chest clinics these workers also assist with reception and documentation duties so that there is a continuing personal contact with the patients both at home and in the clinic, which promotes confidence.

159. The Tuberculosis Workers are recruited from girls of good education and intelligence and are given in-service training for a period of 6 to 12 months before being allocated to their districts. They are not fully-trained nurses nor are they trained social workers.

#### *Assistance to Patients*

160. There is a Tuberculosis Assistance Fund available to the Senior Tuberculosis Almoner which amounted to \$300,000 in 1962. Assistance to the dependants of patients under treatment in hospital is the principal object and disbursements are made on a formula based on previous family income and the continuing family commitments. During the year 280 families received an average weekly grant of \$26.38, as compared to \$24.61 in 1961. In addition, milk powder issued on the basis of one pound each week to each patient was a charge on the fund. Miscellaneous disbursements such as travelling expenses of patients coming from outlying districts for X-ray were also made from the Fund. Surgical appliances for cases of orthopaedic tuberculosis were given to 93 patients at a cost of \$6,964, of which \$3,947 came from the Assistance Fund, the remainder being subscribed either by the patient or by voluntary agencies.

161. Another source of assistance is the Samaritan Fund at the disposal of the Principal Almoner. A total of \$3,416.20 was given for travelling expenses such as are incurred by orthopaedic cases attending clinics.

162. Donations in kind of rice, noodles, cooking fat, beans, clothing and blankets were also made possible through the generosity of C.A.R.E.

163. When it is not possible or expedient to assist patients from the resources available to the Tuberculosis Service they may be referred to other agencies such as the Social Welfare Department, the Family Welfare Society, Foster Parents Inc., and many other similar organizations. A total of 283 patients were thus referred to other welfare agencies for assistance.

#### *Rehabilitation*

164. Ambulatory treatment for the majority of patients who attend the Government Clinics means that the greatest number can continue at work, or spend relatively short periods in hospital before returning to

their jobs. However, there is a considerable proportion of patients, in the 40-45 age group, of unskilled workers with chronic disease who have undergone thoracic surgery and who present a difficult re-employment problem. The Lutheran World Federation operates a rehabilitation scheme whereby patients recommended by organizations dealing with the treatment of tuberculosis are resettled either in agriculture, in small home industries or in other suitable employment. The total number of patients referred during the year to the Lutheran Tuberculosis Project was 56, as compared to 58 in 1961. There is very close consultation and co-ordination with the Government staff by the personnel of this project which offers every promise of success and a much wider field of constructive rehabilitation.

#### *Hospital Services*

165. The magnitude of the Tuberculosis problem in Hong Kong is such that it is not physically possible to segregate and treat in hospital all cases of active open tuberculosis. The place of ambulatory chemotherapy, recently assessed on a scientific basis in Madras, has proved itself in practice over the past ten years in Hong Kong. However, hospital beds are necessary to any system of control and treatment and they play an essential role in Hong Kong. While Government has established and developed outpatient facilities on a major scale, the provision of hospital services has been predominantly the role of the voluntary agencies largely subsidized by Government. Thanks to the practical co-operation of the voluntary agencies, a co-ordinated system of hospitalization has been developed over the years.

166. During 1962 there were 1,748 beds set aside full time for the inpatient treatment of tuberculosis, 52% of which are in the two tuberculosis hospitals and the convalescent home maintained by the Hong Kong Anti-Tuberculosis Association. The other institution dealing exclusively with tuberculosis is the Haven of Hope Sanatorium at Junk Bay in the New Territories.

167. Beds for tuberculosis in Government Hospitals are in the Lai Chi Kok and Cheung Chau Hospitals. During 1962 there were 72 beds at Lai Chi Kok Hospital and 42 beds at Cheung Chau Hospital. The latter are used largely for young adolescents with positive sputum who have to be debarred from school until they are sputum negative. The Tung Wah Group of Hospitals maintains tuberculosis beds mainly for patients with disease of long standing.

168. Tuberculosis beds were distributed as follows during 1962:

Government Hospitals	148
Hong Kong Anti-Tuberculosis Association:	
Grantham Hospital	568
Ruttonjee Sanatorium (Including Freni Memorial Convalescent Home)	336
Tung Wah Hospitals	356
Haven of Hope Sanatorium	230
Private hospitals	110
<b>Total</b>	<b>1,748</b>

169. The Lai Chi Kok and Tung Wah Eastern Hospitals provide emergency tuberculosis beds for the admission of acute emergencies, such as haemoptysis and pneumothorax, which are brought to the two Casualty Departments of the Queen Mary and Kowloon Hospitals. Such cases are admitted either direct or as soon as resuscitation has been effected at the receiving hospital and the patients are fit to move. These are temporary arrangements until such time as a new wing with emergency facilities is available at the Ruttonjee Sanatorium and the present Kowloon Hospital is converted to its future role, which will include a tuberculosis unit of 184 beds, after the Queen Elizabeth Hospital has become fully functional early in 1964.

#### *The Work of the Voluntary Agencies*

##### *The Hong Kong Anti-Tuberculosis Association*

170. This is the largest and longest-established of the voluntary agencies working exclusively in the field of tuberculosis. It maintains two hospitals and one convalescent home, containing a total of 904 beds, a B.C.G. Clinic, an outpatient clinic for the follow-up of discharged patients and a Tuberculosis Insurance Scheme. Supported by voluntary donations and some endowments, the Association also receives substantial annually-recurrent subventions from Government.

171. The Association works very closely with the Government Tuberculosis Service and now provides in its two hospitals almost exclusively the facilities for thoracic and orthopaedic surgery required for the treatment of tuberculosis. Admissions to both the medical and surgical beds of Grantham Hospital and, to a lesser extent, the Ruttonjee Sanatorium are now largely in respect of patients referred by the Government Chest Clinics although both hospitals also arrange admissions direct for their own referred cases.

##### *The Grantham Hospital*

172. Opened in 1957, this hospital is equipped as a modern chest hospital. An extension which was completed early in 1963 provided an additional 84 beds to make the total 624, and also contains a physiotherapy department and a school for the training of nurses for the British Tuberculosis Association Nursing Certificate. Run on a fee-paying non-profit making basis, the hospital provides private, semi-private and general ward accommodation for fees of \$35, \$24 and \$18 a day respectively. During 1962, Government maintained 492 of the beds in the general wards, including 48 beds in the new extension. Government also provides the clinical staff for 252 beds and undertakes the medical social work for patients in the 492 beds it maintains. The follow-up of patients discharged from these beds is undertaken at the Government Chest Clinics.

173. For purposes of clinical supervision of Government-sponsored patients within the hospital, there are the Grantham Pulmonary Unit of 240 medical and surgical beds, the Government Pulmonary Unit of 138 medical and 34 surgical beds and the joint Grantham-Government Orthopaedic unit of 80 beds. The Medical Superintendent, responsible to the Grantham Hospital Management Board, is in charge of the medical administration of the hospital and has clinical charge of the Grantham Pulmonary Unit medical beds. The Grantham Thoracic Surgeon has clinical charge of the surgical beds in that Unit. The medical and surgical beds in the Government Pulmonary Unit are under the clinical supervision of the Government Senior Tuberculosis Specialist and the Government Specialist Thoracic Surgeon respectively. The orthopaedic beds are in the clinical charge of a visiting consultant in Orthopaedics. All staff throughout the hospital is provided by the Association with the exception of Government Medical Officers posted to the Government clinical units whose salaries are recovered from the Association. The Government Specialists act as consultants and no charge is made for their services.

##### *The Ruttonjee Sanatorium and Freni Memorial Convalescent Home*

174. These two units are the responsibility of the Ruttonjee Sanatorium Management Board and are run as one. In the Sanatorium of 226 beds, medical, surgical and orthopaedic work is carried out, while the Convalescent Home of 110 beds is for patients who are under drug treatment but sufficiently well not to be in need of special nursing care. Consultant services are supplied by the University Professorial Units of Medicine, Surgery and Orthopaedics. Medical and Senior Nursing staff are provided by the Sisters of the St. Columban Missionary Order.

175. In addition, the medical staff of the Sanatorium maintain the B.C.G. and 'follow-up' clinic in the Association's Headquarters situated next door to the hospital, and undertake the X-ray and medical work in connexion with the Tuberculosis Insurance Scheme.

176. The work done at the Ruttonjee Sanatorium and the Freni Memorial Convalescent Home during the year ending 31st March, 1963 was as follows:

TABLE 11

ADMISSIONS TO THE RUTTONJEE SANATORIUM AND FRENI MEMORIAL  
CONVALESCENT HOME

	1960	1961	1962
Adults through Government Clinics ... ..	350	289	439
Children (Pulmonary) through Government Clinic	52	31	34
Children (Orthopaedic) through Government Clinic ... ..	39	56	85
Other admissions and re-admissions ... ..	252	302	427
<b>Total ... ..</b>	<b>693</b>	<b>678</b>	<b>985</b>

*The Tung Wah Hospitals*

177. This group of three hospitals has a varying total of between 250 and 350 beds occupied by patients with tuberculosis. These beds are almost entirely occupied by cases of a chronic type and the turnover is accordingly relatively slow. No special subvention is made to support these beds as the total recurrent expenditure of the group is met by a Government subvention. In the busy maternity wards of these hospitals the B.C.G. vaccination of new-born babies is carried out by the Government Tuberculosis Service staff.

*The Haven of Hope Sanatorium*

178. Maintained by the Junk Bay Medical Relief Society, this inter-denominational Protestant Mission Sanatorium provides 230 beds for the medical treatment of tuberculosis. No major surgical or orthopaedic work is undertaken. The Sanatorium staff also maintain a tuberculosis out-patient and 'follow-up' clinic at nearby Rennies Mill and carry out some tuberculosis survey work amongst the villagers in the Junk Bay area. Government maintains 80 beds in the Sanatorium for the free treatment of New Territories villagers and also gives a small annual grant towards the cost of the X-ray survey work.

*Other Voluntary Agencies*

179. The Lutheran World Service developed in 1961 a pilot rehabilitation scheme for patients with arrested or cured tuberculosis. This scheme has now become well-established and its activities are being expanded as additional facilities become available.

*Private Hospitals*

180. There are 110 beds provided in private hospitals, some of which are classed as charity beds in which treatment is given at low cost or free. There is also a considerable amount of ambulatory chemotherapy given by private practitioners, but there is no information at present available either on the numbers of patients under treatment or the results of treatment.

MALARIA BUREAU

181. The Malaria Bureau, under the direction of the Specialist (Malariology), is responsible for all malaria control operations throughout the Colony and, in certain instances, also undertakes the control of the breeding of culicine mosquitoes. In addition, lectures are given on malaria and allied subjects to various groups of health personnel under training, and expert advice is given as required to the Armed Services, to the Pest Control Unit of the Urban Services Department, to Hei Ling Chau Leprosarium, and to Her Majesty's Prisons in the New Territories.

*Control Operations*

182. The important malaria vectors are *A. minimus* and *A. jeyporiensis* var. *candidiensis*. Malaria control in the urban areas is based chiefly on anti-larval measures consisting of training and clean weeding of hill streams, ditching and oiling. Anti-malaria oil continues to be employed as the main larvicide, although Gammexane Dispersible Powder and Diazinon are also used on a limited scale in areas where the application of oil is unsuitable, such as in rice fields and irrigation ditches leading from seepages to rice cultivation. The urban control programme includes Hong Kong Island and, in Kowloon, an area extending from just beyond Lai Chi Kok in the West to Lei Yue Mun in the east, and as far north as the Kowloon Reservoir. Also included in the programme are certain circumscribed rural areas in the New Territories such as Rennie's Mill, the township on Cheung Chau Island, Chi Ma Wan Open Prison and the Shek Pik dam site in the South of Lantau Island.

183. The results of anti-larval operations, as checked by routine adult mosquito catches and larval collections, are satisfactory and the incidence of natural malaria transmission in the controlled areas continues to be virtually nil.

184. In most of the New Territories, control by anti-larval or anti-adult measures is at present impracticable because of the scattered population, the widespread traditional wet cultivation, and the unprotected contiguous borders and islands. The main line of defence against malaria for disciplined groups stationed in the New Territories therefore consists of such anti-larval measures as may be practicable in their immediate vicinity, screening where possible, and chemo-prophylaxis.

185. The cost of control measures during the year was 33 cents per head of population protected.

#### Incidence of Malaria

186. Malaria is a notifiable disease, and the returns of the past five years are set out in Table 12.

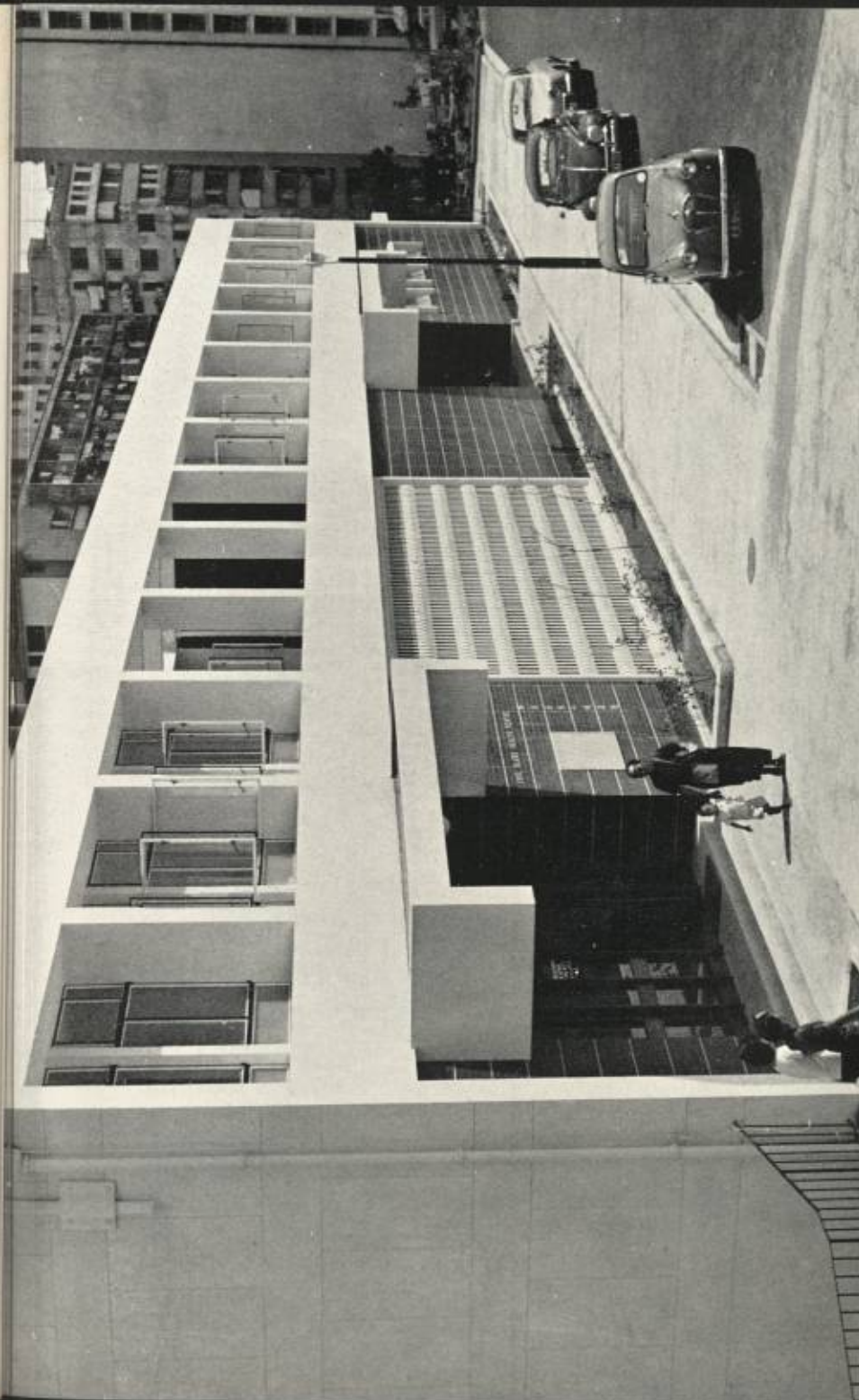
TABLE 12  
MALARIA 1958-62

Year	Cases Notified	Deaths
1958	659	1
1959	442	1
*1960	833	—
1961	812	1
1962	794	—

\* The taking of routine blood smears of all febrile children of 10 years and younger attending Government clinics in the rural areas was instituted in 1960.

187. 91.1% of all cases notified were from outside the protected areas; 53.9% of the cases came from the area surrounding the town of Sai Kung on the east coast and 11.6% of the total from Lantau Island. Of the parasites identified 98.2% were *P. vivax*, 1.3% *P. malariae* and 0.5% *P. falciparum*.

188. Malarimetric indices obtained from a survey carried out during the year in children between 2 and 9 years of age in 11 villages in the New Territories showed that the endemicity of malaria varied in different areas. Spleen rates ranged from 0% to 9% and parasite rates from 0% to 14.19%. A similar survey carried out during the previous year in 14 other villages gave spleen and parasite rates ranging from 0% to 40.2% and 0% to 20% respectively.



The Anne Black Health Centre on Hong Kong Island, which was opened in September, 1962. This building, providing out-patient and maternal and child health facilities, was erected from funds divided equally by Dr. TANG Shiu-kin, C.B.E., I.L.D., and his friends, and by Government.



The Child of a fisherman receives her vaccine on a lump of sugar during the mass immunization campaign against poliomyelitis conducted in 1963.

#### Laboratory

189. The Bureau Laboratory continued to carry out the routine identification of mosquitoes and the examination of blood smears collected at surveys or submitted from outlying dispensaries. Of 1,471 *A. minimus* and *A. jeyporiensis* var. *candidiensis* and 161 other anopheline species dissected during the year, none were found with sporozoites. In addition precipitin tests were carried out for the study of their feeding habits. Other activities of the Bureau included lectures and demonstrations on anti-malaria work to medical students, Health Inspectors and Health Visitors.

#### SOCIAL HYGIENE SERVICE

190. This service, which is the responsibility of the Social Hygiene Specialist, consists of three branches dealing with dermatology, venereal diseases, and leprosy. Facilities for the diagnosis of skin conditions are of considerable importance in bringing to light cases of latent syphilis and of early leprosy. Accordingly, the service is organized to provide 9 centres for purely dermatology clinics; in addition there are thirteen social hygiene clinics, where venereal infections and leprosy undergo investigation and treatment, although a number of cases of skin disease may also attend these clinics. The Wan Chai Hospital provides in-patient accommodation for the treatment of skin disease in women and children and a few dermatology beds for male patients are available at the Kowloon and Lai Chi Kok Hospitals; in addition, some patients with skin diseases are admitted to the Queen Mary Hospital for teaching purposes.

191. The post of Social Hygiene Specialist which had been vacant since October, 1960, was filled during the year.

#### Venereal Diseases

192. The venereal disease clinics serve members of the public, seamen of all nationalities, pregnant women referred from Maternal and Child Health Centres and gynaecological clinics, prison inmates, patients in the Castle Peak Hospital, patients referred from the Medical Examination Board, and applicants for emigration to the United States and Canada. Any treatment required is given free of charge. In addition, a large number of dermatological conditions are seen and treated at the venereal disease clinics. There has been, in general conformity with world statistics, a rise in the early syphilis rate during the year, but the incidence has shown no rise in the teenage group of the population as has been the case in U.S.A., the United Kingdom, Australia and Europe.

193. The incidence of gonorrhoea has remained fairly stable, but further control of the disease remains a problem because of difficulty in diagnosis in chronic cases, especially in females. Laboratory methods involving the use of fluorescent microscopy are about to be introduced. Penicillin is normally the first line of treatment but resistance and anaphylaxis continue to increase. Other antibiotics have strict limitations from the points of view of the supervision of administration and of cost. Research into this problem is at present being undertaken.

194. The incidence of early and late latent syphilis continues to fall. This is to be expected if the overall diagnosis and treatment of syphilis over the past ten years has been effective; however, the large influx of immigrants during the year will probably have some effect on the incidence of late latent syphilis as it has in other aspects of public health.

195. Ante-natal blood tests for syphilitic infection are carried out as a routine on pregnant women attending Maternal and Child Health Centres. The following table shows the results over the past seven years. The value of this routine investigation is reflected in the low figures for congenital syphilis in babies under one year.

TABLE 13  
ANTE-NATAL BLOOD TESTS 1956-62

	1956	1957	1958	1959	1960	1961	1962
No. of Tests (Clinics & Hospitals) .. ..	26,083	27,330	28,026	46,932	52,068	51,449	53,954
% of Positive Rate ..	3.8	3.5	3.3	2.6	2.3	1.6	2.2
No. of Tests (Private Midwives) .. ..	5,464	4,623	5,583	6,269	6,805	6,940	9,640
% of Positive Rate ..	3.4	2.7	3.2	2.3	1.9	1.4	1.2
Cases of congenital syphilis recorded							
Under 1 year ..	19	3	7	10	0	3	11
Over 1 year ..	64	116	86	131	74	48	66

196. The incidence of venereal disease in prostitutes, who attend voluntarily at the Social Hygiene Clinics either through contact tracing or for periodic investigation, has been under review since 1959. Table 14 sets out the results to date.

TABLE 14  
VENEREAL DISEASE IN PROSTITUTES

Year	No. of first attendances	V.D. not found	Gonorrhoea	Syphilis	
				Early Latent	Late Latent
1959 .. ..	1,086	692 (63.8)	235 (21.6)	63 (5.8)	96 (8.8)
1960 .. ..	952	613 (64.4)	124 (13.0)	69 (7.2)	146 (15.4)
1961 .. ..	806	585 (72.6)	124 (15.4)	31 (3.8)	66 (8.2)
1962 .. ..	917	698 (76.1)	115 (12.5)	44 (4.8)	60 (6.5)

(Figures in brackets represent the percentage of first attendances.)

### Leprosy

197. Sixteen clinic sessions are held weekly in nine centres solely for leprosy patients, while two sessions each week are held in conjunction with other social hygiene clinics; in addition, one session is devoted to the care of leprosy patients suffering from trophic ulcers. During the year 253 new cases of leprosy were treated, of which 113 were lepromatous, 120 tuberculoid and 20 diamorphous types of infection; 464 contacts were also examined. Of the infectious cases, 131, as against 124 in the previous year, were admitted to the Hei Ling Chau Leprosarium which is maintained by the Hong Kong Auxiliary of the Mission to Lepers; a very close liaison is maintained between Hei Ling Chau and the Social Hygiene Service.

198. The treatment of surgical deformities in leprosy patients is carried out at the Maxwell Memorial Hospital at the Hei Ling Chau Leprosarium and a small number of cases have also been admitted to certain Government Hospitals. The rehabilitation of disabled non-infectious patients presents a difficult problem to voluntary agency and Government welfare services. The Hong Kong Society for Rehabilitation has accepted 24 of these patients for trade training.

199. Prostheses devised by the Government Surgical Appliance Centre for patients with disabled and deformed limbs have proved to be of great benefit to the healing of chronic foot ulcers and the rehabilitation of the patients.

### Dermatology

200. The dermatological clinics held at the nine centres recorded a total of 6,674 cases referred for an opinion. At the Social Hygiene Clinics there were a further 12,917 first attendance for skin complaints, which is 47.4% of the total of new cases seen at these clinics. Appendix 8 shows the incidence of the types of dermatological conditions seen in clinics.

201. The great majority of cases are those of coccal infections, especially in infants, due to the high humidity and a restricted water supply in the community. Self-medication with herbal preparations and the indiscriminate use of patent remedies give rise to another large group of dermatoses.

202. The incidence of industrial dermatoses remains low despite the increasing number of industrial workers in Hong Kong. The incidence of skin malignancy also remains low.

#### PORT HEALTH

203. The Port Health Administration is responsible for all measures designed to prevent the introduction of quarantinable infectious diseases into the Colony; for the sanitary control of the ports of entry by sea, air and rail; for the carrying out of the provisions of the International Sanitary Regulations as embodied in the Quarantine and Prevention of Diseases Ordinance and the Asiatic Emigration Ordinance; for the compilation of epidemiological statistics and reports and for the general organization of prophylactic vaccination campaigns. There are also statutory responsibilities under the Hong Kong Merchant Shipping Ordinance. A weekly exchange of epidemiological information is maintained with the World Health Organization Epidemiological Station in Geneva.

204. All persons entering the Colony are subject to a quarantine inspection. Arrivals by sea are inspected at the two quarantine anchorages in Kowloon Bay and off Stonecutters Island respectively; arrivals by air are inspected at Kai Tak Airport and persons crossing the land frontier by rail at the Lo Wu Quarantine post. All immigrants without valid certificates are vaccinated against smallpox.

205. Other routine work carried out includes the deratting, disinsecting and fumigation of ships, sanitary duties in the port and airport, including supervision of water supplies control, measures to keep the port and airport free from *Aedes aegypti*, and inspection of all vessels carrying more than twenty unberthed immigrants. A service rendering medical advice by wireless, on request, to ships at sea is also maintained. In addition to routine work, the Port Health Launches, equipped with stretchers, first aid equipment and radio telephones, provide a sea ambulance service in the port area.

206. Four Port Health inoculation centres are maintained for the convenience of persons requiring International Certificates for travel, two on Hong Kong Island and two in Kowloon, including one at the airport. Vaccinations are also offered free at these centres to members of the public. Inoculators are posted to various centres throughout the Colony and are responsible for the field work in connexion with immunization campaigns which are carried out under the immediate supervision of area Health Officers.

207. The new Terminal Building at the Kai Tak Airport was officially opened by H.E. the Governor on the 2nd November, 1962, and became operative on the 12th November. Out-patient clinic facilities are provided

in the Airport for Government servants working at the Airport and for their families. This clinic includes a vaccination centre for members of the public who require International Certificates of Vaccination and it also serves as a first-aid post.

208. Quarantine restrictions were maintained in respect of the Philippines and the Kwangtung Province, and were applied to Taiwan when it was infected with cholera in July 1962.

209. A case of cholera El Tor, the first to occur since the outbreak in 1961, was confirmed on the 23rd August and the Colony was declared to be an infected local area on that date. Further cases were reported and details of the outbreak are given elsewhere in this report.

#### DISTRICT MIDWIFERY SERVICES

210. The difficulties attending home deliveries under existing housing conditions and the growing appreciation of the advantages of the skilled attention available in institutions have resulted in a continuing decline in domiciliary midwifery. During the year only 3.5% of all registered births took place in the home and the maternal mortality rate, which has shown a dramatic fall in recent years, remained at the low level of 0.48 deaths per thousand births.

211. It is now Government policy gradually to reduce facilities for domiciliary midwifery and to provide instead beds for normal midwifery in all new clinics constructed in urban areas where the needs of the district warrant this provision. In the New Territories the policy has been, and still continues to be, to include maternity beds in all new clinics. During the year two such clinics were opened in urban areas, namely, the Anne Black Clinic at North Point and the Jockey Club Clinic at Wang Tau Hom providing a total of 31 additional maternity beds.

212. The work of the Government Midwifery Service during 1962 is summarized in Table 15.

TABLE 15  
GOVERNMENT MIDWIFERY SERVICE, 1962

Maternity beds in hospitals	...	...	...	...	359
Maternity beds in maternity homes (urban)	...	...	...	...	84
Maternity beds in maternity homes (rural)	...	...	...	...	147
Midwives (excluding hospitals)	...	...	...	...	82
Cases attended (excluding hospitals)	...	...	...	...	17,828
Average case-load for each midwife (excluding hospitals)	...	...	...	...	217

213. Midwives in private practice attended 39.6% of all births, the great majority of these taking place in small maternity homes of from two to six beds. The Supervisor of Midwives, a Government Senior Medical and Health Officer, is responsible for the regular inspection of such homes and for the general supervision of the work of the midwives; in this task, she is assisted by a qualified Health Visitor. The work undertaken in 1962 by the private midwives is outlined in Table 16.

TABLE 16  
PRIVATE MIDWIFERY SERVICE, 1962

Number of midwives in active practice	184
Number of registered maternity homes	115
Number of beds	546
Maternity home deliveries	42,327
Domiciliary deliveries	2,227
Total deliveries	44,554

214. All midwives are trained to perform vaccinations against small-pox and to administer B.C.G. to new born infants. It is due to the efforts of these midwives, both Government and private, that 81.6% of all children born in 1962 received B.C.G. protection, a measure which has resulted in a dramatic fall in child mortality from tuberculosis.

#### MATERNAL AND CHILD HEALTH SERVICES

215. In this most important and popular aspect of the work of the Department, which is maintained on a 'well baby' clinic basis, the emphasis is on health education and the prevention of disease. All facilities are provided without charge and, once disease is detected, unless the ailment is minor, the child concerned is referred to the appropriate branch of the curative service for investigation and any necessary treatment. When cured, the patient is encouraged to return to the relevant Maternal and Child Health Clinic. Health Education programmes for groups of mothers in the clinics and of individuals during home visits are permanent and continuing activities of the Health Visitors. In the clinics, all forms of group education are available such as simple talks, film and puppet shows and flannel-graph illustrations; practical demonstrations and group discussions are also widely used, the choice of medium depending on the subject and on the audience.

216. Clinics are held in both full-time and part-time centres and there are sessions for ante-natal and post-natal cases, for infants aged 0-2 years and for toddlers aged 2-5 years. Close liaison is maintained

between the Maternity Hospitals and the Maternal and Child Health Service to ensure the after-care of infants requiring special attention. The work performed during 1962, as compared with that of 1961, is detailed in Table 17.

TABLE 17  
MATERNAL AND CHILD HEALTH SERVICES 1961-62

	1961	1962
Number of full time centres	9	9
Number of subsidiary centres	19	21
Number of ante-natal sessions each year	2,131	2,195
New ante-natal attendances	22,995	23,203
Total ante-natal attendances	92,553	98,245
Number of post-natal sessions each year	857	931
New post-natal attendances	5,031	5,023
Total post-natal attendances	6,546	6,560
Number of infant welfare and toddler sessions each year	4,815	5,103
New infant welfare attendances	37,735	44,348
Total infant welfare attendances	363,206	417,760
New toddler welfare attendances	8,990	9,989
Total toddler attendances	57,903	69,774
Total home visits	64,167	82,231

217. A part time maternal and child health centre was opened in the Kwun Tong Resettlement Estate in May 1962, which will, in time, be replaced by a full-time centre in the new Kwun Tong Clinic now under construction. The part-time centre in North Point was replaced by a full-time centre in the Anne Black Clinic which was opened in September 1962, while a new full-time centre was opened in the Wang Tau Hom Jockey Club Clinic in February 1963.

218. Ante-natal and infant welfare clinics continued to be held once a month at Tai O on Lantau Island and infant welfare clinics were held twice weekly in the Wong Tai Sin Resettlement Estate. The total attendance at Government infant and toddler clinics increased by 15.8% and new attendances by 15.5%; only 0.17% of these attending for the first time showed any abnormality.

219. Immunization against diphtheria, whooping-cough and tetanus is given as a routine, using triple vaccine. Smallpox vaccination is given where necessary and children not known to have received B.C.G. are tuberculin tested, those with a negative reaction being offered such protection. Children aged 3 years and under who are tuberculin positive, but without signs of active disease, are given prophylactic I.N.A.H. for a period of one year.

220. The Colony-wide average attendance at each ante-natal session was 44, as against 43 in 1961, and the average attendance by each expectant mother was 4. Post-natal sessions are the least popular and it seems that attendance is exclusively confined to women who either suspect or are conscious of an abnormality; 16% of those who attended for post-natal care needed some form of treatment.

221. Maternal and Child Health centres played an active part in the oral poliomyelitis vaccination campaign held in January and March 1963, and they provided all the specimens of sera and of faecal swabs for the virological and serological studies carried out by the Government Virus Unit in connexion with the campaign.

#### SCHOOL HEALTH SERVICES

222. The Medical and Health Department undertakes in all registered schools, through its School Health Service, responsibility for environmental sanitation, the control of communicable disease, immunization against diphtheria, smallpox and typhoid and health education. There is also a medical inspection and curative service provided for a limited number of participants in the existing contributory School Health Scheme. This latter scheme is under review and is expected to be replaced soon by a School Medical Service operated on a per capita contributory basis by private practitioners. To this end negotiations have been conducted with the Chinese Medical Association which has agreed in principle to assist with the launching of a comprehensive inspection and curative service.

223. During 1962 there were 23,724 pupils from 253 schools who were participating in the existing contributory School Health Service. Medical inspections, clinics services, dental care and specialist ophthalmic and ear, nose and throat investigations and treatment were provided. Table 18 sets out the work done.

TABLE 18

#### WORK OF SCHOOL HEALTH SERVICE 1962

<i>Medical Inspections</i>	<i>General Clinic Attendances</i>	<i>Dental Attendances</i>	<i>E.N.T. Attendances</i>	<i>Ophthalmic Attendances</i>
38,619	41,947	30,060	1,796	3,696*

\* 1,708 pairs of spectacles and 247 pairs of lens replacements were issued.

224. There were no epidemics of infectious disease in the schools and there was a drop in the incidence of diphtheria, 254 cases being notified

as against 312 in 1961. A total of 137,971 school children were immunized against diphtheria with a full course of inoculations and a further 30,999 were given booster doses; 159,713 children were vaccinated against smallpox and 441,341 were inoculated against cholera.

225. Tuberculin testing has been carried out during the year as part of a general investigation to check the sensitivity state of pupils in registered schools throughout the Colony with a view to extending the B.C.G. service, as a routine, to all school children. During the year 49,567 tuberculin tests were done and 22,903 were given B.C.G. The positive reactors were investigated, as were known family contacts of tuberculosis; those with suggestive signs and symptoms and those with a 15 mm. or greater reaction were requested to attend for an X-ray examination. In these three groups a total of 648 were advised to attend for an X-ray; 505 of them showed no radiological evidence of disease and 104 were referred for full investigation at a chest clinic. The remaining 39 did not co-operate by attending for X-ray examination.

226. Before being permitted to teach in registered schools, school teachers are required to undergo an X-ray examination. During the year, 3,212 chest X-rays were taken and 11 teachers were found to be suffering from active tuberculosis; in such cases permission to teach is refused and priority admission to hospital arranged. After full investigation a further 154 teachers were permitted to teach under regular medical supervision.

227. Registered School premises are inspected routinely by Health Inspectors and all new premises or applications for extensions or alterations to schools are investigated to ensure adequate environmental sanitation and hygiene. For this purpose 2,866 inspections were carried out, and reports were made on plans for new schools or for extensions to existing schools.

228. Health education activities included lectures by doctors and health visitors to teachers-in-training; visits were also arranged to school clinics for practical demonstrations of the common health problems amongst school children. School visits by Health Visitors, home visits, and talks to pupils and parents at school clinics are routine activities which are an integral part of the work of the School Health Service.

#### DENTAL SERVICE

229. The Government Dental Service, under the direction of the Senior Dental Specialist, provides general dental care for the Civil Service as well as a School Dental Service, related to the School Health Scheme. In addition, emergency dental care is given to patients in Government

hospitals, in Her Majesty's Prisons and to the public at certain of the Government outpatient clinics. The work of the General Dental Service is shown in Table 19.

TABLE 19  
WORK OF THE GENERAL DENTAL SERVICE 1961-62

	1961	1962
Dental Surgeries in operation	32*	32*
Attendance by Government Officers	52,039	52,974
Attendance by Dependants of Government Officers	52,487	58,807
Attendances by General Public	25,797	26,596
Total Attendances	130,323	138,377

\* Includes Tai O Dental Clinic used part-time only.

230. A Dental Officer and Dental Nurse, operating in each of six school dental clinics, have provided a service for participants in the School Health Service. It is worthy of note that the proportion of extractions to fillings of deciduous teeth fell in 1962 to 1.8 to 1 compared with almost 2 to 1 in 1961. Also, the number of fillings compared with extractions of permanent teeth rose from 7.9 to 1 in 1961 to 10.4 to 1 in 1962.

#### Dental Epidemiology

231. In connexion with the programme of fluoridation of water supplies, which began in March 1961, a second survey of the dental health of children was carried out in 1962. This survey emphasized the high decay rate of children's teeth and the great disparity between the prevalence of dental caries among children and their use of conservative dental care. Children of six to eight years of age were found to have an average of 8.41 deciduous teeth affected by dental caries. An average of nearly one tooth per child had been extracted, but only one child in twenty-five had had a deciduous tooth filled. Children nine to eleven years of age were found to have an average of 3.49 carious permanent teeth, some of which had already been extracted, yet only about five out of every thousand of these decayed teeth had been filled.

232. It is confidently anticipated that the scheme of fluoridation of water supplies in which the fluoride level of mains water in the urban areas has been adjusted to the optimum for dental health will bring about a marked improvement in the teeth of children and in particular those born in 1961 and subsequent years. In the meantime dental caries continues to remain a problem in Hong Kong, especially amongst younger children.

#### Dental Health Education

233. During 1962, the Hong Kong Dental Society again sponsored a Dental Health Week, from 22nd to 29th September, 1962. This week, during which the aim was to acquaint children with four rules for dental health, was an outstanding success. Various methods of publicity were employed and, according to a survey assessment made by the Society shortly afterwards, the competition had made a substantial impression, more than half the children interviewed being able to recite the basic dental health rules.

234. In January 1963, a dental health exhibition staffed by dental officers and auxiliaries was held as part of the Agricultural Show in Tung Chung, Lantau Island. Demonstrations of oral hygiene methods were given to villagers and fisherfolk of the district and to the visitors from further afield who attended the show.

235. In addition to these special drives, a continuous programme of dental health education was maintained in dental clinics throughout the Colony.

#### Dental Services provided by Private Agencies

236. A number of welfare organizations maintain free or very low cost dental clinics for the poor. Some of these are staffed voluntarily by Government and private dentists and Dental Officers of the Armed Forces stationed in Hong Kong. The Hong Kong Dental Society operates three free clinics during seven evening sessions per week, as well as providing volunteer staff for the Ruttonjee Sanatorium. The St. John Ambulance Brigade gives free treatment at its Hong Kong Headquarters Dental Clinic and at the Sandy Bay Convalescent Home. The Brigade also includes volunteer dentists among the personnel of its Penetration Squads which visit distant areas of the New Territories to carry treatment to people remote from ordinary medical and dental care. The Lutheran World Service and The Church World Service each operate a mobile dental clinic. These mobile low-cost dental services fulfil a very great need among the under-privileged people in resettlement areas, orphanages and the rural areas of the New Territories where very few dentists are in practice.

#### Control of Dental Practice

237. Two Dental Inspectors were employed throughout the year for the supervision and control of dental practice, carrying out regular inspections of premises. There was one prosecution for alleged illegal practice of dentistry, and one person was convicted under the Registration of Dentists Ordinance, 1959.

FORENSIC PATHOLOGY

238. All medico-legal work in connexion with the investigation of crime is carried out in laboratories situated in the Police Headquarters building. These laboratories, under the direction of the Specialist (Forensic Pathology), are staffed jointly by the Medical and Health and Police Departments. Lectures are given in various aspects of medico-legal work to Police personnel and, during the year, a series of talks on 'Emergency Child-birth' were given to women police constables. The Specialist (Forensic Pathology) is Lecturer in Forensic Medicine at the University of Hong Kong.

239. Work undertaken in 1962 is detailed in Table 20.

TABLE 20

WORK OF THE FORENSIC PATHOLOGY LABORATORIES, 1962

Examination of victims and suspects	499
Attendance at scenes of crime	86
Attendance at courts	128
Medico-legal examination of weapons	72
Examination of hairs, fibres, etc.	376
Examination of clothing	598
Miscellaneous Examinations	386
Blood grouping (Medico-legal)	1,745
Blood grouping (Police Officers)	523
Lectures to Police Officers	26
Identification of nature of meat—dog, cat, etc.	37
Chemical examinations	42
<i>Assistance in Raids</i>	
Breach of Pharmacy and Poisons Ordinance and Penicillin Ordinance	19
Unregistered Medical Practitioners	19
Abortionists	7
Unregistered Dentists	2

*Public Mortuaries*

240. The two public mortuaries, one on Hong Kong Island and the other in Kowloon, are under the supervision of the Specialist in Forensic Pathology. It is to these institutions that all cases of sudden, unnatural or uncertified deaths are sent, including deaths in Police or Prison custody, exhumed bodies and human remains. An account of the work done in the mortuaries is listed in Table 21.

TABLE 21

PUBLIC MORTUARIES 1962

	Victoria	Kowloon
Total number of bodies received	1,256	3,145
Total number of autopsies performed	704	1,445
Number of bodies claimed	830	1,711
Number of bodies unclaimed	426	1,434
Deaths due to natural causes	914	2,441
Deaths due to unnatural causes	342	704

GOVERNMENT CHEMICAL LABORATORY

241. The Laboratory carries out analytical and consulting work of a very varied character for Government Departments, the Armed Services, commercial firms and private individuals.

242. The total number of samples examined during the year decreased by about 4% as compared to the previous year, due partly to a drop in the number of specimens submitted for biochemical analysis as an increasing amount of such analysis is now being undertaken by the Chemical Pathology Unit of the Government Institute of Pathology.

TABLE 22

WORK OF THE GOVERNMENT CHEMIST'S LABORATORY 1961-62

	Samples Analysed	
	1961	1962
Biochemical	15,720	14,326
Dangerous Drugs Ordinance	9,871	9,963
Dutiable Commodities	8,029	8,212
Water and Waterworks Chemicals	2,513	2,681
Food and Drugs	1,128	1,147
Forensic	1,177	1,002
Toxicology	852	690
Dangerous Goods Regulations	1,498	343
Commercial	488	632
Import/Export (Prohibition) (Specified Articles) Orders	11	7
Miscellaneous	787	1,437
	<u>42,074</u>	<u>40,440</u>

243. The major part of the work is concerned with biochemical analyses, narcotics control and the assessment of dutiable commodities. A great variety of work was done for the Police during the year, which

included cases of forged or altered documents, the examination of counterfeit gold, tear gases, exhibits from the scene of 'hit and run' accidents and material from explosions, acid throwing and arson. Over 500 specimens of drugs of various kinds were examined in connexion with infractions of the laws relating to the sale of poisons and to the possession of prohibited insecticides.

244. The toxicological work comprised mainly examinations of specimens sent from hospitals and mortuaries in connexion with accidental or suicidal poisonings. The pattern of substances taken for purposes of suicide did not differ significantly from previous years, insecticides being the commonest, followed by hypnotics, disinfectants, and cyanide.

245. Specimens of dangerous drugs examined were mostly seizures from pedlars but included a considerable number of exhibits from heroin manufacturing establishments raided by the Police. Heroin, barbitone and opium account for nearly all narcotics seizures in Hong Kong.

246. The volume and range of dutiable commodities examined for assessment or remission of duty were similar to those in previous years. There was a slight increase in the examinations of water and waterworks chemicals as a continuous check was maintained on the level of fluoridation of the public water supplies, samples being taken daily from each station at which fluoride is added. The regular examination of all domestic supplies continued throughout the year and a further survey of wells was made on Hong Kong Island.

247. The number of samples of food and drugs submitted for examination under the Public Health and Urban Services Ordinance showed a slight increase over the figures for the previous year. Particular attention has been paid to milk and to products containing preservatives. Although 22% of the milk samples submitted during the year were found to be adulterated, the extent of adulteration showed a significant decrease during the latter six months of the year. The adulteration generally took the form of added water but in some cases evidence was obtained of reconstituted milk being sold as fresh milk.

248. A large number of samples were examined for the presence of preservatives, and both non-permitted preservatives and excessive concentrations of permitted preservatives continue to be found in a number of locally-manufactured products.

249. During the previous two years, the examination of edible oils, and in particular sesame oil, has shown a high rate of adulteration with

mineral oil, in some cases up to as much as 95%. As the result of legislation introduced during the year, this practice is now prohibited and oils examined during the last few months have shown a notable improvement in quality.

250. Work carried out for Government departments included the assessment of standards in connexion with tendering the subsequent deliveries and the examination of inflammable and other dangerous goods seized by the Fire Services Department. The number of commercial samples dealt with showed a marked increase and covered a very wide field, including alloys, oils, chemicals, drugs, firecrackers, paints and textiles.

251. An argon vapour-phase chromatograph was acquired during the year and has proved useful in the examination of adulterated liquors and essential oils.

#### GOVERNMENT INSTITUTE OF PATHOLOGY

252. The Government Institute of Pathology, situated on the upper floors of the Sai Ying Pun Polyclinic, undertakes the major part of the clinical pathology and all the public health laboratory work for Government in the Colony and for some of the grant-aided hospitals. There is a major branch of the Institute in the Kowloon Hospital and small clinical laboratories are maintained at the Lai Chi Kok and Castle Peak Hospitals. There is also a branch laboratory, in Caine Lane, for the manufacture of vaccine. The work of the Institute during the year is detailed at Appendix 15. The University Department of Pathology carries out the routine clinical pathology for the Queen Mary Hospital, and a Virus Unit in that Department is staffed from the Institute but operates under the general supervision of the Professor of Pathology.

253. The Vaccine Section of the Institute continued to manufacture standard cholera vaccine of 8,000 organisms per millilitre, and maintained a reserve of 2,000,000 ml. Over 3,000,000 ml. of the vaccine were used in the course of mass anti-cholera inoculation campaigns held during the year.

254. A systematic examination for *V. cholerae* in night soil from collecting vehicles was carried out throughout the year and stool specimens from cases of gastro-enteritis were investigated routinely for vibrios. In addition, the investigation of water from all sources and of other possible vehicles of infection such as fruits, vegetables, fish and shell fish for cholera organisms was continued throughout the year.

On the occurrence of the first clinical case of cholera on the 22nd August, 1962 a twenty-four hour cholera diagnostic service was established at the Institute in Sai Ying Pun and in the Kowloon Hospital branch of the Institute for the investigation of all cases of gastroenteritis and suspected cholera.

255. Table 23 details the examinations for vibrios carried out during the year from sources other than patients and their contacts.

TABLE 23

Water from sea	615
Water from wells	1,079
Tap water	7
Swimming pools	133
Pond water for fish fry	10
Sewer swabs	186
Fresh water from local junks	591
Fresh water from incoming junks	445
Vegetables and fruits	916
Fish and fish swabs	63
Nightsoil and manure	11,489
Cooked food	9
Others	338
<b>Total</b>	<b>15,881</b>

256. Of the 3,754 specimens taken from patients and contacts, the following were positive for *V. cholerae*. (Table 24).

TABLE 24

Faeces		Vomit	Specimen collected from patients' homes			Nightsoil collected by U.S.D.	Total
Patients	Contacts		Night-soil	Kitchen utensil	Misc. swabs		
10	21	2	7	1	18	87	146

257. Non-agglutinable vibrios were isolated during the period August to December, 1962 in 29 instances.

#### Virus Laboratory

258. The Virus Laboratory is equipped mainly for diagnostic and survey work in connexion with enteroviruses. During the year, three faecal surveys were carried out in the months of January, April and June. Specimens of faeces were taken from Chinese children under the age of five years, the methods of sampling and examination being the

same as in previous surveys. The findings again showed that polio-virus and other enteroviruses are distributed widely in the normal child population. Type I poliovirus was the only type found in these surveys, while in 1961 Types I and III were prevalent. The results of the surveys carried out between June 1961 and June 1962 are shown in Table 25.

TABLE 25

POLIOVIRUS AND OTHER ENTERO-VIRUSES IN THE 0-5 AGE GROUP 1961-62

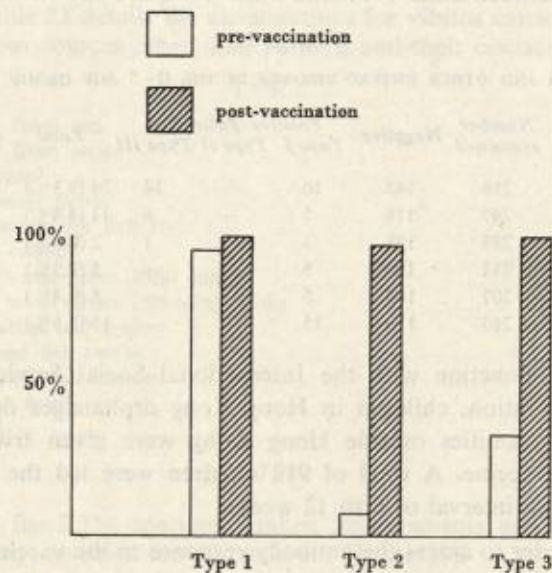
Date	Number examined	Negative	Positive Poliovirus			Total	Positive other enteroviruses
			Type I	Type II	Type III		
June 1961	258	143	10	—	14	24 (9.3%)	91 (35.3%)
August 1961	247	116	5	—	6	11 (4.4%)	120 (48.6%)
November 1961	238	198	1	—	1	2 (0.8%)	38 (15.9%)
January 1962	211	190	5	—	—	5 (2.3%)	16 (7.5%)
April 1962	207	168	5	—	—	5 (2.4%)	34 (16.4%)
June 1962	263	170	15	—	—	15 (5.6%)	78 (25.0%)

259. In conjunction with the International Social Service and the Lederle Corporation, children in Hong Kong orphanages destined for adoption into families outside Hong Kong were given trivalent oral poliomyelitis vaccine. A total of 912 children were fed the vaccine in two doses at an interval of 6 to 12 weeks.

260. In order to assess the antibody response to the vaccine, samples of sera were collected from 69 children before the first feeding and again four weeks after the second feeding. Rectal swabs were also taken from this control group prior to the first dose and again four weeks after each feeding. Prior to feeding, poliovirus type I was isolated in 3 cases, and other enteroviruses in 7 cases, the remainder being negative. The virus excretor rate 4 weeks after the first feeding was found to be 31.6%, being equally shared by poliovirus types II and III; 4 weeks after the second feeding the excretor rate was 3.4% for type III only. A total of 69 serum examinations carried out prior to vaccination showed the presence of type I antibody in 92.7% of the children, type II in 18.8%, type III in 52.1% and only 3 children were negative for all these types of antibody; 41 Sera tested four weeks after the second feeding showed a high conversion rate to all three types of antibody. The results are shown in Figure I.

FIGURE I

CONVERSION RATE OF ANTIBODIES—POLIOMYELITIS 1962



261. The results of routine diagnostic examinations carried out by the Virus Laboratory on specimens received for virus isolations and serological studies are summarized in Tables 26 and 27.

TABLE 26

ISOLATION OF POLIOVIRUS, 1962

Nature of specimen	Number examined	Negative	Total	Positive Poliovirus		
				Type I	Type II	Type III
Clinical Cases	Faeces .. ..	448	266	227	14	25
	Throat swabs ..	36	4	2	1	1
	C.S.F. .. ..	22	0	0	0	0
	Brain Tissues ..	8	5	4	0	1
Contact Cases	Faeces .. ..	1,759	257	219	13	25
Convalescent	Faeces .. ..	94	20	15	3	2

TABLE 27

ISOLATION OF OTHER ENTEROVIRUSES—1962

Nature of specimen	Number examined	Negative	Positive	Virus isolated
C.S.F. .. ..	96	96	0	
Throat swabs (throat washing) .. ..	70	70	0	
Brain Tissue .. ..	5	5	0	
Faeces .. ..	103	90	13	Coxsackie A 9 in 1 case Coxsackie B 2 in 1 case B 3 in 2 cases B 5 in 1 case ECHO type 1 in 1 case 7 in 2 cases 14 in 1 case Unidentified 4 cases

262. From time to time throat washings from suspected cases of influenza are investigated to ascertain the prevalent strain. There were twelve positive isolates obtained during the year which were antigenically identical with the A2/57 (A/Asian/57) strain.

Vaccine Production

263. The Vaccine Laboratory prepared and issued the following quantities of vaccine during the year.

Vaccine	Prepared	Issued
Anti-smallpox vaccine .. .. .	44,292 ml.	38,854 ml.
Anti-rabies vaccine 2% .. .. .	43,050 ml.	45,000 ml.
Anti-rabies vaccine 4% .. .. .	37,150 ml.	38,170 ml.
Anti-typhoid-paratyphoid vaccine (adult) ..	—	55,670 ml.
Anti-typhoid-paratyphoid vaccine (children)	49,600 ml.	11,900 ml.
Anti cholera vaccine .. .. .	2,308,950 ml.	3,065,600 ml.
Anti-plague vaccine .. .. .	68,400 ml.	200 ml.

Autopsies

264. Pathologists from the Institute also carried out postmortems at the Queen Mary Hospital and Kowloon Hospital, including medico-legal cases dying in these hospitals. During the year, 421 such autopsies were performed.

265. Technicians from the Institute undertake the routine post-mortem examination for plague in rodents sent to the Public Mortuaries

by the Pest Control Unit of the Urban Services Department. Of 69,161 rodents examined none were found to be infected with plague.

#### Blood Banks

266. The Blood Donation Centre, maintained by the Hong Kong Branch of the British Red Cross Society on the Hong Kong waterfront, continued to collect and distribute blood to the Blood Banks at the Queen Mary and Kowloon Hospitals; the laboratory work in connexion with this was undertaken by the Government Institute of Pathology.

267. Donations of blood received during the year exceeded by some 230 pints the total for 1961. Although the greater part of the blood again came from members of the Armed Services or from visiting Royal Navy and United States warships, there was a further increase in blood donations from Chinese residents, and the Donors' Club, under the guidance of the Chairman of the Hong Kong Branch of the British Red Cross Society, continued to expand its activities. In addition a considerable amount of blood was donated direct to the Blood Banks by relatives of patients in the various hospitals. The sources and distribution of blood received by the Blood Banks are detailed in Tables 28 and 29.

TABLE 28

SOURCES OF BLOOD DONATED, 1962

British Red Cross Society ... ..	7,964 pints
Patients' relatives and friends ... ..	1,327 pints
Other sources ... ..	1 pint
Total ... ..	<u>9,292 pints</u>

TABLE 29

DISTRIBUTION OF BLOOD, 1962

Government Hospitals ... ..	6,303 pints
Government-Assisted Hospitals ... ..	2,205 pints
Private Hospitals ... ..	231 pints
Military Hospitals ... ..	48 pints
Manufacture of Plasma ... ..	123 pints
Preparation of Coombs Reagent ... ..	2 pints
Unusable due to various causes ... ..	262 pints
Total ... ..	<u>9,174 pints</u>

268. Despite this encouraging increase, there is still a serious shortage of blood to meet all demands. In fact, supply was barely adequate to meet the emergency needs of the acute hospitals and much elective surgery had to be postponed for varying periods for lack of blood. Unless the situation improves greatly in the latter part of 1963, when many more acute beds will come into use, there will be a very grave shortage of this essential aid to modern therapy. Much propaganda is being directed by the British Red Cross Society to attain a significant increase in the number of Chinese donors, as the Armed Services, other temporary residents and visitors cannot be regarded as other than an evanescent source of supply. The people of Hong Kong owe a great debt of gratitude to those donors who, though only temporarily resident in the Colony, give blood for general use.

#### INDUSTRIAL HEALTH

269. The health of workers in factories and in other industrial undertakings is the statutory responsibility of the Commissioner of Labour. The Industrial Health Section of the Labour Department is chiefly concerned with the prevention of occupational disease and the protection of workers against health hazards arising from the working environment. Advice is offered to industry on problems connected with the hygiene of work places, the use of protective clothing and equipment, and the provision of clinic or first-aid facilities.

270. Investigations continued into the working conditions in trades known to be hazardous to health, and medical supervision is maintained of workers in certain dangerous trades such as those in which lead and radio-active substances are handled. Health Visitors carry out individual case work on injured persons claiming compensation under the Workmen's Compensation Ordinance.

271. The contamination of various working environments by toxic gases, fumes or dust, was the subject of a continuing field survey; temperature and ventilation studies have also been made in a number of factories.

272. The cleansing of aircraft contaminated by radio-active dust, following on nuclear explosions in other parts of the world, involved

extensive monitoring of rags and mops used for cleaning. Where indicated, advice was given to employers regarding measures necessary to protect personnel engaged in this work.

273. Lectures on Industrial Health are given to probationer Labour Inspectors, Health Inspectors, Health Visitors and to medical students of the University of Hong Kong. First Aid training classes for industry are organized by the Industrial Health Section and are conducted by the St. John Ambulance Association.

#### HEALTH EDUCATION

274. A better appreciation by the Colony's population of the basic principles of environmental hygiene and the prevention of disease continues to be the main health objective. A very wide field is covered by many branches of the Medical and Health Department as an integral part of the service, and all available methods are used in the programmes undertaken. In general, those methods designed for individual or group education have proved to be the most effective, being used with particular success in the Maternal and Child Health Service, the Tuberculosis Service and the Social Hygiene Service.

275. A number of other departments are concerned with various aspects of Health Education in their respective spheres, and the Inter-departmental Committee on Health Education formed in 1959 acts in an advisory capacity on any matters related to Health Education which may be referred to the Committee.

276. The co-operation of all voluntary bodies interested in health topics is actively sought and Kaifong Associations and Welfare Societies are particularly active in this field. Many of the Kaifongs take a lively and practical interest in the health problems of their respective districts and co-operate in immunization campaigns and in education on environmental hygiene.

277. The Health Education Team, formed during 1961 in the New Territories, was active in promoting better standards of hygiene and living conditions in rural areas and in preparing the way for immunization campaigns. The two 'floating clinics' donated by the Royal Hong

Kong Jockey Club and the 'flying doctor' helicopter service combined curative treatment with advice on environmental hygiene and the prevention of disease during visits to isolated coastal and inland villages.

#### IV. WORK OF THE MEDICAL DIVISION

278. All clinic and hospital services provided by Government continued to operate under heavy pressure throughout the year. There is no doubt that the demand by the general public for medical and health services of all kinds has been steadily mounting in recent years. This pressure is not only caused by the additional numbers requiring attention but also by an increasing tendency to turn from traditional Chinese medicine towards western methods of treatment.

279. Figures II and III show the outpatient attendances, the provision of beds and the admissions to Government hospitals for the five-year period 1958 to 1962:

FIGURE II

OUT-PATIENT ATTENDANCES AT GOVERNMENT CLINICS  
1958-1962

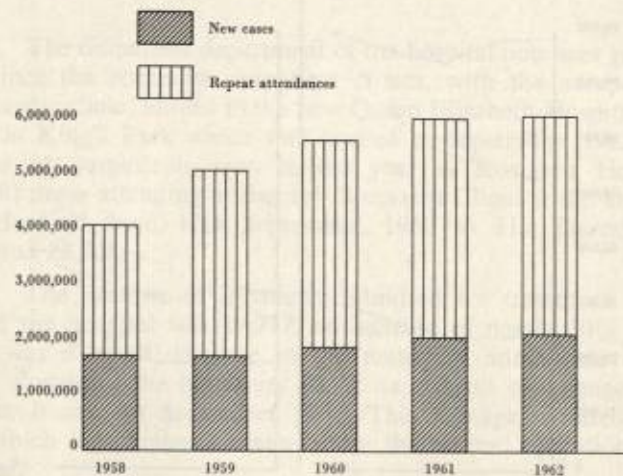
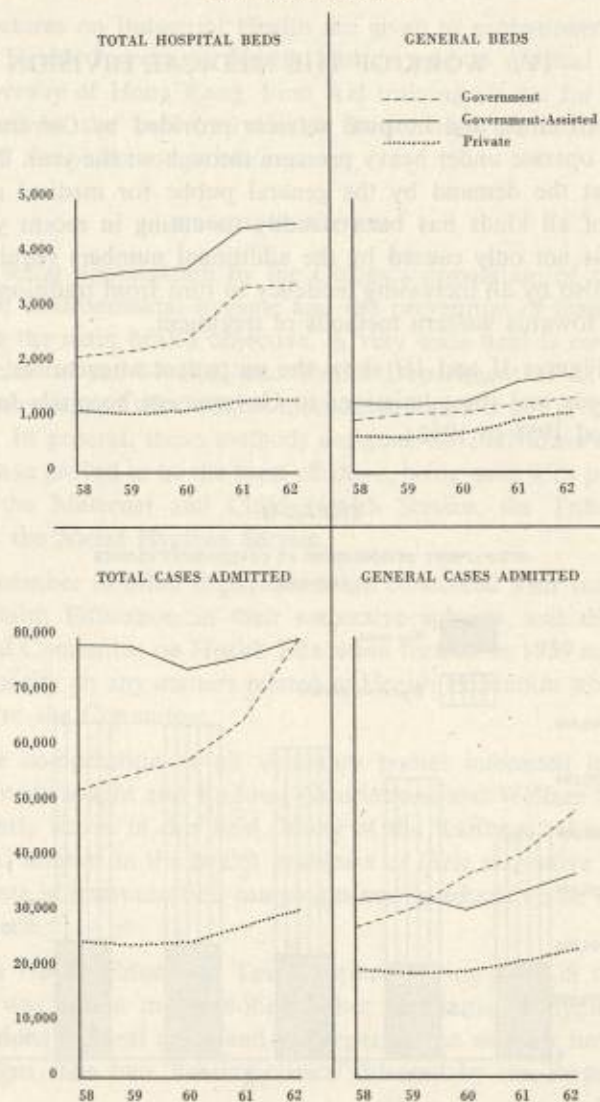


FIGURE III

HOSPITAL BEDS  
(Excluding Maternity Homes)



HOSPITALS

280. At the end of 1962, there was a total of 9,514 beds available in all hospitals in Hong Kong, excluding those hospitals maintained by Her Majesty's Armed Forces.

281. An additional 503 beds in private maternity and nursing homes were also available. Details concerning this hospital accommodation are given in Appendix 10 and an analysis of the work done is set out in Appendices 9 and 11.

282. No new hospitals were opened but extensions to existing institutions and redeployment in the use of accommodation resulted in a total, on balance, of 73 more beds being made available for inpatient treatment; details of these increases are given in the paragraphs dealing with the individual hospitals concerned.

GOVERNMENT HOSPITALS

*Kowloon Hospital*

283. This is the main casualty and emergency receiving hospital for Kowloon and the mainland part of the New Territories. The Casualty Department maintains a 24-hour service and an average of 11.1 cases were seen every hour throughout the year, a total of 97,246 attendances being recorded. This is a 12% increase over the figures for the previous year.

284. The outpatient department of the hospital now sees general cases only since the specialist outpatient clinics, with the exception of the orthopaedic clinic, moved to the new Queen Elizabeth Hospital Specialist Clinic in King's Park which was opened in September, 1962; the total number of outpatients seen in the year at Kowloon Hospital was 596,398; those attending at the new Specialist Clinic at the Queen Elizabeth Hospital from 12th September, 1962 to 31st December, 1962, numbered 23,728.

285. The number of inpatients admitted for treatment to the 574 beds of the hospital was 29,977, an increase of nearly 30% over 1961. There was a small decrease in the maternity admissions due to the partial closure of the Maternity Block as a result of damage caused by typhoon *Wanda* in September 1962. This damage required major repairs which took some 6 weeks before the normal operations could be resumed.

286. All in-patient units of the hospital continued to be hard-pressed; the surgical units recorded an increase of some 20% in admissions and in major operations compared to 1961. The medical unit again showed a rise in the number of admissions resulting from acute cerebrovascular accidents which totalled 198 compared to 136 in 1961; only 66 were admitted in 1959.

287. The orthopaedic unit dealt mainly with patients admitted as a result of traffic accidents and industrial injuries; such patients constituted some 60% of the unit's work during the year.

288. The Gynaecological branch of the Obstetrical and Gynaecological Unit admitted some 70% of its cases as emergencies; 9% of these were ectopic pregnancies and 41% miscarriages or abortions. In Obstetrics, the Caesarian Section rate rose from 6.35% in the previous year to 8.24% in 1962. The trial of the vacuum extractor instrument was continued and was successfully used in 43 deliveries in place of low forceps.

289. The Paediatric Unit opened a new outpatient session in the Maurine Grantham Health Centre, Tsuen Wan, in September 1962 and, in the same month, the Salvation Army Convalescent Home in Cheung Chau became available. The latter institution has been used particularly for cases of rheumatic fever with heart disease, 23 children with this condition having been sent there for convalescent care during the latter part of the year.

290. Table 30 sets out the work of the Hospital during the past five years.

TABLE 30

KOWLOON HOSPITAL 1958-62  
Including Casualty and Outpatient Department

	1958	1959	1960	1961	1962
Maternity Cases .. .. .	3,472	3,646	4,372	4,749	4,578
General Inpatients (excluding Maternity) .. .. .	10,695	13,242	16,052	19,459	25,399
Total Outpatient attendances ..	558,010	532,492	547,592	605,654	596,398
Casualties attended (included in above figures) .. .. .	70,191	71,627	80,333	86,218	97,246
Operations (excluding minor ones) .. .. .	5,704	6,571	7,584	9,257	11,748
Mortality (expressed as percentage of admissions) ..	6.2	5.5	6.4	6.5	7.6

### Queen Mary Hospital

291. This hospital on Hong Kong Island is the largest Government acute general hospital in the Colony. Bed accommodation was increased during the year from 601 to 623 beds by an internal re-arrangement of wards, following the removal of tuberculosis cases to the Grantham Hospital.

292. As the University Teaching Hospital of Hong Kong, the University Departments of Medicine, Surgery, Orthopaedic Surgery, Paediatrics and Gynaecology, each under the direction of a Professor, carried the clinical responsibility for a total of 323 teaching beds; in addition the Government units in Medicine and Surgery also undertake the training of undergraduates. The other clinical units, comprising Radiology, Thoracic Surgery, Neurosurgery, Anaesthetics, Ophthalmology, Ear, Nose and Throat Surgery and Obstetrics are staffed entirely by Government medical staff.

293. The large Casualty Department, which is the emergency and accident centre for the whole of Hong Kong Island, dealt with 46,589 casualty cases during 1962, this being almost double the number of cases seen in 1960.

294. In-patient admissions continued to rise, with a total of 21,311 patients treated during 1962; an increased provision of temporary accommodation in the wards and on verandahs was therefore necessary and a daily average of approximately 120 additional patients, over and above the accepted complement of 623, were under treatment during the year.

295. A Renal Laboratory and Artificial Kidney Unit was inaugurated during the year, following the gift by a private donor of a Travenol Twin Coil Artificial Kidney Apparatus to the University Surgical Unit. Research work was also carried out on the use of intra-arterial infusions of nethotrexate and leucovorin in the treatment of advanced cancerous conditions. This work was supported by grants from the Cancer International Research Co-operative and, later, by the Li Shu Fan Medical Foundation.

296. Towards the end of 1962 work began on extensions to the hospital which will provide some 180 additional beds together with new operating theatre suites, X-ray facilities and improved teaching and research accommodation for the clinical staff of the University Professorial Units.

297. Table 31 sets out the work of the Hospital during the past five years.

TABLE 31  
QUEEN MARY HOSPITAL 1958-62

	1958	1959	1960	1961	1962
Maternity Cases .. .. .	1,975	1,962	2,144	2,324	2,429
General Inpatients (excluding Maternity) .. .. .	12,994	13,224	15,133	15,923	18,882
Total Outpatient attendances ..	44,845	53,306	47,437	58,559	67,291
Casualties attended (included in above figures) .. .. .	18,101	22,307	23,402	41,936	46,589
Operations (excluding minor ones) .. .. .	7,230	7,212	8,160	8,420	9,681
Mortality (expressed as percentage of admissions) ..	7.3	7.5	7.0	7.3	6.6

#### Tsan Yuk Hospital

298. This is the main specialist obstetrics hospital in Hong Kong and the teaching and training centre for medical students and student midwives in obstetrics. The clinical supervision of the 200 beds is undertaken by the University Professor of Obstetrics and Gynaecology, assisted by both University and Government medical staff.

299. Admissions are restricted generally to patients requiring specialized care and comprise primiparae, grand multigravidae and abnormal cases. Some 4% of admissions (305 patients), however, are emergency cases with complications which are referred from other sources, particularly private midwives and Government maternity homes. There were no maternal deaths in the Hospital throughout 1962.

300. Outpatient sessions are held daily at the hospital; ante-natal attendances during the year totalled 34,786.

301. A small research laboratory in the Hospital conducted investigations into haemolytic disease of the newborn among Chinese babies and into the ante-natal blood chemistry of pregnant women.

302. Table 32 below sets out the work done at the hospital for 1961 and 1962:

TABLE 32  
WORK OF THE TSAN YUK HOSPITAL 1961-62

	1961	1962
Total admissions .. .. .	7,774	7,340
Total deliveries .. .. .	6,664	5,993
Still-birth rate (per 1,000 total births) .. .. .	12.34	10.68
Neo-natal mortality rate (per 1,000 live births) .. .. .	13.71	11.70
Maternal mortality rate (per 1,000 total births) .. .. .	0.77	Nil
Percentage operative deliveries .. .. .	21.13	20.63

#### Castle Peak Hospital

303. This hospital for psychiatric patients, originally of 1,000 beds, has been in full operation for little more than 18 months, but pressure on accommodation has already increased to an extent which has called for the provision of additional beds in a number of wards.

304. Psychiatric cases from the whole Colony are admitted to this hospital and the great majority of these are now presenting as voluntary patients.

305. The Hong Kong Psychiatric Centre situated on Hong Kong Island is the main outpatient department and is combined with a Day Hospital which also provides observation, treatment and supervision for patients 'on parole' from Castle Peak Hospital. Commencing in October 1962, two new psychiatric outpatient sessions were held weekly at the Queen Elizabeth Hospital Specialist Clinic.

306. Training in Psychiatric Nursing was successfully continued and is referred to in paragraph 456. Fifth year medical students also spend a week in residence at the hospital to receive practical teaching in psychiatry.

307. In therapy, a number of new psychopharmaceuticals were tried but the oldest of the phenothiazine group—largactil—continued to be the basic standby for controlling schizophrenics, a new drug, trifluorpromazine, having proved too toxic. In mania and other states of agitation with excitement a new compound, haloperidol, was introduced and found to be very useful. In depressive states the use of the mono-amine oxidase inhibitors continued to be effective and also reduced the need for electro-convulsive therapy.

308. Occupational Therapy plays a very considerable part in the management of psychiatric patients and a comprehensive range of activities was organized very successfully throughout the year. Additional premises became available adjacent to the hospital for workshops in one of two large huts which had been previously occupied by a Cadastral Survey Unit of the Public Works Department.

309. Psychiatric social work was undertaken by almoners attached to the main hospital and the outpatient day hospital. Discharged patients and their relatives formed an organization called the New Life Mutual Aid Club, which was registered officially as a Society during the year; the Club aims to promote the mental and physical health of its members, to help with social problems, and to induce a better understanding by

the public of the problems of mental disease and the promotion of better mental health.

310. Tables 33 and 34 below show the work of the Castle Peak Hospital and that of the Psychiatric Centre, Day Hospital and Out-patient Clinics respectively during the year.

TABLE 33

CASTLE PEAK HOSPITAL 1962

	Male	Female	Total
Total admitted 1st admissions ... ..	854	544	1,398
Re-admissions ... ..	473	344	817
Total admissions ... ..	<u>1,327</u>	<u>888</u>	<u>2,215</u>
Discharged, including transfers and deaths*	1,357	830	2,187
Total patients treated in hospital ... ..	2,148	1,347	3,495
Voluntary patients ... ..	1,095	820	1,915

\* There were 35 male and 10 female patients who died in hospital.

TABLE 34

HONG KONG PSYCHIATRIC CENTRES 1962

	Male	Female	Total
<i>Day Hospital</i>			
Admitted ... ..	110	94	204
Discharged ... ..	92	104	196
Total treated ... ..	126	120	246
	<i>First</i>	<i>Subsequent</i>	<i>Total</i>
<i>Outpatient Clinics</i>	<i>Attendances</i>	<i>Attendances</i>	
Hong Kong ... ..	1,164	14,713	15,877
Tsuen Wan ... ..	198	1,013	1,211
Queen Elizabeth Hospital ... ..	66	94	160
Total ... ..	<u>1,428</u>	<u>15,820</u>	<u>17,248</u>

#### Drug Addiction Treatment Centre

311. This pilot venture for the voluntary treatment of male drug addicts at Castle Peak Hospital continued on the same lines as in the previous year. One new feature of importance in 1962 was that all patients discharged had remained in the Centre for the full six months

period of voluntary treatment agreed to on entry; this reflected the considerable improvement in staff/patient relationships and in the co-operation of the patients which is a result of the experience gained in the management of drug addicts over the previous two years.

312. There were no changes made in the methods of treatment used but it has become increasingly apparent that the essential therapeutic problem is the prevention of relapse and much attention has been given to follow-up and community measures with this problem in mind.

313. The Pui Sun Fraternal Association—'Addicts Anonymous' was formed in mid-1962. This group experienced some initial difficulties but, following on an effective re-organization, they became the responsibility of the Categorical Aid Department of the Lutheran World Service which had rendered substantial financial aid to the Association on its formation. More than 100 discharged patients had voluntarily joined the Association by the end of December, 1962. Experience elsewhere of groups like these has not been altogether happy, but every attempt has to be made to assist the addicts to help themselves. It is of vital importance to give them a healthy substitute for the old patterns of interest and activities they have shed, and to encourage mutual aid amongst them. The almoners have worked hard in this direction and much depends on the continued support they and their colleagues can give to this Association.

314. Several members of the staff of the Society for the Aid and Rehabilitation of Drug Addicts attended the Castle Peak Centre for in-service training in preparation for the opening of the Society's Treatment Centre at Shek Kwu Chau.

315. Occupational Therapy is essential for the well being of the patients and the benefits of an incentive scheme became apparent during the year. A system of small groups of about 6 patients each, working at selected occupations, has been found to be very satisfactory and productive. Apart from work therapy, a wide selection of recreational activities are made available, including football and badminton matches, swimming and walking parties and, indoors, table tennis and mahjong; there are also film shows twice weekly.

316. A number of research studies were undertaken during the year and are still continuing. These studies concerned the epidemiology of addiction based on socio-economic data, psychiatric investigation into the initiating factors giving rise to drug taking, an explanatory trial of

aversion treatment by giving, at the same time as the drug, continuous faradic electric shock, further work on the Nalline Test and, finally, radiological studies on lung changes occurring in drug smokers.

317. Table 35 below shows the numbers of male patients treated at the Centre during 1962.

TABLE 35

Patients registered for treatment	360
Patients admitted	122
Patients remaining from 1961	50
Patients discharged	120

(All patients remained in the Centre for 6 months)

#### Lai Chi Kok Hospital

318. This hospital has 481 beds which serve three categories of patients; 150 beds are allocated for infectious diseases, 72 for pulmonary tuberculosis, and the remaining 259 beds for convalescent patients from Kowloon and Queen Mary Hospitals.

319. Physiotherapy and occupational therapy units are maintained at the hospital, the former dealing mainly with the orthopaedic convalescent patients and children with poliomyelitis, while the latter deals with the long stay convalescent and tuberculosis cases.

320. Total admissions during 1962 numbered 7,953; of these 2,445 were cases of infectious disease, including tuberculosis. Of the remainder, 5,307 were from Kowloon Hospital and 201 from Queen Mary Hospital.

321. Five cases of cholera were confirmed out of 43 suspected cases admitted during the outbreak which occurred between August and October.

322. There were 874 patients admitted with diphtheria, most of whom were extremely ill when first seen as shown by the fact that 222 of them required immediate tracheotomy. The mortality from the disease, however, showed some decrease compared to the previous year.

323. Tetanus neonatorum, unfortunately, continued to be distressingly common and there were 55 deaths from this disease. Almost all had been delivered at home in the New Territories without adequate postnatal care.

324. Details of the infectious cases requiring admission to the Lai Chi Kok Hospital and the Sai Ying Pun Hospital are shown in Table 36.

#### Sai Ying Pun Infectious Diseases Hospital

325. The limited accommodation in this old hospital, which is part of the former Government Civil Hospital in the western district of Hong Kong Island, continued to be severely taxed during the year. With a nominal strength of 88 beds, there were seldom less than 100 patients accommodated, the resultant overcrowding making strict isolation and prevention of cross-infection a difficult problem.

326. The pattern of infectious disease in the patients admitted mainly followed that of the previous year and there was a further decrease in the number of cases of tuberculous meningitis seen. The case fatality rate for measles and diphtheria also showed a significant decrease although the children suffering from these diseases are nearly always admitted at a late stage and with severe complications. Bacillary dysentery was more evident during the year and admissions due to poliomyelitis were more than twice those of 1961; the latter disease has, however, shown a phenomenal drop in incidence since the oral vaccination campaign conducted early 1963.

327. Five cases of cholera were admitted to the special cholera annexe of the hospital during the outbreak in August and September and all responded well to treatment; 38 contacts of cholera cases were also admitted for observation during typhoon *Wanda* when it was impossible to reach the Quarantine Centre across the harbour.

328. Table 36 details the cases of infectious disease admitted to both Sai Ying Pun Hospital and Lai Chi Kok Hospital.

TABLE 36

ADMISSIONS TO INFECTIOUS DISEASE HOSPITALS—1962

	Cases Admitted	Deaths	Case Fatality Rate (per cent)
Diphtheria	1,245	95	7.63
Typhoid	416	5	1.20
Tetanus	179	70	39.11
Amoebic dysentery	105	3	2.86
Bacillary dysentery	591	6	1.02
Poliomyelitis	318	42	13.21
Tuberculosis meningitis	23	13	56.52
Measles	245	23	9.39

### *St. John Hospital*

329. Consisting of 100 beds and a general outpatient department, this Hospital serves the island of Cheung Chau and the neighbouring islands on the western sea-board. Specialist clinics for tuberculosis, paediatrics, medicine, dental, eye, social hygiene and skin diseases are also held at the hospital. Patients who require specialist medical or surgical treatment in hospital are transferred to Hong Kong Island.

330. There are 42 beds set aside for patients with pulmonary tuberculosis who need in-patient supervision. These beds are largely occupied by adolescents with open lesions who cannot be allowed to attend school until they are rendered sputum negative.

331. A complete renovation of kitchen facilities was carried out and a badly needed hot water supply system was installed in the hospital during the year.

### *Wan Chai Hospital*

332. This small 30-bed hospital, originally intended for the in-patient treatment of venereal disease amongst women and children, is now primarily an institution for the care of female patients with skin diseases and a busy dermatological out-patient department is also maintained.

333. Out-patient facilities are also provided for the treatment of women suffering from venereal disease and for the examination of known female contacts.

### *South Lantau Hospital*

334. This small hospital of 17 beds, two of which are now reserved for maternity cases, serves the workers on the Shek Pik Reservoir project (now nearing completion) and the villages on the southwest coast of Lantau Island. The Medical Officer-in-Charge is also responsible for the dispensary and maternity home at Mui Wo, and for sick prisoners and staff at Her Majesty's Prison at Chi Ma Wan; he also serves as the Health Officer for the area.

335. Outpatient clinic attendances have more than doubled since last year; the figures for 1962 were as follows:

Mui Wo Dispensary	...	...	...	...	26,416
South Lantau Hospital	...	...	...	...	11,640
Shek Pik First Aid Post	...	...	...	...	15,007
H.M. Prison Chi Ma Wan	...	...	...	...	21,390
Total	...	...	...	...	<u>74,453</u>

### *Prison Hospitals*

336. Four hospitals with a total of 186 beds are maintained within the prison compounds at Stanley Prison, Victoria Prison, Tai Lam Prison and Lai Chi Kok Female Prison.

337. H.M. Prison Hospital at Stanley for male prisoners is the largest of these hospitals and has 90 beds for all purposes; 1,042 patients were admitted for treatment during 1962. A large outpatient clinic attached to the hospital dealt with an average of 550 prisoners daily including those attending the specialist sessions for tuberculosis, venereal disease, leprosy, eye diseases and dentistry.

338. Selected blood donors amongst the prisoners gave a total of 575 donations of blood during the year in response to appeals from the Hong Kong Branch of the British Red Cross Society.

339. H.M. Prison, Tai Lam, houses convicted male drug addicts. The vigorous programme of treatment and rehabilitation which is carried out here has given very encouraging initial results though no accurate assessment of the relapse rate after discharge is as yet available.

340. H.M. Prison, Victoria, has a special Psychiatric Observation Unit for suspected cases of mental disease in prisoners. This unit, which admitted 173 such cases during 1962, is under the clinical supervision of the Senior Specialist in Psychiatry.

341. The female prison at Lai Chi Kok has a small hospital ward, including maternity beds, which is under the care of the Medical Superintendent of the Lai Chi Kok Hospital.

### GOVERNMENT ASSISTED HOSPITALS

342. Financial assistance mainly by means of an annual subvention is given by Government to eleven hospitals maintained by voluntary organizations.

343. Paragraphs 165 to 180 mention those institutions which are concerned solely with the care of tuberculosis patients.

### *The Tung Wah Group of Hospitals*

344. This group comprises three large hospitals and two infirmaries. Incorporated in 1870 by statute which is based on the charitable aims and objects of Chinese tradition, a Board of Directors is elected annually. Management of the hospitals and infirmaries is delegated by the Board to the Tung Wah Hospital Medical Committee which is under

the chairmanship of the Director of Medical and Health Services and is composed of the Chairman of the Board of Directors, the three Principal Directors of the Board, a prominent Chinese citizen appointed by His Excellency the Governor, a member from the Permanent Advisers to the Tung Wah Board, representatives from the Government Finance, Public Works and Medical Departments and the Medical Superintendents of the Hospitals. The Board of Directors raises large sums annually from donations, charity functions, public appeals and a flag-day. This money is devoted mainly to capital expenditure on hospitals, primary schools and welfare services for the poor. Government gave a subvention of \$13,799,169 in 1962-63 to meet the recurrent expenditure of the hospitals and infirmaries.

345. Each hospital provides general medical, surgical and obstetric facilities. In addition, wards containing an average of 250 to 350 beds are set aside in the hospitals and infirmaries for the accommodation of patients with tuberculosis. A Group Medical Superintendent and three Medical Superintendents are appointed by Government to the hospitals and Government Nursing Sisters are seconded to the Nurses Training school as Tutors. All training and other activities are conducted in Chinese. Consultant Services are given voluntarily by private medical practitioners and, in some instances, by Government Specialists.

346. Patients are admitted through large out-patient departments maintained at each of the three hospitals. A number of acute medical and surgical conditions are treated and there is also accommodation for patients with chronic disease requiring long periods of inpatient care. The infirmaries cater for many suffering from incurable or disabling diseases who cannot be cared for at home. The obstetric service is an extremely busy and important one and one third of the babies born in the Colony each year are delivered in the three Tung Wah Hospitals. The work done is detailed at Appendix II.

347. The major occupation of the Directors at present is the redevelopment of the Kwong Wah Hospital in Kowloon. The building is being done in five phases; the fourth phase, which was started early in 1962, was nearing completion at the end of the year under review and work had commenced on the fifth and final stage.

348. In addition to this major project, an extension to the Sandy Bay Infirmery, accommodating 180 patients, was opened in December, 1962; this provides a much-needed addition to the accommodation available for chronic and disabled patients. At the Tung Wah Hospital,

43 mentally-defective patients are now being cared for in a renovated block of the old Hospital; these wards were formally opened in February, 1963.

#### *The Alice Ho Miu Ling Nethersole Hospital*

349. This hospital now provides 300 beds for general medical, surgical and obstetric care and maintains a large outpatient department. The increase in beds was provided to meet the new requirements of the Hong Kong Nursing Board and the General Nursing Council of England and Wales in respect of a Nurses Training School.

350. Demolition of the old East Wing and Nurses Quarters was commenced during the year to make way for new buildings which will provide further ward accommodation, a nurses block and medical staff quarters.

#### *Pok Oi Hospital*

351. Situated on the outskirts of Yuen Long in the New Territories, the Pok Oi Hospital provides 118 beds for the treatment of medical and minor surgical illness that do not require specialist medical or surgical care. There are operating theatre, radiodiagnostic and laboratory facilities of a simple nature. It is managed by an Executive Committee consisting of six representatives of the statutory Board of Directors and six representatives of Government. The Board of Directors provides charitable services in the Chinese tradition and raises funds from voluntary sources for the capital and recurrent costs. These are augmented by Government subvention on a deficiency grant basis. A Government Medical and Health Officer is seconded to the Hospital as Medical Superintendent.

352. The foundation stone of a new out-patient department was laid by the Director of Medical and Health Services on the 30th March, 1963. The completion of this building will mark the first phase in a plan for the expansion of the out-patient and in-patient facilities of the hospital which is designed to meet the needs of the increasing population in that area.

#### *Hei Ling Chau Leprosarium*

353. Maintained with the aid of a substantial recurrent subvention from Government by the Mission to Lepers, Hong Kong Auxiliary, on an island six miles from Hong Kong, the Leprosarium contains accommodation for up to 540 leprosy patients. The Maxwell Memorial

Medical Centre provides fifty beds for the care of patients undergoing reconstructive surgery or suffering from intercurrent disease and a further 15 beds for male patients with tuberculosis. The construction of a Physiotherapy Unit and a ward for patients with tuberculosis, for which funds were raised by the Marianne Reichl Aid to Lepers Group, was completed in September. The opening ceremony was performed on the 3rd November, 1962 by Dr. N. FRASER, Medical Secretary of the Mission to Lepers, who was formerly the first Medical Superintendent of the Leprosarium. The Unit provides sufficient space and equipment for physiotherapy and occupational therapy. The ward of 4 beds is intended for women patients suffering from open tuberculosis as well as leprosy; however, in the absence of any such women patients this ward is at present used for men.

354. There is a close liaison with the Government Leprosy Clinics and all patients, the majority of whom are infectious, are admitted through these clinics. Most patients are treated with a combination of two drugs, particularly DDS, thiambutosine, sulphetrone and thiosemicarbasone. However, all modern drugs available are used in the most suitable combinations necessary to achieve the quickest possible cure and very detailed records continue to be maintained. Vadrine was employed in the treatment of patients resistant to other drugs but, like etisul, it was found to be very variable in its results.

355. During the year 284 surgical operations were performed of which 265 were to correct the deformities of leprosy. A new procedure was adopted for wasting of the thumb web and applied in 28 cases with promising results. The bone grafts used for the second stage of nasal reconstructions have proved satisfactory and show no sign of being absorbed.

356. All patients on the island are expected to work in accordance with their physical capacity and previous occupation; training is available in agriculture, cottage industries and in certain light industrial occupations. There is a primary school for child patients, the staff of which hold evening classes for adults. Social activities continue as in a normal community.

#### *Our Lady of Maryknoll Hospital*

357. This hospital was opened at the end of 1961 and is adjacent to a large resettlement estate area in Wong Tai Sin. The building of an additional wing to the hospital is now in the planning stage.

358. A re-arrangement of the wards has increased the accommodation slightly during the year and there are now 55 beds in general wards, 4 in private wards and 20 cots. The Hospital is staffed by the Maryknoll Sisters, assisted by locally-trained nurses and midwives. A large general outpatient department is also maintained which was attended by 26,316 patients during 1962.

#### *Sandy Bay Convalescent Home*

359. This Home is maintained by the Hong Kong Society for the Relief of Disabled Children and now has 108 beds as the result of an extension built during 1962. All beds are for children requiring long-term orthopaedic care, particularly for bone and joint tuberculosis, most of whom have previously undergone major surgical operations at the Queen Mary Hospital. A school teacher is provided for the children by the Hong Kong Branch of the British Red Cross Society.

#### *London Missionary Society Maternity Clinic, Sheung Shui*

360. This Maternity Clinic of 10 beds is conducted by a missionary Nursing Sister of the Society, assisted by locally appointed staff. Antenatal and maternal and child health sessions are also maintained at the clinic. The Sheung Shui Maternity Clinic Advisory Board, consisting of local residents, supports the work and the London Missionary Society also makes an annual contribution towards running costs. This is augmented by an annually recurrent subvention from Government funds.

#### OUTPATIENT SERVICES

361. Pressure on all outpatient clinics continued to increase throughout the year. The outpatient clinics maintained by Government recorded some 6,094,000 attendances by patients, of which some 2,166,000 were new cases.

362. New facilities which became available during the year included the three-storey Specialist Clinic on the Queen Elizabeth Hospital site which was donated by the Royal Hong Kong Jockey Club and opened in September 1962. The Anne Black Health Centre in North Point was opened in the same month by Lady BLACK, the wife of His Excellency the Governor; this clinic was built as a combined project between Government and Dr. TANG Shiu-kin and his friends who donated half the cost of construction. The Health Centre consists of an outpatient department, a maternal and child health centre, a maternity section of 8 beds and residential accommodation. In November 1962, a clinic was opened at Kai Tak Airport in the Terminal Building.