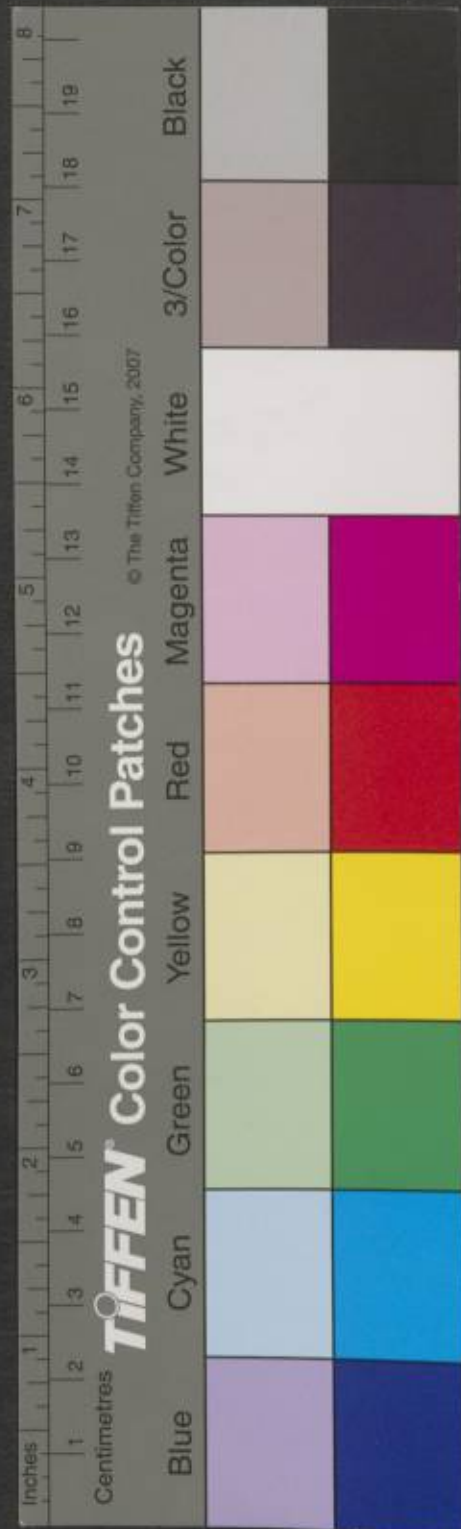


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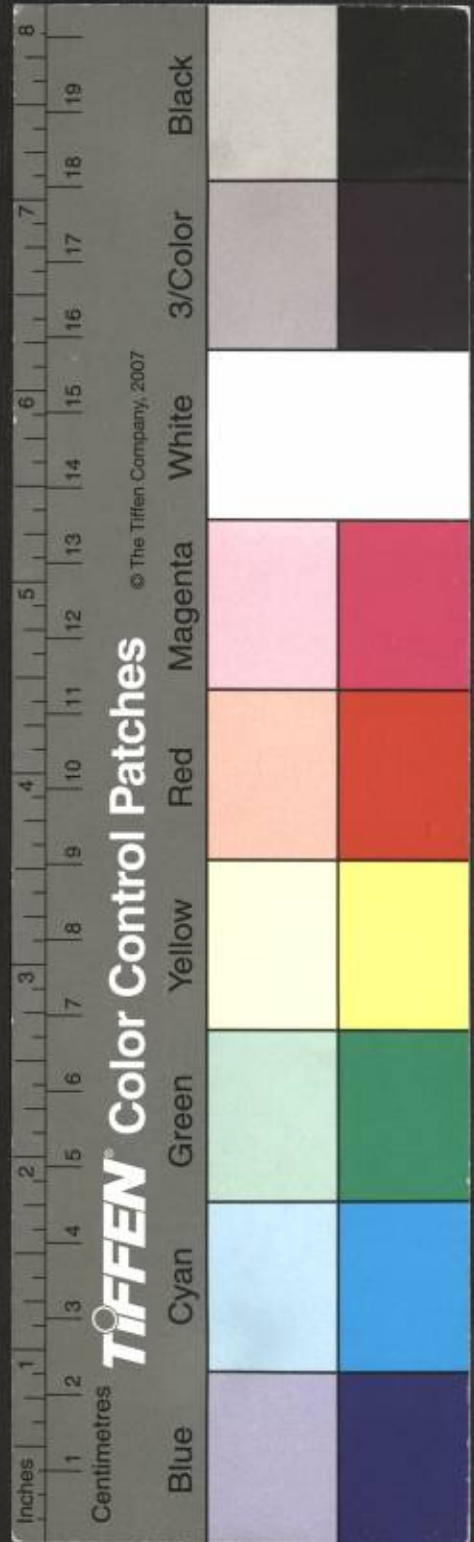
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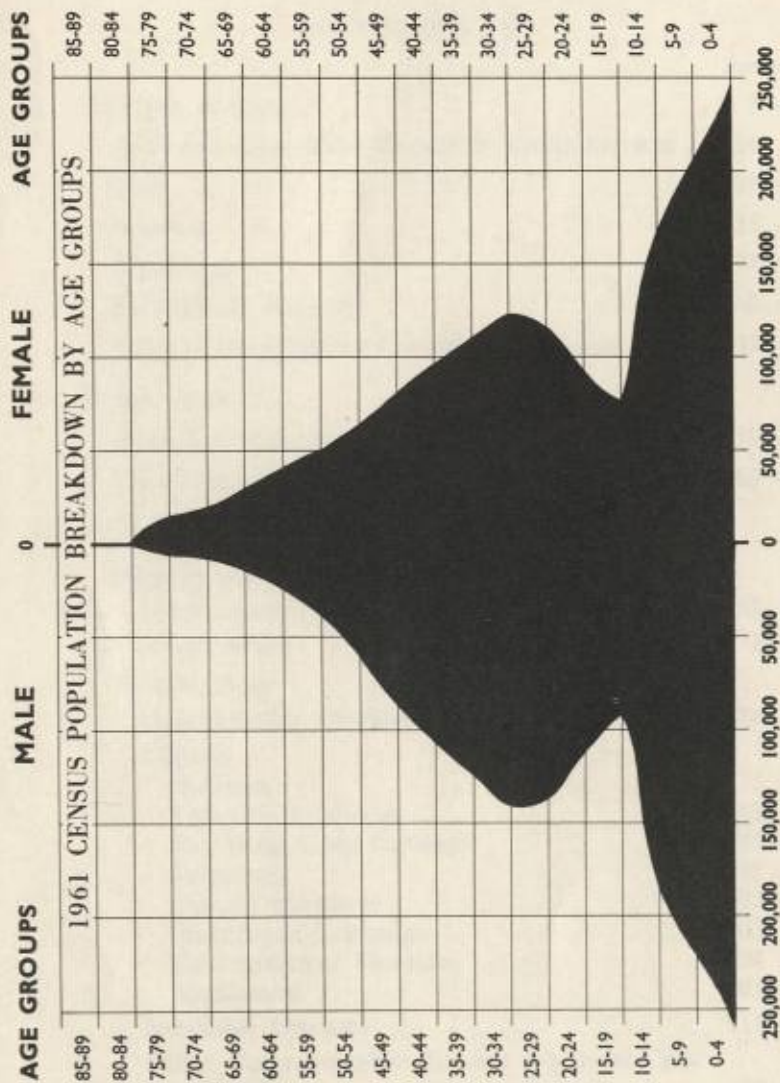
HONG KONG
ANNUAL DEPARTMENTAL REPORT
BY THE
DIRECTOR OF MEDICAL
AND HEALTH SERVICES
FOR THE
FINANCIAL YEAR 1961 - 62

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The challenge Hong Kong has to face in providing public services.

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I. GENERAL REVIEW

To the discerning visitor the inevitable impression taken away from Hong Kong is that of a vital and industrious community of great versatility living in the face of largely unpredictable economic trends. It is a young population of which 40.8% are under 15 years of age and 16% below the age of five. The low crude death rate of 5.9 per 1,000 and the relatively high birth rate of 34.2 per 1,000 with a low infant mortality rate of 37.7 per 1,000 all indicate that it is a healthy population. The general state of nutrition is good.

2. There are 14 census divisions with population densities of over 2,000 persons to the acre. Despite this density, the restricted water supply and the problems of environmental hygiene posed by pre-war tenement buildings and the aggregations of squatter and roof top dwellings, the standards of personal hygiene maintained are creditably high. With a restricted land area of 398½ square miles and a natural increase of over 3% per annum, population densities must remain high. However, the resettlement and low cost housing estates that have been developed to meet rehousing needs, while planned for average densities of 1,800 to the acre, have protected water supplies, modern sewerage and highly organized public cleansing facilities. Apart from the Government Resettlement programme which has re-housed 439,000 squatters, private enterprise has provided accommodation with modern services for 500,000 people during the past six years. This is a significant advance towards higher standards of community health.

3. As an international seaport and airport and the terminus of the Kowloon-Canton Railway, Hong Kong is necessarily vulnerable to the introduction of disease from outside. The total recorded movement in and out of the Colony during 1961 was 2,449,953 persons of which air traffic movement accounted for 458,428; passengers to and from the frontier station at Lo Wu numbered 868,298. The number of people coming in and going out of the Colony by small boats and junks is difficult to assess and it is here that quarantine safeguards can be most readily breached.

4. Besides being a centre for refugees who come in to make their home in Hong Kong, it is also a medical centre to which many come

from Mainland China for the treatment of tuberculosis and other chronic diseases as the opportunity offers and relatives or friends can be found who will provide temporary accommodation. Once in Hong Kong any individual can attend at Government or Government subsidized clinics or hospitals, which provide treatment free or at low cost, without investigation as to origin. It is significant that during March 1962, of persons attending the Government Chest Clinics for free treatment of active tuberculosis, 12½% had arrived in the Colony within six months. During the year 1961, 4,987 persons being treated for tuberculosis defaulted from treatment; many could not be traced and 2% of these were described as having 'returned to village'. This influx for treatment is not a new phenomenon, but it is one that is now being more clearly defined and it illustrates a part of a very considerable additional burden on the already heavily committed curative services provided for the 3,177,700 residents of Hong Kong.

5. The services developed to control tuberculosis, which is the major endemic disease problem in Hong Kong, are now being subjected to a fresh and impartial assessment of the results of the work of the past ten years. This review is being carried out, at the request of Government, by the Consultant in Tuberculosis to the Secretary of State for the Colonies, Professor F. R. G. HEAF, C.M.G., and by Dr. Wallace FOX of the Medical Research Council, who was formerly in charge of the Tuberculosis Research Project in Madras. Professor HEAF visited Hong Kong first in 1952 when he reported on the situation existing at that time and made recommendations on the developments then required.

6. Professor HEAF and Dr. FOX have been asked to submit a report covering all aspects of the tuberculosis problem, with particular emphasis on the methods of investigation and research of a practical nature which will facilitate and guide the long term planning of the further measures of control necessary for the elimination of tuberculosis as a community health problem. Dr. Wallace FOX spent five weeks in the Colony in February and March 1962 and Professor HEAF's visit took place during April 1962.

7. The pressure on hospital beds has not eased, particularly in Kowloon. Some indication of the demand is given by the work of the Casualty Department of the Kowloon Hospital which attended to an average of 9.8 casualties every hour throughout the year. Traffic accidents, industrial accidents and accidents in the home constitute the heaviest load. Some additions have been made to the Kowloon Hospital

where 52 more beds were put into use for children. At the same time a redistribution of tuberculosis cases to the Grantham Hospital from the Queen Mary and Lai Chi Kok Hospitals has freed more acute and convalescent beds for paediatric cases. Meanwhile, work on the two major Hospital projects of the Queen Elizabeth and New Kwong Wah Hospitals is going ahead rapidly. It is expected that the Queen Elizabeth Hospital will be opened in the middle of 1963 and that the New Kwong Wah Hospital will also be completed before the end of that year.

8. Inevitably, there is an increasing number of physically handicapped in the younger age groups as a result of severe trauma on the roads or at work. More and more emphasis is accordingly being placed on rehabilitation services which will fit the disabled to return to full employment either in the accustomed field or in a new one more suited to the altered potential. The development of a Government Surgical Appliance Centre where artificial limbs and other prostheses are made locally and fitted in conjunction with physiotherapy is now beginning to make a significant contribution in this field. Voluntary agencies are also active in rehabilitation and the Tuberculosis Rehabilitation Service of the Lutheran World Service has made a modest but very promising start. The Kwun Tong Rehabilitation Centre sponsored by the Hong Kong Society for Rehabilitation will be completed in 1962 where special emphasis will be laid on the recovery and return to work of the victims of severe industrial injuries.

9. Progress has also been made in the registration, assessment and training of the blind and the deaf, again by voluntary agencies. The prevention of blindness and the early detection of visual defects has made considerable progress, while the addition of an Audiology Technician to the staff has marked a significant advance in the assessment of hearing defects.

10. The Centre for the Voluntary treatment of Drug Addicts at the Castle Peak Hospital is now well established. Designed as a pilot scheme to gain experience of the pattern of addiction in Hong Kong and the most fruitful regimen of rehabilitation, much useful information has been obtained during this first year of its work. In the meantime, the Hong Kong Society for the Aid and Rehabilitation of Drug Addicts is going ahead, in close co-operation with the Government, with its plans for a Centre at Shek Kwu Chau, an uninhabited island adjacent to Cheung Chau, where accommodation for 240 addicts requesting treatment on a voluntary basis will be ready during 1962. The intention is to send

voluntary patients from the Government Drug Addiction Clinic to the Castle Peak Hospital for treatment during the period of withdrawal from the drug, and thereafter to transfer them to Shek Kwu Chau for a course of rehabilitation and training which will fit them to return to work. Re-employment and follow-up activities will be a combined effort shared between the Government Departments and Voluntary Agencies concerned.

11. The inauguration of a 'flying doctor' service to remote villages in the New Territories in March 1961 has proved to be very popular and worthwhile. Using helicopters of the Hong Kong Auxiliary Air Force, visits are paid weekly to 7 centres where minor ailments are treated, cases of emergency illness evacuated to hospital and much health education given. In remote rural areas a curative service is always the spear head of health education in the prevention of disease either through immunization or the practice of simple hygiene based on some elementary knowledge of disease processes and how they can be avoided.

12. The most significant event of the year was the re-appearance of cholera during August 1961 after an absence of 15 years, presumably introduced by the migrant small boat population. This followed an outbreak of paracholera El Tor in the Kwangtung Province of China and the subsequent occurrence of cases in Macau. The infection in Hong Kong was proved to be due to the El Tor type of vibrio cholerae of the Ogawa group and resulted in a total of 77 confirmed clinical cases. In addition, investigation of 731 contacts of clinical cases isolated at the emergency Quarantine Centre resulted in another 53 confirmed infections in contact carriers without symptoms. There was a total of 15 deaths, of which seven occurred before admission to hospital.

13. The first two cases were reported on the 16th August and the last one on the 8th of November. However, the majority of cases occurred during the first 12 days when 52 patients suffering from clinical cholera were admitted to hospital; subsequently 24 cases occurred during the next 26 days and the emergency phase was over by the 23rd September. Thereafter one isolated case occurred on the 8th of November, coming to light only because all cases of gastro-enteritis were being investigated for vibrio cholerae infections as a routine.

14. The public reaction to the situation was most heartening. There was no hint of panic and full co-operation in the emergency measures applied to control the outbreak was evident from the start. There was an unprecedented demand for inoculation and, between the 14th August

when precautionary measures were first applied and the 25th August, 1,855,830 persons were given vaccine. By the end of the inoculation campaign sample surveys indicated that over 75% of the total population had been immunized.

15. Strict and comprehensive measures of quarantine and environmental hygiene were applied throughout the Colony and were accepted readily. The cardinal feature was the isolation, in the emergency Quarantine Centre at the Chatham Road Camp, of all immediate contacts of the confirmed clinical cases. All confirmed contact carriers were further isolated in another section of the Centre and given prophylactic treatment with antibiotics, to which the vibrio cholerae isolated were known to be susceptible, until three negative rectal swabs in succession had been obtained. These particular quarantine measures are believed to have had a significant influence in preventing an outbreak of epidemic proportions with many deaths. In conjunction with the early treatment in hospital of clinical cases, protection of the water supplies and strict control of markets and food hawkers there seems to be no doubt that the initial widespread dissemination of vibrio cholerae, indicated by the sporadic appearance of clinical cases, was contained most effectively by this isolation of all immediate contacts of those suffering from overt cholera.

16. The high degree of public co-operation is underlined by the fact that there was no concealment of cholera cases or deaths. Memories of cholera in the past and knowledge of what had happened or what was happening to relatives in neighbouring China must have had no small influence on this favourable reaction of those most vulnerable to cholera—the boat people, the waterside communities and the grossly overcrowded tenement dwellers.

17. During February and March 1962 a further cholera immunization campaign was launched in anticipation of a possible recurrence of cholera in the summer of 1962. The results were encouraging amongst the groups most at risk, where an average of over 80% of cover was achieved. The response in the urban areas was not so good but the indications are that, over-all, some 53% of the total population had received cholera vaccine by the end of April.

18. Routine laboratory investigations of all cases of gastroenteritis, of water supplies, of night-soil and of fruit and other potential vehicles of infection have been continued throughout the year with entirely negative results since November 1961.

19. Further comment is made on cholera in paragraphs 75 to 110 of this report and the outbreak has been fully recorded in the Government White Paper on the Outbreak of Cholera in Hong Kong tabled in the Legislative Council on 13th December, 1961.

20. The Medical Advisory Board which was established in 1946 to advise on health problems arising after the re-occupation, was reconstituted during the year with wider terms of reference. Now representative of all major organizations concerned with medical and health work in the Colony, its function is to advise His Excellency the Governor on all problems referred to the Board which concern the health of the people of Hong Kong.

21. The proposal to establish a School Medical Service, utilizing the services of private medical practitioners, has been welcomed by the Chinese Medical Association and over 200 of its members have agreed provisionally to participate in the Service. A Working Party consisting of unofficial members of Councils, of representatives of Government Departments, the Chinese Medical Association and private Schools is being constituted to make recommendations to Government on the organization and working of this Service.

22. Reference was made in the last Annual Report to the outline development plan for the Medical and Health Services, covering a period of fifteen years. Following receipt of the corrected census returns, the 1960 to 1965 segment of the plan, already approved in principle, was reviewed and the provisional programme for 1966 to 1972 considered in detail in relation to population densities and their projected distribution. A comprehensive plan has now been compiled and is being examined by the Government.

23. A happy and memorable event was the visit by Her Royal Highness The Princess Alexandra of Kent to the Queen Elizabeth Hospital School of Nursing in November. A guard of honour was formed by nurses and student nurses from the Government Hospitals and the members of the Nursing Board and the Midwives Board were presented to Her Royal Highness. At the reception that followed, Her Royal Highness talked to leading members of the nursing profession and to a number of student nurses and student midwives from the general nurses and midwives training schools in the Colony.

ADMINISTRATION OF THE MEDICAL AND HEALTH SERVICES

24. 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

25. 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 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 Boards dealing with the registration and disciplinary control of Medical Practitioners, Dentists, Pharmacists, Nurses and Midwives.

26. 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 health matters. The Principal Matron is the Chief Nursing Officer and administers the Nursing Division which provides nursing, midwifery, health visitor and health sister services.

27. 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.

28. 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.

29. 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.

30. 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.

31. 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.

32. 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.

33. 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.

34. Appendix 1 shows the establishment at 31st March, 1962.

FINANCE

35. The actual expenditure of the Medical and Health Department for the financial year ended 31st March, 1962, was \$64,064,336 to which should be added a further \$25,009,269 disbursed in the form of subventions. Capital expenditure on medical projects under the Public Works Non-Recurrent head totalled \$9,836,801. These amounts represent 10.38% of the Colony's total expenditure during the year. This does not include expenditure on environmental sanitation by the Urban Services Department and the New Territories Administration.

36. A Statement of Expenditure for the five years from 1957-58 to 1961-62 is shown at Appendix 3.

37. The total revenue collected from all sources by the Department amounted to \$4,859,444.

38. The largest subvention was made to the Tung Wah Group of Hospitals which received \$12,495,539. In addition, a further capital grant of \$4,922,184 was made towards the cost of Phase IV of the rebuilding of the Kwong Wah Hospital. Other large subventions were \$1,060,000 to the Alice Ho Miu Ling Nethersole Hospital, \$2,930,736 to the Grantham Hospital, \$1,000,000 to the Hong Kong Anti-Tuberculosis Association, \$740,000 to the Mission to Lepers, Hong Kong Auxiliary and \$450,000 to the Pok Oi Hospital.

LEGISLATION

39. The following legislation dealing with medical and health matters was enacted during the year 1961-62. Mention is made of the purpose of the more important ordinances in the body of this report.

Ordinances:

- (i) Nurses Registration Ordinance, 1961.
- (ii) Dangerous Drugs (Amendment and Validation of Regulations) Ordinance, 1961.
- (iii) Pharmacy and Poisons (Amendment) Ordinance, 1961.
- (iv) Mental Health (Amendment) Ordinance, 1961.
- (v) Dangerous Drugs (Amendment) Ordinance, 1962.
- (vi) Quarantine and Prevention of Disease (Amendment) Ordinance, 1962.

Rules and Regulations:

- (a) Dangerous Drugs (Amendment of Schedule) Order, 1961, (G.N.A. 61/61).

- (b) Penicillin (and other Substances) (Amendment) Regulations, 1961, (G.N.A. 69/61).
- (c) Nurses (Registration and Disciplinary Procedure) Regulations, 1961, (G.N.A. 75/61).
- (d) Nurses Rewards and Fines Fund—Legislative Council Resolution, 1961, (G.N.A. 77/61).
- (e) Poisons (Amendment) (No. 5) Regulations, 1960, (G.N.A. 78/61).
- (f) Poisons List (Amendment) (No. 5) Regulations, 1960, (G.N.A. 79/61).
- (g) Poisons (Amendment) Regulations, 1961, (G.N.A. 80/61).
- (h) Poisons List (Amendment) Regulations, 1961, (G.N.A. 81/61).
- (i) Poisons (Amendment) (No. 2) Regulations, 1961, (G.N.A. 82/61).
- (j) Quarantine and Prevention of Disease (Scale of Charges) (Amendment) Regulations, 1961, (G.N.A. 101/61).
- (k) Midwives (Registration and Disciplinary Procedure) (Amendment) Regulations, 1961, (G.N.A. 113/61).
- (l) Prevention of the Spread of Infectious Disease (Amendment) Regulations, 1961, (G.N.A. 133/61).
- (m) Dangerous Drugs (Amendment of First Schedule) (No. 2) Order, 1961, (G.N.A. 141/61).
- (n) Poisons (Amendment) (No. 3) Regulations, 1961, (G.N.A. 147/61).
- (o) Poisons (Amendment) (No. 4) Regulations, 1961, (G.N.A. 148/61).
- (p) Poisons List (Amendment) (No. 2) Regulations, 1961, (G.N.A. 149/61).
- (q) Poisons List (Amendment) (No. 3) Regulations, 1961, (G.N.A. 150/61).
- (r) Mental Health Regulations, 1962, (G.N.A. 3/62).
- (s) Medical Practitioners (Registration and Disciplinary Procedure) (Amendment) Regulations, 1962, (G.N.A. 20/62).

PROFESSIONAL REGISTERS

40. 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.

41. At the 31st March, 1962, the numbers of persons on the statutory registers were as follows:

Register of Medical Practitioners	...	...	...	...	1,062
Register of Dentists	...	...	...	...	402
Register of Pharmacists	...	...	...	...	102
Register of Nurses (Female)	...	...	...	...	1,943
Register of Nurses (Male)	...	...	...	...	114
Register of Midwives	...	...	...	...	1,896

WORK OF THE STATUTORY COUNCILS AND BOARDS

Medical Council

42. There were seven ordinary meetings of the Council and three meetings to inquire into disciplinary charges. The Council's Warning Notice to Medical Practitioners was revised during the year and a number of supplementary notices issued during the past 5 years were incorporated into the revised Notice which at the end of the year was in the hands of the printers.

43. The Preliminary Investigation Committee met five times to consider charges of advertising and two cases were referred to the Medical Council for inquiry. The first inquiry involved two meetings and resulted in the defendant being found guilty and reprimanded. The second inquiry is down for hearing in April, 1962.

44. During the year there were 130 applications accepted for full registration and 32 applications for provisional registration. There were 20 names erased from the Register as a result of death, departure from Hong Kong or failure to notify changes of address.

Dental Council

45. The Council met seven times during the year and the Preliminary Investigation Committee met twice to consider disciplinary charges, neither of which was referred to the Council for an inquiry.

46. There were seventeen applications for registration, of which eleven were accepted without examination. One applicant was required to sit the Council's examinations which he passed, being then registered. Five applications were rejected.

Pharmacy Board

47. The Board met four times for the transaction of routine business. There were fifteen applications for registration of which two were accepted without examination; four applicants were accepted after passing the Board's examinations and nine were required to undergo further practical training in the Colony before being allowed to enter for the examinations.

48. Following representations made by the Board, Government agreed to the provision of a limited number of scholarships for the study of pharmacy in Australia. One such scholarship was awarded during the year.

Nursing Board

49. The Nurses Registration Ordinance, 1961, and the Nurses (Registration and Disciplinary Procedure) Regulations, 1961, were enacted in July. This has brought up to date the law governing the training, examination and registration of nurses and has made comprehensive provision for disciplinary procedures in line with that for doctors, dentists and midwives.

50. There were four meetings of the Nursing Board, the main business conducted being in connexion with examinations in general nursing and psychiatric nursing. Examinations were held in June and December with the following results:

	Entered	Passed
<i>General Nursing</i>		
Preliminary Examinations	433	282
Final Examination	233	158
<i>Psychiatric Nursing</i>		
Preliminary Examinations	14	12

51. There were 200 applicants for registration as General Nurses of whom 177 were accepted; 162 of these nurses were from the approved Training Schools in Hong Kong and a further 15 nurses trained outside the Colony were accepted without examination. Of the remaining applicants 9 were required to sit the Final Examinations, 8 were advised to take a full year's course of training at an approved Training School and 6 were required to undergo further practical training before entering for the final examinations. Six applications for re-registration were approved.

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

Midwives Board

53. This Board also meets quarterly and examinations are held in April, July, October and January. A total of 163 candidates entered for the Boards examination of whom 155 passed.

54. There were 157 applications for registration and 155 were accepted; 152 of the applicants had completed their training in Hong Kong. Two applications for restoration to the Register were approved.

55. The Preliminary Investigation Committee met on one occasion but found no cause for a disciplinary inquiry.

Radiation Board

56. There were three meetings during the year, the main business being consideration of the draft Radiation (Control of Radioactive Substances) Regulations. These Regulations, which are complementary to the draft Radiation (Control of Irradiating Apparatus) Regulations, are designed to replace existing regulations (which deal only with industrial undertakings) and to extend control to all undertakings which manufacture, store or handle radioactive substances.

57. These two sets of Regulations, taken together, will cover the field of control considered necessary at the present time in relation to radiation hazards.

Medical Advisory Board

58. This is a non-Statutory Board appointed by His Excellency the Governor. Reconstituted on the 1st July, 1961, its terms of reference are 'To advise the Governor on any matters of medical and health policy referred to the Board by the Director of Medical and Health Services'. There were three meetings during the year at which the Medical and Health Services Development Plan covering the period 1961 to 1972 was considered in detail.

II. PUBLIC HEALTH

GENERAL COMMENTS

59. For the first time in 15 years Hong Kong was declared a cholera infected area on the 16th August, 1961. Despite the overcrowding, limited water supplies, inadequate housing and lack of modern sanitation in large parts of the urban area, the attack rate was very low and the outbreak was quickly contained.

60. Otherwise the general level of health has been well maintained and although there was an overall rise in the number of notifications of infectious diseases, this was largely due to an epidemic of measles during the first quarter of the year. There was a small increase in notifications of chickenpox, poliomyelitis, bacillary dysentery and tuberculosis. The morbidity from diphtheria continued to decline.

61. Measles was responsible for a small increase in the total of deaths from infectious diseases while the number of deaths from the diseases of later life continued to rise. The increase in morbidity and mortality from accidents of all kinds continues unabated.

62. The notification of infectious diseases is compulsory and a small fee is paid by Government for each notification. Nevertheless only a fraction of the infectious diseases seen outside the Government Hospitals and Clinics is notified, resulting in a gross distortion of the epidemiological data and making contact tracing and control measures difficult. This is particularly so for tuberculosis and further comment is made later on this aspect.

VITAL STATISTICS

63. 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 received by cemeteries and crematoria are recorded. Table 1 shows the annual returns for births and deaths during the past five years period.

TABLE 1
BIRTHS AND DEATHS 1957-61

Year	Estimated Mid-Year Population	Total Live Births	Crude Live Birth Rate (per 1,000 Population)	Still Birth Recorded	Total Deaths	Crude Death Rate (per 1,000 Population)
1957 ...	2,583,000	97,834	37.9	1,245	19,365	7.5
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

64. After reaching a peak in 1960 the total of live births and the crude birth rate showed a slight decline in 1961; there was a natural increase of 89,988 persons during the year. The age structure of the population is reflected by the low crude death rate, the continuing decline of which can be attributed largely at this time to the concomitant fall in infant mortality.

65. The mortality pattern continues to show the same trends observed during previous years, namely, decreasing mortality from the communicable diseases and increases in deaths from diseases of later life, particularly neoplasms and cerebro-vascular disorders. An analysis of mortality for the years 1957-61 can be found in Appendix 4.

66. Table 2 shows the recent trends in infantile and maternal mortality. Infant and maternal mortality rates continued to fall but the neonatal mortality rate remained more or less stationary.

67. An analysis of maternal mortality over the past 5 years is shown in Table 3. A marked reduction in deaths from ectopic gestations and toxæmias complicating pregnancy was noted.

TABLE 2
INFANTILE AND MATERNAL MORTALITY 1957-61

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)
1957 ...	55.6	23.8	1.06
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

TABLE 3
ANALYSIS OF MATERNAL MORTALITY 1957-61
(per 1,000 total births)

Year	Sepsis (excluding Septic Abortions)	Toxæmias	Haemorrhages	Abortions	Ectopic Pregnancies	Others
1957 ..	.020	.373	.334	.040	.060	.132
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

III. WORK OF THE HEALTH DIVISION

HYGIENE AND SANITATION

Urban Areas

68. 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 serves as Vice-Chairman of the Urban Council and is the co-ordinating

link between the two Departments for the control of communicable disease through improved 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.

69. 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 local 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 the routine house inspections and the 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 fully trained Health Visitors, the Health Officers maintain investigations into the sources of known cases of diphtheria, tetanus neonatorum, poliomyelitis, typhoid and certain other intestinal diseases.

70. These activities are closely co-ordinated with the activities of teams of inoculators of the Epidemiological Section of the Medical and Health Department which work under the immediate direction of area Health Officers and offer prophylactic immunization against smallpox, diphtheria and enteric fever.

Rural Areas

71. 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 medical services and the Principal Medical Officer of Health, New Territories, advises the respective authorities on all health matters affecting the area.

72. The Medical and Health Department is responsible for environmental health in rural areas. The main emphasis is on health education stemming from the curative centres and designed to stimulate self-help through village schemes of environmental sanitation.

73. Active measures continue to control the illegal slaughtering of animals for food and the sale of unwholesome meat, but considerable difficulties are encountered in detecting offenders. Insanitary conditions in workmen's settlements around new development projects continue to be a health problem.

EPIDEMIOLOGY

Quarantinable Diseases

74. Prior to the outbreak of cholera in 1961, there had been no case of quarantinable disease notified in the Colony since 1952. On that occasion there were three cases of smallpox, two of which were imported.

CHOLERA

Historical

75. Cholera was first recorded in Hong Kong in 1858. Records are incomplete but it was reported that 'as many as fourteen hundred were destroyed by the disease' in the fishing village of Aberdeen. Thereafter, cases were reported annually between 1862 and 1866 followed by a break of 19 years. Cases then appeared in 1885, 1888 and 1891 after which cases again occurred annually during the years 1894 to 1897. Four years later, in 1901 there was another five years of annual occurrence followed by a 3 years' interval. However, from 1908 to 1916 cholera again occurred each year; during 1913, in August, fifty cases occurred 'almost all of which were on board fishing and cargo boats belonging to the village of Shaukiwan'. Between 1919 and 1927, again a small number of cases was recorded each year with the exception of 1924.

76. Towards the end of April 1932, an epidemic of cholera started in Shanghai and spread throughout Southern China when it was estimated that 100,000 cases occurred with a fatality rate of some 50%. A total of 241 cases with 156 deaths was recorded in Hong Kong where two infectious disease hospitals were staffed and equipped to deal with the emergency.

77. The next episode was in August 1937 when the disease 'became epidemic with almost startling suddenness and nearly 1,000 cases were found, many refugees probably having brought the infection with them'. The measures taken included inspection and examination of all arrivals,

isolation and treatment of the sick, legislation to minimize infection of food, intensive house to house inspections, disinfection of infected dwellings and mass inoculation.

78. The outbreak continued on into 1938 and 'was aggravated by the steady stream of refugees into the Colony. Many more males than females were affected by the disease'. According to the official reports, there was a total of 2,227 cases resulting in 1,445 deaths. However, Wilkinson (1943) has recorded this outbreak in some detail and according to his paper, the outbreak lasted until 1940. There are reports that the disease thereafter appeared sporadically during the first twelve months of the Japanese occupation.

TABLE 4
CHOLERA IN HONG KONG (WILKINSON 1943)

	1937	1938	1939	1940
Cases	1,690	547	708	647
Deaths	1,082	363	448	331

79. In 1940, a carrier rate of 20% was found amongst certain sections of the community just before the annual outbreak which started in June of that year and which reached epidemic proportions in July and August, waning during September.

80. During 1946, the first case of cholera was reported on the 8th January and was definitely established as an imported case from Canton. A further 6 cases were notified during March, of which four were imported; a further 29 were notified in April of which 25 were imported. Special anti-epidemic measures were established on the 1st April in the face of a steady monthly influx of an estimated 100,000 returning residents and refugees. Despite rigorous measures of environmental sanitation and mass inoculation with cholera vaccine, epidemic proportions were reached in June when, during the week ending the 15th June, 112 cases occurred. Altogether there were 281 cases during June with 137 deaths. The last case of cholera was reported on 26th September, 1946, and thereafter no further case of cholera was confirmed in Hong Kong until the 16th August, 1961.

TABLE 5
CHOLERA IN HONG KONG 1946

	Cases	Local	Imported	Bodies Dumped	Deaths	Inoculations Performed	Estimated Population
Total	514	374	52	88	239	371,608	1,550,000

81. There are no records of the detailed bacteriological findings prior to 1961 now available but it was assumed that all these infections were due to cholera Asiatica, predominantly of the Ogawa group. Haemolysis tests were not applied in the past and all the epidemics recorded presented the clinical picture of classical cholera.

The 1961 Outbreak

82. The infections confirmed during the Hong Kong outbreak in 1961 were proved, with one exception, to be due to the El Tor type of the Ogawa group of vibrio cholerae; there was only one infection of the Inaba group. Therefore, the recent history of paracholera or 'enteritis choleraformis El Tor' in this region of Southeast Asia is of some interest.

83. Paracholera has occurred periodically in epidemic form in Indonesia over the past 25 years. Neighbouring countries had remained free of the infection until the middle of 1960 when El Tor cholera vibrios were isolated in Bangkok towards the end of an outbreak of cholera Asiatica. At this time the El Tor isolates were cultured from a few patients suffering from mild diarrhoeal conditions and from samples of food and water. In September, 1960, an epidemic of paracholera El Tor occurred in Northeast Thailand.

84. Meantime, an epidemic which started on the 5th January, 1960 in Macassar spread throughout the whole of Indonesia, affecting Java in 1961. The infection appeared in Sarawak in July, 1961, and concurrently paracholera was occurring in the Kwangtung Province of the Chinese Peoples Republic. Macau reported its first confirmed case on the 14th August, 1961, and the first two cases were confirmed in Hong Kong on the 16th August. On the 22nd September, 1961, the first case in the Republic of the Philippines occurred in Manila; in January, 1962, North Borneo was, in turn, infected.

The Hong Kong Outbreak

85. During the first week in August, international press agencies carried reports of an epidemic of cholera occurring in the Kwangtung Province of China. At the same time, travellers entering Hong Kong by railway at Lo Wu presented anti-epidemic certificates of inoculation, against the 'four diseases', with T.A.B.—cholera vaccine. There were stories of a cholera-like disease affecting many villages in the rural areas of the province and causing many deaths. On the 10th of August, Reuter reported cholera in Macau, but this was not confirmed by the Macau Health Authorities. However, in view of the strength of the

rumours it was decided to take precautionary measures in Hong Kong and over the ensuing week-end the production of additional supplies of cholera vaccine was started, working on a shift basis. Cholera inoculation centres were designated, to open on Monday the 14th August, hospital and other staff most at risk were inoculated, and plans made to open cholera treatment centres and to intensify all necessary measures of environmental sanitation.

86. On Monday, the 14th August, a case of cholera was confirmed in Macau and Hong Kong imposed quarantine restrictions on Macau and the Kwangtung Province of China. Inoculation Centres were opened up on that day, the chlorination of unprotected well water supplies started in the urban areas, food inspections intensified, treatment centres prepared and a quarantine centre designated. Through the radio and the press the public was informed of the preparations made, the measures being taken and co-operation sought regarding the inoculation campaign and the practice of hygiene in the home.

87. Two suspected cases of cholera were reported on the 16th of August, one a gravely ill child with typical symptoms of cholera who was brought into a hospital in the New Territories from an isolated village on the shores of Deep Bay. The other was an elderly woman brought in dead to the Kowloon Public Mortuary from a junk anchored off Cheung Sha Wan. Bacteriological confirmation of the presence of vibrio cholerae of the Ogawa group was available by mid-day on August 17th and Hong Kong declared itself infected with cholera and put into full operation the plans to deal with an epidemic.

88. A detailed report is given in the White Paper on the Outbreak of Cholera in Hong Kong which was laid before Legislative Council on the 13th December, 1961. (White Paper, December 1961). Therefore this report will deal mainly with the epidemiological features considered to be of interest.

89. Epidemiological action was based on the fact that cholera vibrios of the Ogawa group had again appeared in Hong Kong after an absence of 15 years. Early on, it was suspected that these vibrios were of the El Tor type and the haemolysis tests in the laboratory, although in conclusive and not clear cut, supported this. However, 'this differentiation is of no importance as far as the treatment of patients and the control of the outbreak is concerned'. (Pollitzer 1959). The densely overcrowded foreshores, the aggregations of squatter and roof top dwellings and the inadequately sanitized old tenement areas in the

urban areas all presented a very grave risk of an explosive epidemic. Accordingly, the disease was notified to World Health Organization as cholera and appropriate action taken.

90. The outbreak lasted until the 23rd of September when the last but one confirmed case was admitted to hospital. There was then an interval of just over six weeks when one further confirmed infection came to light on routine investigation of a case of moderately severe gastro-enteritis admitted to hospital on the 8th of November. Since that time, routine sub-culture of all specimens sent to the laboratory from cases of gastro-enteritis has been continued, so far with entirely negative findings.

91. The total of proved vibrio cholerae infections was 130 of which 70 were admitted to hospital with clinical symptoms and a further 7 were brought in dead to the Public Mortuaries. The other 53 proved infections, all in persons without symptoms, were found amongst the 731 contacts of clinical cases who were isolated at the Chatham Road Quarantine Centre. Of the 70 patients treated in hospital 8 died, making a total of 15 deaths during the outbreak.

92. All of the clinical cases encountered were sporadic, were in persons of the Chinese race, and none of these clinical cases could be traced to either a previous clinical case, a known carrier or a clearly defined common source of infection. The contact carriers were all directly related to the respective clinical cases, being either members of the family or common habitation dwellers. The highest attack rate was in the boat people which accounted for 30% of the proved infections in a group which constitutes only 4.42% of the total population. The contact carrier rate was 25% amongst the boat people but only 3% amongst those living on land. This is not surprising as the families living in sampans and junks use the boats as permanent dwellings, are of a low socio-economic group and live under very simple and primitive conditions.

93. The greatest number of clinical cases admitted on any one day between the 16th August and the 23rd September was eight, with fifty-two cases occurring during the first twelve days. From the 28th August onwards, there was a gradual decrease, 19 cases occurring over the next twelve days and only five between the 10th and the 23rd of September. Thirty-two cases were notified in Kowloon, 24 in the New Territories and 20 on Hong Kong Island.

94. Of the clinical cases 35% of those treated on Hong Kong Island presented symptoms and signs indistinguishable from classical cholera;

in Kowloon only 10% presented this picture. Of the 8 cases that died in hospital, two were drug addicts in very poor physical condition, a third was an old lady of 79 years of age and a fourth a man of 27 years suffering from a ruptured pyelo-nephritis and peritonitis. The other four deaths were in adults, all of whom were over 60 years of age. The seven persons brought in dead to the Mortuaries had all been ill for less than 36 hours, the majority dying within 6 to 12 hours of the onset of symptoms. Three of these deaths occurred in children aged five, seven and twelve respectively.

Treatment

95. The treatment of cases admitted to hospital was by the rapid replacement of fluid and electrolyte loss. Patients with clinical cholera coming to clinics in the New Territories were started at once on re-hydration with normal saline which was maintained during the journey by launch or ambulance to the relevant treatment centres maintained at the Lai Chi Kok Hospital, the old Victoria Mental Hospital and the Cheung Chau Hospital. Once admitted, patients were given rapid intravenous normal saline infusions—up to 2,000 ml. were given in one case between the time seen at a clinic and $\frac{3}{4}$ hour after admission to hospital. When more than 2 litres of saline had been given, 0.5 gm. of potassium chloride was given in 500 ml. of normal saline and after each 4 litres of saline, 500 ml. of 2% sodium carbonate was administered. After re-hydration had been achieved intravenous normal saline was given ml. for ml. of fluid lost through vomitus, stool and urine until convalescence had been established. The invisible loss from sweating and respiration, amounting to one litre each day, was also replaced.

96. To begin with, noradrenaline was added to the intravenous fluids when the blood pressure was below 70 mm Hg and until such time as the blood pressure was restored. However, after the first week the method of estimation of the specific gravity of plasma advocated by Philips et al (1950) was adopted and normal saline, given at the rate of 75 ml. per minute, obviated the need for noradrenaline which is not without its risks under such circumstances. Chloramphenicol was also given intramuscularly in doses of one gramme 8 hourly until the patient was able to take the drug by mouth when it was continued in appropriate doses for five days. This is of doubtful value as the modern treatment of cholera is a process of tiding over a period of altered physiology during an apparently self limiting disease. Using precision methods to estimate the fluid and electrolyte losses and giving the

essential replacements rapidly according to physiological requirements is all that is required in the form of therapy. In this way the fatality rate from cholera can be reduced to negligible levels provided that treatment is given early in the disease and that there is no severe underlying chronic pathology which will tip the scales between life and death as it will do during any acute and severe clinical condition.

Control Measures

97. The most significant single measure which limited the outbreak is believed to have been the isolation of 96% of the immediate family or habitation contacts. In Hong Kong where whole families live in cubicle spaces with numbers of families in the same room, the segregation of contacts is no mean problem. Fortunately, the Chatham Road Camp with accommodation for 3,000 persons was available as a quarantine centre. Once a clinical case of cholera appeared, the contacts were identified by a team consisting of a Health Visitor and a Health Inspector and all were removed to the quarantine centre. A police guard was placed on the premises, disinfection carried out and the living quarters sealed until the contacts returned. It is a high tribute to all concerned that there was virtually no opposition to the quarantine measures and no losses of personal property occurred.

98. In the Quarantine Centre, rectal swabs were obtained from all contacts and the 53 contact carriers detected were isolated within the Centre. Of this latter group, 41 were given treatment with an antibiotic to which the strains of vibrios cholerae were proved to be sensitive. Contacts who were not proved carriers were isolated for six days and then returned to their homes. The contact carriers were isolated until at least three successive negative rectal swabs had been obtained. It is of interest, if not significant, that no secondary case of cholera occurred that could in any way be related to the contacts.

99. The first group of contact carriers which numbered 20 was treated with chloramphenicol. Later, two cases which did not respond to streptomycin were given chloramphenicol. The dosage for the adult was 1 gm. of chloramphenicol in 4 divided doses daily for a period of five days. In eleven cases, it took 96 hours before the first negative swab was obtained and the other 9 took 48 hours.

100. Oral streptomycin was given to a second group of 21 of the contact carriers in 1 gm. doses hourly for 8 hours, on an empty stomach. The dose was reduced appropriately for children. Rectal swabs taken daily indicated that this cleared the bowel of cholera vibrios within

24 hours, except in two cases where the strains of vibrio proved to be resistant to streptomycin. In these two cases oral chloramphenicol in full therapeutic doses given over five days rendered the bowel free of vibrio cholerae.

101. Unfortunately, owing to pressure of work in the laboratory during the early stages, rectal swabs were taken from the chloramphenicol group at only 48 hours interval. Therefore, the time factor for clearing the bowel was not comparable in the two groups and the only provisional conclusion is that streptomycin in the way given may be more rapidly effective provided that there is no true resistance factor arising.

102. Although antibiotics do not seem to have a place in the treatment of the clinical condition they do appear to have, under appropriate control, a very definite place in the management of the contact carrier state. This aspect requires intensive investigation as it offers a method of control of the contacts of clinical cases under conditions where isolation is not possible or practicable and short term therapy with an oral antibiotic could be used on a community basis.

Inoculation Campaign

103. The response to the call for inoculation with cholera vaccine was unexpected and almost overwhelming. There was a stock of 840,000 c.c.'s of cholera vaccine, prepared locally in the Government Institute of Pathology, in hand during the first week of August. This was sufficient to inoculate some 1,200,000 persons giving one dose of 1 c.c. of 8,000 million organisms to adults with appropriate reductions for children between the ages of one and twelve years. This was expected to meet all demands until such time as fresh supplies were coming forward from the Institute at an expected rate of over 100,000 c.c.'s each day from the 18th August onwards. In the event, over one million inoculations were given between the 14th and the 19th of August and there had to be a temporary conservation of the remaining supplies over the week-end of 19th and 20th August. Due to the generous and quick response from many countries to an appeal for additional cholera vaccine, full scale inoculation was resumed on the 21st; by the 28th of August some 75% of the total population of the Colony had been inoculated. This was achieved by closing down many of the routine clinic and health activities and turning over the staff and premises to inoculation duties. The hospital services were not curtailed in any way during the outbreak.

Environmental Measures

104. On the environmental side, the whole of the Health Inspectorate and other supporting staff of the Urban Services Department was concentrated on food inspections, markets and food hawkers control, the chlorination of wells, the control of fly breeding and the disinfection of premises.

Assessment

105. In retrospect, the sporadic occurrence of cases and their distribution throughout the Colony indicated a very wide spread of cholera vibrios throughout the community. There is accordingly a number of factors to be taken into account in assessing the epidemiology of this outbreak. The first is that the people of Hong Kong have many close family links with Kwangtung Province and they were disturbed by the accounts reaching them of an epidemic of cholera in Kwangtung Province. Next, the older people had seen cholera in the past and knew what could happen. The development, since the War, of health education in general and immunization techniques in particular has engendered a community sense of the benefits of inoculation, of early treatment of disease and of the environmental measures necessary during an epidemic emergency. Accordingly, when Hong Kong became infected, there was no concealment of cases and patients with symptoms of cholera were brought immediately for treatment to the nearest clinic or hospital. There was no opposition to the isolation of contacts or to the other environmental measures applied. Possibly the most surprising feature, judging by the past, was the demand for inoculation and a special tribute is due to the patience and good humour of the people in the long queues at the inoculation centres as they waited in the rain and the humid heat for their turn to come.

106. It was accordingly possible to apply fully the basic principles of the early isolation and treatment of clinical cases, the strict quarantine of contacts, the treatment of carriers, the immunization of the community at risk and the necessary environmental measures to deal with potential sources and vehicles of infection.

107. The behaviour of the El Tor cholera vibrios in other countries affected during the past two years has demonstrated all the hall marks of cholera as a formidable epidemic disease. Undoubtedly, the problem in a predominantly urban area with all facilities available is an entirely different one to that presented by cholera in scattered rural communities. Nevertheless, the infecting agent was community wide in Hong Kong

in August 1961 and, yet, despite the continuing search for vibrios, agglutinable or non-agglutinable, none have been recovered since November of last year. This is not in accordance with past experience of a post-epidemic phase when cases of cholera have continued to appear sporadically for many months thereafter. Whether or not this is related to certain characteristics of the El Tor vibrio is not clear, but experience elsewhere of El Tor as it has occurred during the past months suggests that this is not entirely the answer.

108. The source of the Hong Kong infection was undoubtedly the Kwangtung Province and the introduction was presumably via the boat people who move between Kwangtung Province and Hong Kong in junks and sampans. All of the first cases appeared on the water fronts and it was only later that cases appeared inland. No case was traced to traffic by rail through Lo Wu where all entering the Colony had been given cholera vaccine or were inoculated on entry.

109. The danger period during 1962 is expected to be during the months of hot humid weather in July and August. Accordingly, a cholera immunization campaign was started in February 1962 and continued throughout March and April. This time, in the absence of an emergency the public response was not so good. However, although only an overall 53% of cover of the whole population resulted, the boat people and waterside dwellers most at risk came forward readily and between 80% and 100% of these groups received a 'booster' dose of cholera vaccine.

110. An account of the outbreak is not complete without a sincere tribute to the people of Hong Kong. All sections of the community gave unqualified and practical support to all measures taken while the outside world responded immediately and generously to the call for assistance with vaccine when additional supplies were most needed.

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Notifiable Diseases

111. During the year 1961, there was an increase in the number of cases of the more common notifiable diseases, the increase being most marked for measles and chickenpox while there was a decrease in notifications of diphtheria, enteric fever and amoebiasis.

112. Free immunization against smallpox, enteric fevers, diphtheria and cholera continued to be available throughout the year 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. The outbreak of cholera interrupted for a period of six weeks the special campaigns against diphtheria and for vaccination against smallpox.

113. Towards the end of 1961 and continuing in early 1962, special attention was given to smallpox vaccination and a total of 801,876 vaccinations were performed between November 1961 and January 1962.

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

Amoebiasis

115. Amoebiasis occurs sporadically throughout the Colony and the number of cases notified varies from year to year. The incidence rate for this infection in 1961 was 6.78 per 100,000 of population being the lowest notified for many years: there were 12 deaths recorded from this cause.

Bacillary Dysentery

116. There was a marked rise in the number of cases notified with 51.9% of the cases occurring in children under the age of 10 years. Eight deaths were attributed to bacillary dysentery, two less than the number recorded in the previous year.

117. Much intensive health education in the prevention of this infection is carried out by Health Officers amongst those connected with the handling, preparation and sale of food. There were 122 carriers detected amongst case contacts and all were given treatment and not allowed to return to work until three consecutive negative stool specimens had been obtained.

Cerebro-spinal Meningitis

118. There were 36 cases notified with a fatality rate of 72.2%. The majority of the cases occurred in Kowloon, only seven occurring on Hong Kong Island and five in the New Territories. All were sporadic and were brought into hospital late in the disease.

Chickenpox

119. The number of cases notified showed a considerable increase over that of the previous year. The infection was most prevalent in the first 4 months of 1961 when a total of 402 cases was recorded as against 96 for the remaining 8 months of the year.

120. There were 7 fatal cases, the deaths being attributed to inter-current broncho-pneumonia.

Diphtheria

121. The intensive immunization campaign which commenced in the autumn of 1959 was continued throughout the year and although there was a further drop in the number of cases notified the decline was less marked than that of the previous year. This could be, in part, attributed to a break in the campaign for a period of 6 weeks during the cholera outbreak when all available staff was diverted for emergency duties.

122. Over 50% of the cases occurred in the densely populated tenements and squatter areas of Kowloon. *C. Diphtheriae mitis* was the predominant causative organism and only in rare instances was an 'inter-medius' or a 'gravis' strain isolated.

123. Most of the 1,334 cases were in children under the age of 10 years with the highest incidence in the 0-4 age group. The number of deaths from diphtheria has not shown a fall in parallel with the drop in incidence but the case fatality rate remained low. During 1961 there were 109 deaths attributed to diphtheria, a case fatality rate of 8.2%.

124. Despite the poor response of the population to the facilities for immunization, approximately 60% of the children under the age of 10 years have now been protected and the continuing decline in incidence of the infection gives some encouragement. Another hopeful feature was that 95 carriers were detected amongst case contacts and thereafter admitted to the Infectious Diseases Hospitals for treatment. During the previous year only 35 carriers had been detected.

Enteric Fever

125. There was a slight drop in the number of cases and deaths notified during the year, there being 742 cases, as compared with 773 during 1960. The incidence rate in the 5-9 and 10-14 age groups remained high accounting for 46.2% of the cases recorded. The case fatality rate was 3.2%. Twenty-six carriers were detected and treated. Of interest was a decline in the incidence of the infection in areas where the domestic water supply was derived from wells chlorinated during and after the cholera outbreak.

126. Owing to the priority given to diphtheria immunization throughout the year, no intensive prophylactic drive was possible. However, 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 and eating houses are required to submit to inoculation with T.A.B. vaccine annually.

Malaria

127. There were 812 cases notified with one death recorded during the year. The incidence was highest in the Sai Kung District of the New Territories. Detailed comment is made in paragraphs 198 to 207.

Measles

128. There was a marked increase in incidence and in deaths, the total of 1,727 cases notified being the highest recorded in recent years. The disease reached its peak in February and then gradually declined. No cases were reported in November and only 4 in December. The case fatality rate was 25.2% which high figure is an index of incomplete notification and the delay in bringing severe infections for the treatment of complications.

Poliomyelitis

129. An increase in the number of cases of poliomyelitis was recorded during the year, most of the cases occurring during the summer with the incidence peak in June. There were 184 cases notified with 39 deaths. The morbidity rate was 5.79 per 100,000 of population and the case fatality rate 21.2 per cent. Children under five years of age accounted for 83.2% of the total morbidity.

130. Faecal surveys were carried out at intervals from June 1961 onwards in healthy children under the age of 5 years to obtain information on the seasonal variations in the excretor rates of poliovirus and other enteric viruses. The results obtained are shown in Table 6.

TABLE 6

FOLIOVIRUS AND OTHER ENTERIC VIRUSES IN THE 0-5 AGE GROUP 1961-62

Date	Number examined	Negative	Positive Poliovirus				Positive other enteric viruses
			Type 1	Type 2	Type 3	Total	
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%)

131. Although Type 2 virus was not isolated in the course of the faecal surveys, a serological survey carried out in 1960 indicated that there is a wide circulation of all three types of poliomyelitis virus amongst the child population.

132. During February and March 1962 in conjunction with the International Social Service and the Lederle Corporation, children in orphanages destined for adoption into families outside Hong Kong were given trivalent oral poliomyelitis vaccine. Certain of the staff of the Department assisted with the work thus gaining practical experience prior to a mass immunization campaign, using oral vaccine, planned for late 1962. The marked drop in the excretor rate for polio and other enteric viruses suggests that the optimum time for mass immunization is during the winter months of the year.

Tuberculosis

133. Tuberculosis remains the major public health problem in Hong Kong and although the results achieved in recent years are promising, much remains to be done. The problem is considered in detail in paragraphs 140 to 197.

Other Notifiable Infectious Diseases

Influenza

134. Notification of this infection is entirely voluntary. Cases reported during the year numbered 6,223 with 39 deaths compared with 5,727 and 26 deaths in 1960.

Ophthalmia Neonatorum

135. 250 cases were reported as compared with 254 in 1960.

Puerperal Fever

136. Only 2 cases, both fatal, were registered during the year. Deliveries in both the cases took place in the home without the help of a doctor or a qualified midwife.

Scarlet Fever

137. Sporadic cases of this infection occurred throughout the year. 29 cases were reported as against 17 in 1960.

Whooping Cough

138. 47 cases were notified during the year, the lowest on record since 1949. One death was reported.

Other Communicable diseases which are not notifiable

Tetanus

139. Of 142 cases of tetanus admitted to hospital, 92 occurred in new born children. Most of the cases of tetanus neonatorum occur in infants delivered at home in villages situated almost exclusively 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 ground ginger root to the umbilicus as a styptic, all 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. 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.

TUBERCULOSIS

140. The steady decline in the death rate from tuberculosis, which reached a peak in 1951, has continued. However, the morbidity, although changing in pattern, remains high and the figure of an average of 2% of persons with active tuberculosis in the community has not changed significantly. Of this 2% one fifth are open cases, infective to others.

TABLE 7

DEATH RATES FROM TUBERCULOSIS

Year	Estimated population (mid-year)	Death rate per 100,000 from all cases	Percentage of total deaths from tuberculosis	Percentage of tuberculosis deaths below 5 years
1951	2,013,000	208.0	20.0	34.0
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

141. The vaccination of new born babies with B.C.G., started in 1952, is now widely accepted and all agencies engaged in midwifery are participating. As 96% of the registered births take place in institutions, vaccination is greatly simplified and during 1961 the percentage vaccinated was 79.31%. The percentage in 1952 was 4.33%. The effect of this measure is reflected to some extent in the notifications of tuberculosis amongst children aged 5 years and under. What percentage of the cases so notified have not received B.C.G. is not yet known, but this aspect of the situation is now under investigation.

TABLE 8

TUBERCULOSIS NOTIFICATIONS UNDER FIVE YEARS

	% New Borns Vaccinated	Under Five Years		Under one Year	
		All Forms	T.B. Meningitis	All Forms	T.B. Meningitis
1952	4.33	2,388	583	321	108
1957	35.93	1,441	448	270	114
1958	46.86	1,137	309	224	105
1959	59.53	975	276	190	80
1960	71.54	660	181	74	39
1961	79.31	649	185	76	48

TABLE 9

NOTIFICATIONS OF TUBERCULOSIS (ALL AGES) 1961

Government Chest Clinics	8,957
Other Government Institutions	2,056
Tung Wah Group of Hospitals	947
Non-Government Institutions	112
Private Practitioners	512
	<hr/>
	12,584

142. The notifications of tuberculosis are far from complete and it will be seen that the great majority are made from Government Institutions which account for 87.5% of the total. On the other hand the registration of deaths is virtually complete and there were 1,907 deaths recorded as due to tuberculosis. An analysis of these deaths showed that full details of the previous history were available for only 651. Of this group 1.7% had no signs of tuberculosis; 27.6% had not received treatment prior to death. Of the 460 receiving treatment before death 219 had attended Government Chest Clinics and 241 had been under treatment by private practitioners. Assuming that death rates are roughly comparable in the two groups under treatment, it appears that some 9,000 notifications have not been made. This situation is also under investigation with a view to ensuring that the statutory obligation to notify tuberculosis is more fully appreciated and met.

143. An analysis of morbidity rates calculated from notifications and related to census data shows that tuberculosis morbidity is low under the age of 14 years after which it rises sharply to the age of 24 years, increasing thereafter gradually in the older age groups. In the age group 60-64 years, the death rate from tuberculosis is five times the average for all ages; in young persons the death rate is highest in the 0-4 years group being just over two-thirds of the rate for all ages. The most favoured group is between 10 and 19 years where the death rate is less than 6 per 100,000.

144. The major unknown factor is of course the number of persons coming into Hong Kong to get treatment for tuberculosis. An inquiry conducted in March 1962 showed that 12½% of cases under active treatment had been in the Colony for six months or less. A review carried out in hospital patients showed that 14% had come to Hong Kong specifically for treatment. Of the 4,987 cases who defaulted from treatment during the year, about 2% was recorded as 'returned to village' which is taken to indicate that they had left the Colony to return home.

145. All cases attending the Government Chest Clinics are given treatment free without question as to origin. The increasing volume of work undertaken at the Government Chest Clinics is set out below.

TABLE 10

	1957	1958	1959	1960	1961
First attendances	35,126	39,454	39,008	35,991	40,146
Cases of tuberculosis discovered ..	11,428	12,270	14,406	12,937	15,270
Total attendances for treatment ..	539,282	*803,326	1,655,100	2,001,960	2,204,058

TABLE 10—Contd.

	1957	1958	1959	1960	1961
Under treatment from previous year	5,887	9,132	13,733	16,062	16,433
Started treatment during the year	7,964	11,546	11,357	12,617	12,381
Completed treatment	1,213	1,048	2,064	3,724	3,776
Failed to attend	2,868	3,048	5,391	4,975	4,987
Admitted to hospital from Chest Clinics	1,078	1,511	1,587	1,592	889
Still on treatment at end of year	9,132	13,733	16,062	16,433	17,714

* Streptomycin course extended by daily injections.

146. Treatment at the Chest Clinics is by ambulatory chemotherapy which includes daily injections of streptomycin 6 days each week for periods up to nine months or more and concurrently combined PAS/INAH in tablet form issued weekly to be taken daily. 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 in the hope that they will become 'catalase negative'. Hospital admission is arranged for those patients whose treatment can be expedited by surgical or other means or who, for purely medical reasons, require in-patient treatment.

147. An analysis during the year of 1,500 patients who had completed treatment showed that 65% showed satisfactory radiological improvement and just over 94% of cases with positive sputum had been rendered sputum negative. Of those who fail to complete treatment, just under one third default during the first three months, the next largest group being those who have completed 12 months treatment. Amongst patients who can be traced, the majority give the reason that they are too busy to attend.

148. There are four full time Government Chest Clinics, each with its own X-ray department, which are open all day on week days and offer one evening diagnostic session each week. Part time clinics are maintained at twelve centres, visited once weekly by the tuberculosis staff, where daily treatment is continued by the permanent staff of the centres visited. A sessional advisory service is also maintained at four other centres maintained by voluntary agencies.

149. In addition there are injection sessions for patients receiving daily streptomycin at seven other centres; these are for the convenience of patients who cannot travel regularly to the main or branch clinics. They are supplemented by injection sessions on five nights each week at the four full time chest clinics for patients who cannot attend during

the day. These injection centres, particularly the evening ones, are very popular.

150. Not surprisingly there is a large number of patients who do not attend with complete regularity. It is for this purpose that the very comprehensive regimen of treatment was instituted in 1958. If occasional injection sessions are missed the combined PAS/INAH tablets, provided they are taken regularly, will ensure that the long term result is not affected materially. Irregular drug taking is, however, a world wide phenomenon under such circumstances and it is of interest that surprise urine checks show that irregularity of drug taking varies from only 3% to 16% in the various clinics in the Colony.

151. The general picture is that new cases of tuberculosis coming forward for treatment are doing so at a much earlier stage of the disease. There is, however, still a not inconsiderable number attending the Government Clinics for the first time with extensive disease and who have had treatment previously either in Hong Kong or in China. Of these many have organisms resistant to one or more of the standard drugs in use. The size of this resistance problem is unknown and is the subject of urgent study and investigation. However, once a chronic case with resistant organisms is detected, contact investigations follow and treatment is fully supervised. It is the undetected resistant case moving freely in the community that is the main problem and, until prevalence surveys can be mounted, the total problem posed remains obscure.

Contact Tracing

152. Once a case of tuberculosis is diagnosed, Tuberculosis Workers visit the home and arrange for the examination of family or close household contacts. Those under 8 years of age are tuberculin tested and those over that age are X-rayed. During the year a total of 18,411 contacts underwent a full investigation, the findings being:

TABLE 11
CONTACT EXAMINATIONS 1960-61

Under 8 years of age	1960	1961
Tuberculin Tests		
{ Negative	907	831
{ Positive	2,392	3,102
Clinical findings of contacts showing Positive Mantoux		
{ Active T.B.	69	92
{ Inactive T.B.	101	125
{ Suspicious T.B.	473	510
{ Free of T.B.	1,749	2,375
Percentage of Contacts found to have active tuberculosis	2.09%	2.34%

Over 8 years of age		1960	1961
Result of Clinical examination following 'Contact' X-rays	Active T.B. ...	318	421
	Inactive T.B. ...	387	665
	Suspicious T.B. ...	1,043	1,002
	Free of T.B. ...	8,766	12,390
Percentage of contacts found to have active Tuberculosis		3.02%	2.91%

X-ray Surveys

153. Government conducts annually an X-ray survey of all civil servants. In addition all prisoners are X-rayed each year and other X-ray surveys are undertaken, on request, of groups of employees in commercial or industrial concerns where certain conditions are met regarding sick leave for, and re-employment of, persons found to be suffering from active disease. There are only two mobile X-ray units at present available for this purpose and they are very fully committed in dealing with radiological services to part-time clinics and to the annual and 'conditional' surveys. A static X-ray Survey Centre is now being built on Hong Kong Island and another is planned for Kowloon.

154. During the year the following survey work was undertaken:

TABLE 12
X-RAY SURVEYS

	Government Employees	Prisoners	Conditional Surveys
Total examined	45,617	9,735	26,809
Further clinical and large film examination	5,677	3,390	1,761
Active tuberculosis	399	485	313
Percentage of active tuberculosis	0.875%	4.98%	1.17%

155. Government servants undergo a pre-employment examination which excludes tuberculosis and are thereafter examined yearly. During 1961 there were 123 new cases diagnosed in Government servants who showed no signs in the 1960 survey. This represents an annual attack rate of 0.28% in what is a fairly representative cross section of the community. At the other extreme, the prison population is representative of the lowest socio-economic group 48.25% of which have an history of drug addiction when they are first committed to prison. The conditional surveys are carried out on employees working for enlightened firms which have an eye to the welfare of their employees. Thus none of these findings gives a precise indication of the incidence of active disease

in the general population which, on present data available, is estimated to average just over 2% in the adult population.

Tuberculin Testing and B.C.G. vaccination

156. Through the Maternal and Child Health and School Health Services, tuberculin testing is carried out on children not known to have been vaccinated at birth with B.C.G. There are still some 20,000 to 30,000 unvaccinated children added to the community each year and it is estimated that there are about 100,000 of these all told in the 0-5 age group. During the year 17,474 children were tuberculin tested in Maternal and Child Health Centres and schools of whom 7,756 were negative and were vaccinated with B.C.G. This is a disappointing figure and merely represents those who have attended the various clinics where testing is done as a routine.

157. Children under three years of age who have not had B.C.G. but who show a positive tuberculin test are given I.N.A.H. for 12 months as a prophylactic measure in an effort to minimize the risks of a progressive primary tuberculosis. During the year 57 such children were discovered at the chest clinics and a further 90 through the Maternal and Child Health Service. There were thus 147 under treatment during 1961 compared to 180 during 1960.

158. The desirability of maintaining this measure, relatively small though it be, is underlined by the fact that for the first time in 8 years there was an increase in the infant death rate from tuberculosis. While the increase was not a significant one, there can be no relaxation in any measure, however small, that will help to consolidate the gains of the past ten years.

Surgical Tuberculosis

Thoracic Surgery

159. 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.

160. The numbers of cases seen during the past 3 years and since the inception of these sessions were:

	Government Thoracic Surgeon			Grantham Thoracic Surgeon		
	1959	1960	1961	1959	1960	1961
First attendances	123	103	112	226	147	125
Subsequent attendances	612	803	891	144	262	321
Total	<u>735</u>	<u>906</u>	<u>1,003</u>	<u>370</u>	<u>409</u>	<u>446</u>

Orthopaedic Surgery

161. 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.

162. Attendances at these sessions over the past five years have been:

	1957	1958	1959	1960	1961
First attendances	543	629	617	441	415
Subsequent attendances	768	2,083	3,503	4,001	4,618
Total	<u>1,311</u>	<u>2,712</u>	<u>4,120</u>	<u>4,442</u>	<u>5,033</u>

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

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

164. There has been a steady fall in the number of new cases attending over the past three years and most of the long standing cases in the Colony have now been dealt with. First attendances are now almost exclusively early cases and as orthopaedic tuberculosis in Hong Kong is principally a disease of children, the downward trend associated with the decline of all forms of tuberculosis in the youngest age groups is considered to be largely due to the greatly increased scale of B.C.G. vaccination.

Radiology

165. The total number of examinations carried out on behalf of the Tuberculosis Service by the Radiology Branch of the Department was 305,088, an increase of more than 10% over the 1960 total. The largest proportional increase was in the use of 35 mm. and 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

166. The Government Institute of Pathology undertakes all bacteriology for the Tuberculosis Service. There is a substantial increase in this work each year and the range of investigations is increasing all the time. During 1961, 47,984 direct smear examinations were carried out, an increase of 4,000 over the previous year. Culture and resistance examinations accounted for a further 12,000 procedures. A re-organization and expansion of the bacteriological tuberculosis work is at present under way to ensure the most comprehensive laboratory support possible within the space and facilities available.

Medical Social Work

167. 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.

168. 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 11,443 new patients were interviewed while the total of interviews rose by almost one thousand to 36,517. 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.

169. 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 admissions and the maintenance

of waiting lists. Waiting time for admissions is less than six weeks and, at the end of 1961, there were only 273 patients waiting of whom 120 were orthopaedic cases. The total number of admissions and re-admissions arranged by the Almoners was 1,529, a decrease of 63 compared with 1960. This was mainly due to re-allocations of beds in the Lai Chi Kok Hospital during the cholera outbreak and, before that, on account of the seasonal pressure due to diphtheria.

170. 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.

171. 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 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. At present each Tuberculosis Worker is responsible for an average of 1,350 patients while the desirable maximum case load is 900. 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.

172. 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

173. There is a Tuberculosis Assistance Fund available to the Senior Tuberculosis Almoner which amounted to \$300,000 in 1961. 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 continuing commitments. During the year 274 families received an average weekly grant of \$24.61. 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 131 patients at a cost of \$3,148.

174. Another source of assistance is the Samaritan Fund at the disposal of the Principal Almoner. A total of \$4,232.55 was given for travelling expenses such as are incurred by orthopaedic cases attending clinics.

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

176. 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. Over 300 patients were thus referred, for assistance, to other welfare agencies.

Rehabilitation

177. 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 has launched a pilot 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 to the Lutheran Tuberculosis Rehabilitation Project from the Government Tuberculosis Service was 58 and initial results have been most encouraging. 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

178. 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.

179. During 1961 there were 1,825 beds set aside full time for the inpatient treatment of tuberculosis, 49% 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.

180. Beds for tuberculosis in Government Hospitals are in the Queen Mary, Lai Chi Kok and Cheung Chau Hospitals. At Queen Mary Hospital there were 52 beds during 1961 and there were 88 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.

181. The Tung Wah Group of Hospitals maintain tuberculosis beds mainly for patients with disease of long standing.

182. Beds were distributed as follows during 1961:

Government Hospitals	212
Hong Kong Anti-Tuberculosis Association:	
Grantham Hospital	540
Ruttonjee Sanatorium (Including Freni Memorial Convalescent Home)	336
Tung Wah Hospitals	392
Haven of Hope Sanatorium	210
Other public and private hospitals	146
Total	<u>1,836</u>

183. Early in 1962 there was a re-distribution of beds, made possible through the co-operation of the Hong Kong Anti-Tuberculosis Association which is building an extension to the Grantham Hospital of 84 beds. This enabled 48 patients in the Queen Mary Hospital to be transferred to the Grantham Hospital and so make additional paediatric beds available at the Queen Mary Hospital.

184. Another pressing problem has been 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 and which require immediate admission. Such cases have had to be accommodated in general wards until they are fit for discharge or transfer to other hospitals. To meet this situation, emergency tuberculosis beds have been provided at the Lai Chi Kok and Tung Wah Eastern Hospitals to which such cases will be admitted either direct or as soon as resuscitation has been effected and the patients 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 available for conversion, which will include a tuberculosis unit, when the Queen Elizabeth Hospital is opened during 1963.

The Work of the Voluntary Agencies

The Hong Kong Anti-Tuberculosis Association

185. This is the largest and longest established voluntary agency working exclusively in the field of tuberculosis. It maintains two hospitals and one convalescent home, containing a total of 876 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 receives substantial annually recurrent subventions from Government.

The Grantham Hospital

186. Opened in 1957, this hospital has 540 beds and is equipped as a modern chest hospital. An extension is now under construction which will contain 84 beds, a physiotherapy department and a school for the training of assistant nurses. 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 1961, Government maintained 444 of the beds in the general wards and early in 1962 assumed responsibility for a further 48 beds eventually to be accommodated in the new extension. Government also provides the clinical staff for 204 beds and undertakes the medical social work for patients in the 444 beds it maintains. The follow-up of patients discharged from these beds is undertaken at the Government Chest Clinics.

187. For purposes of clinical supervision within the hospital, there are the Grantham Pulmonary Unit of 240 medical and surgical beds, the Government Pulmonary Unit of 92 medical and 32 surgical beds and the Government Orthopaedic Unit of 80 beds. The Medical Superin-

tendent, responsible to the Grantham Hospital Management Board, is in administrative charge of the whole 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 the Government Orthopaedic Specialist. 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. For part of the year the Government Orthopaedic Specialist post was vacant and the work of the Unit was undertaken by an Honorary Consultant Orthopaedic Surgeon in private practice.

188. The number of admissions continues to rise since the hospital became fully operational towards the end of 1958 and the work carried out during the year ending March 31st, 1962 is shown in the following table.

TABLE 13

<i>New Admissions</i>	<i>Re-admissions</i>	<i>Discharged</i>	<i>Total Bed Days</i>	<i>Deaths</i>	
1,006	59	978	193,897	33	
<i>Orthopaedic Operations</i>					
	<i>Spine</i>	<i>Hip</i>	<i>Others</i>		
	78	31	10		
<i>Thoracic Operations</i>					
<i>Resections</i>					
	<i>Wedge</i>	<i>Segmental</i>	<i>Lobectomy</i>	<i>Pneumonectomy</i>	<i>Miscellaneous including Thoracoplasty</i>
Grantham Thoracic Unit ...	1	9	48	38	56
Government Thoracic Unit ..	6	13	58	1	57

189. An analysis of 254 cases which have undergone thoracic surgery in the Grantham Hospital unit has shown that 253 have remained sputum negative; 186 have returned to full time work, while 68 are working part-time.



Bathing a baby.

Health Teaching 'Prevention is better than cure'.





Flying Doctor calling at a village.



Hailing Boat People to come for prophylactic immunizations.

The Ruttonjee Sanatorium and Freni Memorial Convalescent Home

190. 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.

191. 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.

192. The work done at the Ruttonjee Sanatorium and the Freni Memorial Convalescent Home during the year ending 31st March, 1962 was as follows:

TABLE 14

	<i>New Admissions</i>	<i>Re-admissions</i>	<i>Discharged</i>	<i>Total Bed Days</i>	<i>Deaths</i>
Ruttonjee Sanatorium ..	588	151	504*	77,417	29
Freni Memorial Convalescent Home	298†	—	295	39,121	NIL

* Includes 82 discharged to Children's Convalescent Home at Sandy Bay and 40 to other hospitals; 382 were discharged direct to home. An additional 295 were transferred to the Freni Home.

† This figure of 298 includes the 295 referred to above.

RUTTONJEE SANATORIUM

Orthopaedic Operations

<i>Spine</i>	<i>Hip</i>	<i>Others</i>
72	18	11

Thoracic Operation

Resections

<i>Wedge</i>	<i>Segmental</i>	<i>Lobectomy</i>	<i>Pneumonectomy</i>	<i>Miscellaneous including Thoracoplasty</i>
7	21	73	8	32

ASSOCIATION FOLLOW UP CLINIC

Under treatment as outpatients	1,711
Annual check of patients under supervision only	1,906
Total attendances	12,904

ASSOCIATION B.C.G. CLINIC

Number of tuberculin tested	832
Number of B.C.G. vaccinated	247

193. 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 the 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 Tung Wah Hospitals

194. 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 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

195. Maintained by the Junk Bay Medical Relief Society this interdenominational Protestant Mission Sanatorium accommodates 210 beds for the medical treatment of tuberculosis. No major surgical or orthopaedic work is undertaken. The Sanatorium staff also maintain a tuberculosis outpatient 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 60 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

196. Mention is made in paragraph 403 of the rehabilitation work carried out by the Lutheran World Federation and in paragraphs 339 to 341 of the work of the Sandy Bay Convalescent Home maintained by the Society for the Relief of Crippled Children. Tuberculosis beds are also provided in the Nethersole Hospital and the Hei Ling Chau Leprosy Settlement, both of which organizations receive subsidies for general medical work.

Private Hospitals and Other Agencies

197. There are 132 beds provided in private hospitals and nursing homes, 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. Mention has already been made regarding the paucity of notification of tuberculosis by private agencies dealing with the disease.

MALARIA BUREAU

198. The Malaria Bureau, under the direction of the Government Specialist Malariologist, is responsible for all malaria control operations throughout the Colony and, in certain instances, it also undertakes the control of breeding of culicine mosquitoes. Lectures are given on malaria and allied subjects to various groups of health personnel under training and expert advice is offered to the Armed Services, to the Pest Control Unit of the Urban Services Department, to Hei Ling Chau Leprosarium and to Prisons in the New Territories.

Control Operations

199. The important malaria vectors are *A. minimus* found breeding in certain hill streams, seepages and irrigation ditches leading to rice cultivation and *A. jeyporiensis* var. *candidiensis* which breeds in rice cultivation, fallow-rice fields, pools in rice stubble and water flowing through grass. Other anopheline species found in the Colony play little or no part in malaria transmission. Malaria control in the urban areas is based chiefly on anti-larval measures consisting of training and clean-weeding of streams, ditching and oiling. Anti-malaria oil continues to be employed as the main larvicide, although Gammexane Dispersible Powder is also used on a limited scale in areas where the application of oil is unsuitable. These anti-larval operations against anopheline breeding afford protection to over 2½ million people living within the urban areas of Hong Kong, Kowloon and New Kowloon and in certain circumscribed areas in the New Territories.

200. Results of the Malaria control work in the urban areas continue to be satisfactory and the incidence of natural malaria transmission has been reduced virtually to zero.

201. 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. Therefore, the main line of defence against malaria for disciplined groups stationed in the New Territories consists of such anti-larval measures as may be practicable in the vicinity, screening where possible and chemo-prophylaxis. There were 19 cases of malaria notified from police and services personnel during the year.

202. The cost of the control measures during the year under review was 36 cents per head of population living in the protected areas.

Incidence of Malaria

203. Malaria is a notifiable disease, and the returns of the past five years are set out in Table 15.

TABLE 15
MALARIA 1957-61

Year	Cases Notified	Deaths
1957	447	0
1958	659	1
1959	442	1
1960	833	0
1961	812	1

204. The endemicity of malaria varies, as was proved by Malario-metric indices obtained from a survey carried out during the year in children between 2-9 years of age in 14 villages in the New Territories. Spleen and parasite rates ranged from 0% to 40.2% and from 0% to 20% respectively.

205. The total number of cases of malaria notified during 1961 was 812 as compared with 833 in 1960. Notifications of 91.3% of all cases were from outside the protected areas; 43.8% of the cases came from the area surrounding the small town of Sai Kung and 26.2% of the total from Lantau Island. Of the parasites identified 96.4% were *P. vivax*, 2.4% *P. falciparum* 1.0% *P. malariae* and 0.1% were undetermined.

206. A scheme to control malaria in the Sai Kung District is under consideration and an entomological survey was conducted in the area between July and October 1961 to study the anopheline larval habitat and relative species abundance. *A. minimus* and *A. jeyporiensis* var. *candidiensis*, the chief malaria vectors in the Colony, comprised 11.4% and 2.1% of the six anopheline species encountered during the survey.

Laboratory

207. The Bureau laboratory continued to carry out routine identification and dissection of mosquitoes and the examination of blood smears collected at surveys. Susceptibility tests of anophelines to various insecticides were conducted from time to time and the results forwarded to the World Health Organization.

SOCIAL HYGIENE SERVICES

208. 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 and a number of cases of skin disease also attend. The Wanchai Hospital provides in-patient accommodation for the treatment of skin disease in women and beds for male patients are available at the Lai Chi Kok Hospital.

209. During the year the post of Social Hygiene Specialist remained vacant and the Principal Medical and Health Officer (Health) at Medical Headquarters was responsible for the administrative aspects of the service. It is believed that the Specialist post will be filled by the middle of 1962.

Dermatology

210. The dermatology clinics held at the nine centres recorded a total attendance of 6,094 cases referred for an opinion. At the Social Hygiene Clinics there were a further 12,173 first attendances for skin complaints which is 47.2% of the total of new cases seen at these clinics.

211. Biopsies, microscopic and culture examinations for fungi and tests for uroporphyrin are carried out at the clinics. Patients requiring radio-therapy for skin conditions are referred to the Sai Ying Pun Polyclinic.

212. Griseofulvin is now the treatment of choice for ringworm of the body, hair and nails. Neurodermatitis is treated at the Wan Chai Hospital with hydrocortisone lotion, using the vibro puncture technique. Discoid lupus erythematosus responds well to Plaquinol which has proved to be one of the less toxic chloroquin derivatives.

213. Appendix 8 details the classification and relative frequency of the skin conditions seen. There is a close liaison maintained with the Industrial Health Officer and dermatological conditions known or suspected to be due to industrial hazards are notified to him.

Venereal Diseases

214. Sixty one clinic sessions are conducted each week, including two new sessions for females started during the year. There was a total of 182,049 attendances of which 25,819 were new cases. Of the latter 36.2% attended on account of venereal disease, 16% were proved not to have venereal disease, and 47.2% were first attendances with skin complaints not related to venereal disease or leprosy.

215. At Appendix 7 is the annual incidence and trend of disease for which patients attended the Social Hygiene Clinics over the past 11 years. During 1961 there were 35 cases of primary and 26 cases of secondary syphilis; the total of cases of syphilis, numbering 1,606, showed a 26% reduction of the total for the previous year. The incidence of gonorrhoea was the lowest on record in the eleven year period and there was a marked drop in the incidence of chancroid and lymphogranuloma venereum.

216. Ante-natal blood tests 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 16

THE TABLE SHOWS RESULTS OF THOSE TESTS OVER A 7-YEAR PERIOD

	1955	1956	1957	1958	1959	1960	1961
No. of tests Clinics & Hospitals	23,716	26,083	27,330	28,026	46,932	52,068	51,449
% of Positive Rate ..	4.5	3.8	3.5	3.3	2.6	2.3	1.6
No. of tests Private Mid-wives	5,439	5,464	4,623	5,583	6,269	6,805	6,940
% of Positive Rate ..	4.2	3.4	2.7	3.2	2.3	1.9	1.4

217. 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 the subject of investigation since 1959. During 1957, owing to the increasing numbers of cases of penicillin anaphylaxis, the prophylactic treatment of prostitutes was discontinued. Since that time there has been a relative increase in the incidence of gonorrhoea. Table 17 sets out the results to-date.

TABLE 17

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)

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

218. Default from treatment of venereal diseases still continues to be a problem and follow-up is made first by letter and then by visit. By letter, there was 27.8% of success, the highest figure since 1956. By visit there was 21.5% of success amongst females and 24% of success amongst males. Female social hygiene visitors paid a total of 14,000 visits to contacts and defaulters, while their male counterparts paid 2,939 visits. An almoning service has also been available to male out-patients and female inpatients throughout the year.

219. Penicillin remains the treatment of choice for both syphilis and gonorrhoea, but the slightest sign of intolerance is followed by an immediate change of therapy. No deaths from anaphylactic shock were recorded during the year.

220. In common with other notifiable diseases, the notifications of venereal disease received do not give a precise indication of incidence. Many patients receive treatment from sources other than the Government clinics and the figures recorded above apply only to the work of the Social Hygiene Clinics.

Leprosy

221. Sixteen clinic sessions are held weekly in nine centres solely for leprosy patients, while two other 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, 124 infectious cases, the same number as 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 with this institution, which is referred to in paragraphs 334 to 336 of this report, is maintained by the Social Hygiene Services.

222. For routine outpatient treatment at the Leprosy Clinics, dapsone remains the drug of choice and is administered orally or intramuscularly; if there is intolerance to dapsone, diphenyl thiourea is exhibited instead.

In selected cases, bi-weekly injections of ditophal are used, combined with routine systemic therapy, but there have been instances where a contact dermatitis has resulted and the injections had to be discontinued.

223. Surgical rehabilitation of leprosy patients suffering from deformities and disfigurements is carried out at the Maxwell Memorial Hospital at the Hei Ling Chau Leprosarium; it is also provided in certain Government hospitals where a limited number of beds is available for the purpose.

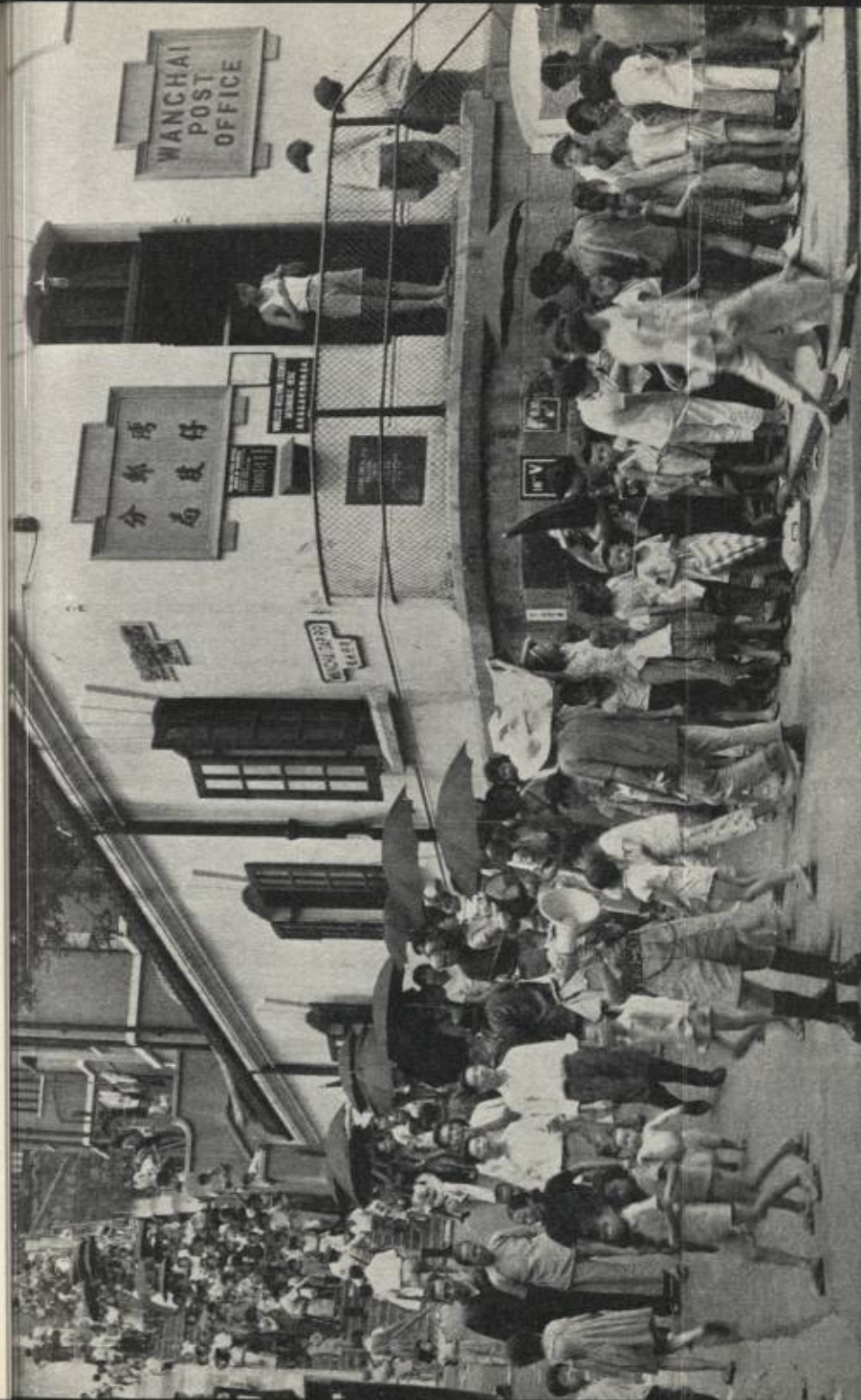
224. In the epidemiological field, it is a routine for the home of each new leprosy patient to be visited by a Social Hygiene Visitor within a month of the diagnosis being made; personal advice is given, contacts are requested to attend for examination and it is urged that child contacts receive B.C.G. vaccination. After the initial examination, contacts are advised to return for re-examination at least once a year; those who do not return are re-visited as are patients defaulting from treatment.

PORT HEALTH

225. 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.

226. 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, at the Lo Wu Quarantine post. All immigrants without valid certificates are vaccinated against smallpox.

227. 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



Anti-Cholera Campaign — people waiting for anti-cholera inoculations.



Helicopter landing at a small village in the New Territories.

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 an ambulance service in the port area.

228. Four Port Health inoculation centres are maintained, 2 on the Island and 2 in Kowloon (including 1 at the airport), for the convenience of persons requiring International Certificates for travel. Free prophylactic vaccinations are also offered at these centres to members of the public. Inoculators are also 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 Medical and Health Officers.

229. On the 14th August quarantine restrictions were imposed against persons arriving from Macau and the Kwangtung Province of China on the receipt of information that these areas were infected with cholera. A few days later the infection spread to Hong Kong and the Colony was declared to be infected with cholera on the 17th August, 1961. Details of the outbreak are given elsewhere in this report.

DISTRICT MIDWIFERY SERVICES

230. 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 less than 3.5% of all registered births took place in the home as against 6% in the previous year. This is reflected in the further decline in maternal mortality which has shown a dramatic fall in recent years.

231. It is now Government policy gradually to withdraw 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 25 maternity beds were provided in the Jockey Club Clinic which was opened at Shek Wu Hui in June 1961.

232. The work of the Government Midwifery Service during 1961 is summarized in Table 18.

TABLE 18

GOVERNMENT MIDWIFERY SERVICE 1961

Maternity beds in hospitals	346
Maternity beds in maternity homes (urban)	76
Maternity beds in maternity homes (rural)	149
Midwives (excluding hospitals)	69
Cases attended (excluding hospitals)	16,430
Average case-load for each midwife (excluding hospitals)	238

233. Midwives in private practice attended 37.6% of all births, the great majority 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 general supervision of the work of the midwives; in this task, she is assisted by a qualified Health Visitor. The work undertaken in 1961 by the private midwives is outlined in Table 19.

TABLE 19

PRIVATE MIDWIFERY SERVICE 1961

Number of midwives in active practice	183
Number of registered maternity homes	116
Number of beds	480
Maternity home deliveries	38,734
Domiciliary deliveries	2,481
Total deliveries	41,115

234. 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 79.31 per cent of all children born in 1961 received B.C.G. protection, a measure which has resulted in a dramatic fall in child mortality from tuberculosis.

MATERNAL AND CHILD HEALTH SERVICES

235. In this most important and popular aspect of the work of the Department, the emphasis is on health education and the prevention of disease. All facilities are provided without charge, and once disease is detected, exclusive of minor ailments, 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. The Health Education of groups of mothers in the clinics and of individuals while home-visiting is a permanent and continuing activity 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 widely used, the choice of medium depending on the subject and on the audience.

236. 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 was maintained between Maternity Hospitals and the Maternal and Child Health Service to ensure the after care of infants requiring special attention. The work performed during 1961, as compared to that of 1960, is detailed in Table 20.

TABLE 20

MATERNAL AND CHILD HEALTH SERVICES 1960-61

	1960	1961
Number of full-time centres	9	9
Number of subsidiary centres	17	19
Number of ante-natal sessions each year	2,023	2,131
New ante-natal attendances	20,296	22,995
Total ante-natal attendances	77,741	92,553
Number of post-natal sessions each year	816	857
New post-natal attendances	4,686	5,031
Total post-natal attendances	6,399	6,546
Number of infant welfare and toddler sessions each year	4,358	4,815
New infant welfare attendances	29,634	37,735
Total infant welfare attendances	307,956	363,206
New toddler attendances	5,052	8,990
Total toddler attendances	40,187	57,903
Total home visits	59,071	64,167

237. A part-time centre was opened during the year in the new Jockey Club Clinic at Shek Wu Hui where infant health sessions were held once a week and ante-natal sessions twice weekly. Ante-natal and infant welfare clinics continued to be held once a month in Tai O on Lantau Island and infant welfare clinics were held twice weekly in the Wong Tai Sin Resettlement Estate. The total attendances at the Government infant and toddler clinics increased by 21% and new attendances by 11%; only 0.23% of those attending for the first time showed any abnormality. Immunization against diphtheria, whooping cough and tetanus is given as a routine using a triple vaccine. Smallpox vaccination is given where necessary and children not known to have B.C.G. are tuberculin tested, those with a negative reaction receiving B.C.G. Those 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.

238. The average attendances at ante-natal sessions were 43 as against 38 in 1960, but the average rate of attendances by each expectant mother dropped from 3.8 to 3. Post-natal clinic sessions are still the least popular and it seems that attendance is almost exclusively only by those who either suspect or are acutely conscious of an abnormality. During the year 24.09% of all women attending post-natal clinics needed some form of treatment.

239. All Maternity and Child Health Centres stopped their routine work during the cholera outbreak for a period of 2 weeks during which the staff worked full-time in the anti-cholera inoculation campaign.

SCHOOL HEALTH

240. 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 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; over 200 of its members have indicated their willingness to participate in a *per capita* contributory scheme.

241. During 1961 there were 24,330 pupils from 278 schools who were participating in the existing scheme. Medical inspections, clinic services, dental care and specialist eye and ear, nose and throat investigations and treatment were provided. The following table sets out the work done.

TABLE 21
ATTENDANCES

Medical Inspections	General Clinics	Dental Clinics	E.N.T. Clinics	Eye Clinics	Hospital Admissions
39,327	47,405	34,086	1,715	3,806*	63

* 2,181 pairs of spectacles and 281 pairs of lens replacements were issued.

242. There were no epidemics of infectious disease but there was an increased incidence of diphtheria, 312 cases being notified. Except during the cholera outbreak, the main emphasis was on diphtheria

immunization and 80,186 school children came forward for the full course of inoculations. This was part of an intensive campaign against diphtheria which included visits by Health Visitors to schools that had not applied for the services of immunization teams. The Health Visitors also held a series of meetings with headmasters of primary schools which had been arranged by the Health Education Officer.

243. During the autumn, special emphasis was also laid on vaccination against smallpox and 67,484 vaccinations were performed in schools.

244. Special attention is also being given to tuberculin testing and the B.C.G. vaccination of negative reactors. This is part of a general investigation to check on 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. Over a period of 4 months, 6,043 tuberculin tests were done and 1,527 negative reactors were given B.C.G. The positive reactors were investigated and 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 484 were advised to attend for an X-ray; 384 of them showed no radiological evidence of disease and 65 were referred for full investigation at a chest clinic. The remainder did not co-operate by attending for X-ray examination.

245. Before being permitted to teach in registered schools, school teachers are required to undergo an X-ray examination. During the year 3,994 chest X-ray were taken and 29 teachers found to be suffering from active tuberculosis; in such cases permission to teach is refused and priority admission to hospital arranged. A further 270 teachers, after full investigation, were permitted to teach under supervision.

246. 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. For this purpose 1,646 inspections were carried out and reports made on 67 plans for new schools or for extensions.

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

INDUSTRIAL HEALTH

248. 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 which is staffed by personnel seconded from the Medical and Health 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.

249. Investigations continue 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.

250. An inter-departmental committee on Silicosis submitted its final report to Government in March 1962, in which it recommended certain measures for controlling the disease. The Committee found particular difficulty in attempting to formulate an acceptable compensation scheme for affected workers and recommended seeking expert advice, from outside the Colony, on this issue.

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

252. Lectures on Industrial Health are given to probationer Labour Inspectors, Health Inspectors, Health Visitors and 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.

253. The staff of the Industrial Health Section during 1961 consisted of a Senior Medical and Health Officer, one Medical and Health Officer and three Health Visitors, all of whom are seconded from the Medical and Health Department.

254. An additional commitment arose in connexion with the cleansing of aircraft contaminated by radio-active dust following on the Russian nuclear explosions. This involved extensive monitoring of rags

and mops used for cleaning and advice to employers regarding measures to protect personnel engaged in this work.

HEALTH EDUCATION

255. 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 and all available methods of Health Education are used in the various programmes undertaken. A novel method which was given a trial during an immunization campaign in rural areas in the New Territories is 'sky shouting'. A helicopter flew over villages the day before immunization teams would be operating in the area and broadcast propaganda relating to the campaign. The response to this measure was most encouraging.

256. In general, health education methods designed for individual or group education have proved the most effective, being used with success in the Maternal and Child Health Service, the Tuberculosis Service and the Social Hygiene Service. On the other hand, methods suitable for widespread dissemination of health education, as in the immunization campaigns amongst the general public, are accorded a somewhat apathetic reception. However, a general response to mass propaganda can now be expected in the threat of an epidemic of major importance as was the experience during the cholera outbreak.

257. A number of other departments are concerned with various aspects of Health Education in their respective spheres. The Inter-departmental Committee on Health Education formed in 1959 continued to concentrate its efforts on the furtherance of the anti-diphtheria campaign. Health exhibits were included in the Agricultural Show in the Sai Kung district of the New Territories in September 1961 and in the Fisheries Exhibition in Aberdeen during the Chinese New Year in February 1962.

258. 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.

259. A small health education team, formed during the year 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 service combined curative treatment with advice on environmental hygiene and the prevention of disease during visits to isolated coastal and inland villages.

IV. THE WORK OF THE MEDICAL DIVISION

260. The demands on the clinic and hospital services provided by Government continued to increase during the year. The point has been reached where these demands are barely contained by exploiting successive *ad hoc* arrangements and any delay in the implementation of hospital and clinic development plans will inevitably reproduce soon the grave situation experienced five years ago. The steady influx of immigrants with few or no resources who have yet to establish themselves in the community throw a heavy demand on the low cost general ward and clinic services. Assuming an annual influx of only 50,000 new residents and a natural increase of 90,000, the net annual gain in beds, doctors and clinics required to maintain existing ratios of provision is 438 beds, forty six doctors and one major urban clinic respectively. This does not take into account the service to temporary residents who come in specifically for medical treatment.

261. Figures I and II below indicate the outpatient attendances, the provision of beds and the admissions to Government institutions during the five year period 1957 to 1961:

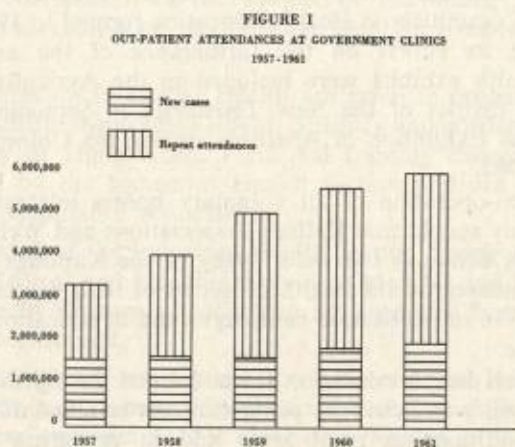
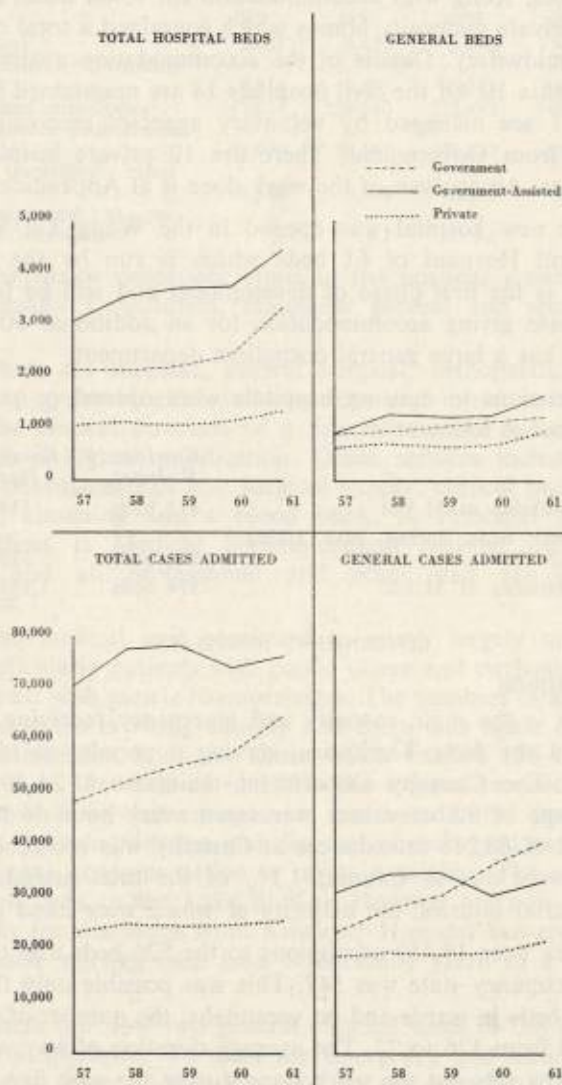


FIGURE II
HOSPITAL BEDS
(Excluding Maternity Homes)



HOSPITALS

262. By the end of 1961 there were 40 civil hospitals and nursing homes in Hong Kong with accommodation for 9,464 beds. In addition there were private maternity homes which contained a total of 480 beds for normal midwifery. Details of the accommodation available are set out in Appendix 10. Of the civil hospitals 14 are maintained by Government and 11 are managed by voluntary agencies receiving recurrent subventions from Government. There are 10 private hospitals and 5 nursing homes. An analysis of the work done is at Appendices 9 and 11.

263. One new hospital was opened in the Wong Tai Sin district, the Maryknoll Hospital of 61 beds which is run by the Maryknoll Sisters. This is the first phase of development and will be followed by a second phase giving accommodation for an additional 50 paediatric beds. It also has a large general outpatient department.

264. Extensions to existing hospitals were opened or put into use during the year as follows:

	<i>Kowloon Hospital</i>	<i>Kwong Wah Hospital</i>
Beds available at 31.3.61	413 beds	534 beds
Additional beds during year ended 31.3.62	161 beds	519 beds
Beds available at 31.3.62	574 beds	1,153 beds

GOVERNMENT HOSPITALS

Kowloon Hospital

265. This is the main casualty and emergency receiving centre for Kowloon and the New Territories, serving a population of just over two million. The Casualty Department maintains a 24 hour service and an average of 9.8 casualties were seen every hour throughout the year. A total of 86,218 attendances at Casualty was recorded of which some 52% were due to trauma; 1.1% of the total attendances were due to industrial injuries, the majority of which were hand injuries.

266. There were 19,459 admissions to the 526 beds and the average daily bed occupancy state was 547. This was possible only through the use of camp beds in wards and on verandahs; the number of camp beds in use varied from 126 to 27. The average duration of stay was 7 days. Table 22 below sets out the work done during the past five years.

TABLE 22

KOWLOON HOSPITAL 1957-61
Including Casualty and Outpatient Departments

	1957	1958	1959	1960	1961
Maternity Cases	2,861	3,472	3,646	4,372	4,749
General Inpatients (excluding Maternity)	7,819	10,695	13,242	16,052	19,459
Total Outpatient attendances	547,026	558,010	532,492	547,592	605,654
Casualties attended (included in above figures)	51,986	70,191	71,627	80,333	86,218
Operations (excluding minor ones)	4,884	5,704	6,571	7,584	9,257
Mortality (expressed as percentage of admissions)	5.6	6.2	5.5	6.4	6.5

267. The major outpatient clinic in the hospital grounds, adjacent to the Casualty Department, maintains general and specialist clinic services.

268. There are medical, general surgical, orthopaedic, paediatric, obstetric and gynaecological and ear, nose and throat units. Each unit is under the clinical direction of a Specialist or of a Senior Medical Officer with a higher qualification. Other services include diagnostic radiology, pharmaceutical and surgical supply, clinical pathology, physiotherapy, almoning and a blood bank. A Principal Medical and Health Officer is Medical Superintendent, assisted by a Hospital Secretary, and all professional and other staff are provided by Government.

269. The medical unit continued to admit largely medical emergencies particularly patients with peptic ulcers and cirrhosis of the liver who presented with gastric haemorrhages. The numbers of acute cerebrovascular accidents is rising sharply and there was again a marked increase in admissions from this cause which totalled 136 in 1961 compared to 107 in 1960 and 66 in 1959. The imperative need for a quick turnover of beds so that emergencies can be admitted poses a serious problem of the rehabilitation and disposal of recovered cases for whom adequate home accommodation is rarely available. The relatively few convalescent beds in the Lai Chi Kok Hospital are now used largely for cases fit for discharge from Kowloon Hospital but requiring more comprehensive nursing care than is normally given in a convalescent hospital.

270. There are now two general surgical units in the hospital each headed by a Specialist. To meet the emergency and trauma needs the two operating theatre suites are working on a 24 hour basis and an

average of 25 major operations were performed each day throughout the year. Head injuries and severe burns continued to increase in numbers and the main non-traumatic emergency is acute cholangitis. In the non-acute field, the range of surgery was wide, including closed heart and pulmonary surgery. In one surgical unit some 50 radical excisions of the oesophagus were performed. The second surgical unit formed has enabled a wider scope of plastic surgery to be undertaken, the specialist in charge having recently returned from a course of study of modern techniques in this field.

271. As would be expected under existing conditions, the orthopaedic unit dealt mainly with admissions due to trauma which accounted for 90% of the total. There has been a significant rise in the number of fractures of the neck of the femur in elderly people.

272. With a population containing 40% of children under 15 years of age, increased bed accommodation for paediatric cases has been essential. The opening of one new paediatric ward resulted in an increase of admissions to the Paediatric Unit by 51.5% during the first 3 months of 1962. In addition a convalescent ward for children was allocated in the Lai Chi Kok Hospital which has greatly helped the turnover in the acute beds. Bronchopneumonia, gastroenteritis and burns have accounted for the majority of admissions.

273. A helicopter landing strip was completed at the hospital in March 1962, which enables emergencies from outlying districts to be brought direct to the grounds. One case from Tai O, the most distant township in the Colony, was actually in bed in a surgical ward twenty-five minutes after being put on board the helicopter. This journey normally takes five to six hours by launch and ambulance.

Queen Mary Hospital

274. This hospital of 601 beds on Hong Kong Island is the largest Government acute hospital in the Colony. It is the University Teaching Hospital and the Specialist Centre for Hong Kong Island. There is a Casualty Department which receives all emergency cases from the Island and serves a population of one million. There is no general outpatient department at the hospital.

275. The University Departments of Medicine, Surgery, Orthopaedics and Obstetrics and Gynaecology are all under the direction of a Professor and carry the clinical responsibility for a total of 296 beds. There are Government Medical, Surgical, Paediatric, Radiology, Radiotherapy, Neurosurgery, Thoracic Surgery, Anaesthetic and Ear, Nose and Throat

Units, each in charge of a Specialist. All nursing and other staff are provided by Government. There are Pharmacy and Surgical Supply, Physiotherapy, Occupational Therapy, Blood Bank and Almoning Services. The Clinical Pathology is carried out by the University Department of Pathology. The Medical Superintendent is a Government Principal Medical and Health Officer and is assisted by a Hospital Secretary.

276. Specialist outpatient clinics are held at the Sai Ying Pun Polyclinic by the University and some Government clinical units. Government specialist clinics are also held at the Violet Peel Polyclinic.

277. Throughout the year, there was a daily bed-occupancy averaging 720 with an average duration of stay of 14 days. The pattern of emergency admissions is broadly the same as in Kowloon and required the use of camp beds varying between 110 and 90 with a daily average of 100.

278. The Casualty Department, which provides a 24 hour service, dealt with 58,559 attendances during the year. There is a helicopter landing strip close to the hospital.

279. There were 18,247 admissions during the year and the table below sets out the work done over the past five years.

TABLE 23
QUEEN MARY HOSPITAL 1957-61
Including Casualty and Outpatient Department

	1957	1958	1959	1960	1961
Maternity Cases	1,950	1,975	1,962	2,144	2,324
General Inpatients (excluding Maternity)	11,775	12,994	13,224	15,133	15,923
Total Outpatient attendances ..	42,513	44,845	53,306	47,437	58,559
Casualties attended (included in above figures)	13,896	18,101	22,307	23,402	41,936
Operations (excluding minor ones)	6,977	7,230	7,212	8,160	8,420
Mortality (expressed as percentage of admissions) ..	6.4	7.3	7.5	7.0	7.3

Tsan Yuk Hospital

280. This is the main specialist obstetric hospital in the Colony and the clinical supervision of the 200 beds is undertaken by the University Professor of Obstetrics and Gynaecology. She is assisted by her University Lecturer Staff and by Government Medical and Health Officers; all nursing and other staff are provided by Government.

281. It is the teaching centre in Obstetrics for medical undergraduates and the training school for midwives who are undergoing the

two year course conducted in Cantonese and who have not trained as general nurses.

282. Admissions to the hospital are now mainly from amongst those women registered at the hospital ante-natal clinic, and 94.8% of the admissions were primiparae, 'grand' multigravidae, women with a previous history of abnormal labour or referred patients who are in need of specialist care. The rest of the admissions were emergency cases referred by private midwives, general practitioners or the Government Midwifery Service.

283. The work carried out during the year is set out in Table 24.

TABLE 24
WORK OF THE TSAN YUK HOSPITAL 1960-61

	1960	1961
Total admissions	7,251	7,774
Total deliveries	6,416	6,664
Still-birth rate (per 1,000 total births)	9.70	12.34
Neo-natal mortality rate (per 1,000 live births)	12.17	13.71
Maternal mortality rate (per 1,000 total births)	0.16	0.77
Percentage operative deliveries	20.12	21.13

284. Ante-natal and post-natal clinics are held weekly and consist of 6 ante-natal and 2 post-natal sessions. Since July 1961 an appointments system has been in use and has been found to be satisfactory. Patients who are not within the categories which are registered at these clinics for admission to Tsan Yuk are referred to Government Maternity Homes or to private midwives for their confinements. There were 37,158 attendances at ante-natal sessions and 3,925 attendances at post-natal clinics. A Health Visitor from the Maternal and Child Health Service attends to give health talks, lasting 20 minutes, twice each week. During the ante-natal sessions milk drinks are given to the pregnant women, the supplies of milk coming through the good offices of social welfare agencies.

285. There are special consultant clinics during each week for medical conditions complicating pregnancy and for venereal diseases. The Family Planning Association also holds a clinic in the hospital out-patient department twice each week.

Castle Peak Hospital

286. This modern psychiatric hospital of a nominal 1,000 beds was opened by His Excellency the Governor on the 27th March, 1961. Sited in spacious grounds where the patients can have exercise, recreation and some outside work, every attempt has been made to preserve an

open appearance and give as much freedom as is possible. Of two storey pavilion structure, the wards are light and airy and the ancillary services include a large occupational therapy department, facilities for physiotherapy, electro-encephalography and an operating theatre which can be used for neuro-surgery. Within the hospital, one block of 120 beds has been set aside for the treatment and rehabilitation of drug addicts who come forward voluntarily for treatment. There is also a School of Psychiatric Nursing to which reference is made in paragraph 465.

287. The hospital is in the New Territories, some 22 miles from Kowloon and there is direct public transport between town and hospital. The majority of admissions are voluntary and come through the Hong Kong Psychiatric Centre situated in the former Victoria Mental Hospital on Hong Kong Island. This is also the main outpatient and Day Hospital from which patients discharged on trial from Castle Peak are supervised and where therapy is continued.

288. The new hospital settled down remarkably quickly considering its size and it is not without significance that additional beds have already been fitted in to the new wards giving a total 1,119 beds available.

289. An additional psychiatric outpatient clinic was opened during the year in Tsuen Wan where a session is held once a week, conducted by staff from Castle Peak. Plans are in hand to establish a Psychiatric Centre with day hospital facilities in Kowloon and proposals have also been made for the re-housing of the Hong Kong Island Centre. The Almoning Service which has trained psychiatric social workers on the staff has broadened and expanded this section of its activities to keep pace with the developments of the Mental Health Service.

290. The work done at the hospital and the associated Psychiatric Centre and Day Hospital is recorded in Table 25.

TABLE 25
CASTLE PEAK HOSPITAL 1961

	Male	Female	Total
Total admitted	834	477	1,311
1st admissions	417	347	764
Re-admissions			
Total admissions	1,251	824	2,075
Discharged, including transfers and *deaths	984	821	1,805
Total patients treated in hospital	1,805	1,280	3,085
Voluntary patients	957	749	1,706

* There were 29 male and 14 female patients who died in hospital.

For convenience, the work of the outpatient centres and the Day Hospital is recorded here.

TABLE 26

HONG KONG PSYCHIATRIC CENTRE

<i>Day Hospital</i>				<i>Male</i>	<i>Female</i>	<i>Total</i>
Admitted 1961	...	...	...	65	77	142
Discharged 1961	...	...	...	53	53	106
Total treated	...	...	...	69	79	148
<i>Outpatient Clinics</i>				<i>First Attendances</i>	<i>Subsequent Attendances</i>	<i>Total</i>
Hong Kong	...	...	...	1,116	9,636	10,752
Tsuen Wan	...	...	...	106	319	425
Totals	...	...	...	1,222	9,955	11,177

291. A variety of therapeutic approaches to the treatment of psychiatric disorders have been employed. No new drug therapy was introduced during the year but increasing emphasis is placed on drug combinations adjusted according to the stage of the illness. Psychotropic preparations, physical treatments and psychotherapy were all employed although there was considerably less use made of insulin shock therapy. While leucotomy was little used, the services of the Neurosurgical Specialist at the Queen Mary Hospital were well utilized, primarily for diagnostic investigations; once the operating theatre at the Castle Peak Hospital can be more fully used, it is probable that this work will be undertaken there. In the Day Hospital several patients were given courses of autogenic training and this form of 'fractional hypnosis' gave satisfactory results.

292. It is appropriate here to pay a special tribute to the staff of the Mental Health Service for the practical and cheerful way they have faced the problems arising during this first year's work in the new hospital. In this, they have been greatly assisted by the Architects and maintenance staff of the Public Works Department as well as the staff of the Department of Agriculture and Forestry who have done good work in developing the grounds.

Drug Addiction Treatment and Rehabilitation Centre

293. This Centre was opened at the Castle Peak Hospital in March 1961, as a pilot venture to assess the effectiveness of a system of voluntary treatment for drug addiction, the root causes of addiction in the voluntary group affected and the pattern of rehabilitation most suited to the social circumstances in Hong Kong. The Drug Addicts Treatment

and Rehabilitation Ordinance, 1960 gives the necessary statutory backing and addicts who volunteer for treatment are required to surrender their liberty for a period of not less than 6 months.

294. There is an Addiction Clinic in the Hong Kong Psychiatric Centre where addicts desirous of treatment can register. Initially large numbers came forward to register and as the accommodation in the two wards available at the hospital was limited, it was obvious that some criteria of selection had to be imposed. Registration was started on the 1st February and by the end of the first 4 weeks, 201 persons were on the register. At the end of the year, 583 addicts were registered of whom 162 had been admitted to the Treatment Centre and 112 of these had been discharged.

295. In consultation with the Narcotics Advisory Committee certain criteria for selection for treatment were laid down. The cardinal points are a genuine desire to be rid of the habit, good prospects of re-employment on discharge, an absence of any record of serious crime and freedom from severe mental or physical disease. On registration all who come forward are documented. Their employment situation is investigated by a representative of the Secretariat for Chinese Affairs, a thorough physical examination including an X-ray is carried out and they are then interviewed by a psychiatrist. Thereafter, the Almoner investigates the social history and, as a rule, interviews wives or relatives. Once the case notes are completed they are assessed by the psychiatrist in charge of the Treatment Centre and a decision taken on immediate admission or otherwise. If selected for admission, notification is sent through the Secretariat for Chinese Affairs. On admission the patient is given an explanation by the Almoner of the implications of signing the admission form which, once signed, gives statutory authority to detain the addict for up to six months. Thereafter discharge is at the discretion of the Medical Superintendent of the Hospital, subject to any appeal to a statutory Board of Appeal. All documents concerning an addict who comes forward voluntarily are privileged and cannot be admitted as evidence in Court on a charge made under the Dangerous Drugs Ordinance.

296. On admission, treatment is commenced by the substitution of methadone according to the intensity of withdrawal symptoms and the methadone itself is withdrawn over a period of one to two weeks. Adjunctive symptomatic treatment is also given, where necessary, to relieve distress. Many cases are physically ill and most are malnourished.

Therefore skilled medical and nursing care are essential at this time, the patients being treated in bed in the wards.

297. After some three weeks during which the physical and mental condition improves markedly and considerable weight is gained, the programme of occupational and recreational therapy is started. Domestic work, tailoring, wood-work, shoe repairing and gardening are allocated according to circumstances and there is an incentive scheme of payments which are credited to individual accounts. Some of the money can be used for purchases of sweets and additional foods and to support group incentives in the way of traditional dinners, operas and cinema shows. However, the major part of the payments is held as a credit, to help re-establishment expenses on discharge. Recreation includes table tennis, cards, mahjong, dominoes, music parties, football, net ball, walks, outings and swimming.

298. During this period of rehabilitation the Almoner interviews patients in the ward, and builds up a basis of understanding with a view to follow up work on discharge. Contact is also made with relatives and with employers to try and ensure that the patient is given every assistance to re-instate himself when he leaves hospital.

299. After leaving hospital, patients are encouraged to come and see the Almoner once weekly for the first 3 months. If contact with the patient is not regular, a relative is asked to attend. Complaints of physical ailments, which are frequent, are referred to a general out-patient clinic and, where appropriate, the advice of the psychiatrist is sought. A club of ex-addicts has been formed which meets once a week, the Almoner attending as an observer who is there to guide the club activities and discuss points of general importance raised by the group.

300. While in the Centre a patient may be given leave to attend to family affairs or to make arrangements about a job. If suspected of a relapse while on leave the nalline test is applied. It has been found that the judicious granting of short periods of leave has been well worth while and, on the whole, the privilege has been respected.

301. Research is proceeding into the socio-economic background and clinical characteristics of addicts in Hong Kong, into the basic nature of addiction and into the place of aversion therapy in preventing relapse. Personality studies are also being conducted in which the Chinese version of the Maudsley Medical Questionnaire was given to an unselected group of addicts, the Questionnaire having been previously validated against psychoneurotic outpatients. While there is evidence

that addicts are more neurotic than the average person, clinical experience shows that any specific type of addictive personality cannot as yet be clinically delineated. It is possible to say, however, that as a group they have, for varying reasons, an inability to postpone pleasure and a low tolerance for tension arising from unsatisfied desires.

302. Much useful information has been accumulated as a result of the first year of work. It is too early to reach any categorical conclusions, but valuable experience in management has been gained. A scheme of voluntary treatment appears to fulfil a real need but it is most important to exercise a high degree of selection for admission if the limited staff and facilities available are to be put to the best use. This has been emphasized by experience of the first group of 62 addicts admitted who were entirely unselected other than the selection inherent in the fact that registration was voluntary. This group contained a number of persons, about one-third, with a bad criminal record which had not been disclosed. They were aggressive, lacking in self-discipline and at times, violent. Once the bad elements had been assessed and weeded out, much more progress was made and the patients in the centre settled down.

303. The crucial stage in treatment is after the withdrawal period is over and the patients are gaining weight and energy. They then become restless, start to worry about the future and are anxious to get back to their families. This is when a well disciplined programme of rehabilitation and recreation must be rigorously imposed. Material incentives and short periods of leave thereafter are valuable adjuncts to the programme. Once discharged, success depends on active follow-up and support which involves patient, employer and any relevant social agency that can contribute.

304. Treatment and rehabilitation in the Centre is a first but essential phase in a long process. The assessment of cures will have to be made very cautiously over a long period. It is much too early to say other than that a scheme of voluntary treatment is well worth while. The crux of full success is to cut off supplies of addicting narcotics at the source. Thereafter, there will be many addicts of long standing who will continue to be a social problem but there will also be a substantial number who can be rehabilitated for a return to a worth while and productive life.

305. The following table indicates the turnover of patients during 1961. The relatively short average duration of stay is largely due to the

necessity to discharge in the early stages a number of individuals who proved quite uncooperative in treatment. These data apply to male addicts only and the relatively few female addicts who volunteer for treatment are treated as voluntary patients in the women's section of the hospital, under the provisions of the Mental Health Ordinance, 1960.

TABLE 27

ADDICTION TREATMENT CENTRE—CASTLE PEAK HOSPITAL

Total patients admitted	...	...	...	...	...	162
Total patients discharged	...	...	...	...	...	112
Average length of stay of patients discharged	...	...	...	...	...	109 days
Maximum length of stay	...	...	...	...	...	165 days
Minimum length of stay	...	...	...	...	...	1 day
<i>Reasons for premature discharge</i>						
Employment available at once and prognosis good	...	...	...	...	...	31
Disciplinary infringements	...	...	...	...	...	16
Did not return from leave	...	...	...	...	...	9
Others—including severe physical illness uncovered during withdrawal	...	...	...	...	...	5
Total	...	...	...	...	...	61

306. The Hong Kong Society for the Aid and Rehabilitation of Drug Addicts is building a rehabilitation centre on Shek Kwu Chau Island some 14 miles from Hong Kong. This centre will initially have accommodation for 240 addicts with workshop and other facilities. It is proposed to channel admissions through the Treatment Centre at Castle Peak Hospital where medical and nursing care will be given during the withdrawal period and the medical and psychological assessments made. The Society, a voluntary body, will be responsible for the capital and recurrent costs of the Island Centre to which Government is making capital and recurrent subventions.

Lai Chi Kok Hospital

307. This hospital of 479 beds situated on the outskirts of Kowloon consists of 12 two storey buildings, originally converted for use as an infectious diseases hospital for Kowloon and the New Territories. However, its function has changed under the pressure on acute hospital beds and it now has 241 convalescent beds, 150 infectious diseases beds and 88 tuberculosis beds. It is entirely staffed by Government.

308. The convalescent beds are used mainly for patients transferred from Kowloon and Queen Mary Hospitals. Numbers of these patients are, in fact, 'semi-acute' and in the immediate post-emergency phase.

Accordingly, much more nursing care is provided than is generally required for convalescent beds. However, there is also a number of long stay cases such as paraplegics who cannot be discharged on account of quite unsuitable home conditions.

309. The infectious diseases section admitted mainly cases of diphtheria, typhoid, tetanus and measles with broncho-pneumonia. Other conditions treated during the year were tuberculous meningitis, poliomyelitis and bacillary and amoebic dysentery. During the cholera outbreak, one block was set aside as a treatment unit for a period of seven weeks from the 17th August.

310. Out of 1,885 admissions to the Infectious Diseases Section 925 were on account of diphtheria with a fatality rate of 7.4%; tracheotomy was necessary for 190 of these patients. The predominant strain of Cl. Diphtheria was of the mitis type.

311. The pulmonary tuberculosis unit admits patients who are being prepared for Thoracic surgery or who require a period of medical treatment in hospital. Ten beds are now set aside, since November, 1961, for the acute emergencies arising in pulmonary tuberculosis and which are usually referred direct from the Kowloon Hospital Casualty Department.

312. Physiotherapy and occupational therapy units are maintained full time as well as an Almoning Service. There is also a school for long-stay children which is run by the Hong Kong Branch of the British Red Cross Society.

Sai Ying Pun Infectious Diseases Hospital

313. This hospital of a nominal 88 beds is on Hong Kong Island and is used entirely for the treatment of infectious diseases; the daily average in-patient state is usually over 100. Table 28 below details the causes of admission during 1961.

TABLE 28
INFECTIOUS DISEASE HOSPITALS 1961

	Cases Admitted	Deaths	Case Fatality Rate (per cent)
Diphtheria	1,176	100	8.50
Typhoid	369	1	.27
Tetanus	154	75	48.70
Amoebic dysentery	108	1	.93
Bacillary dysentery	407	4	.98
Poliomyelitis	147	30	20.41
Tuberculous meningitis	33	14	42.42
Measles	279	36	12.90

314. Specialist clinics are held at the hospital twice weekly for surgical, gastric, genito-urinary and ear, nose and throat conditions arising as the result of infectious diseases. Audiometry tests are carried out on two days each week as part of the E.N.T. Service.

315. In the course of the cholera outbreak, the staff of this hospital also took over the work of the Island cholera treatment unit established in the nearby male block of the old Mental Hospital.

St. John Hospital

316. 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. The floating clinic which serves the islands in this area uses Cheung Chau as a base. Specialist clinics for tuberculosis, paediatrics, medicine, dental, eye, social hygiene and skin diseases are also held at the hospital which provides accommodation for patients from Cheung Chau and the neighbouring islands who require general medical and minor surgical treatment which cannot be given on an outpatient basis. Those requiring medical or surgical specialist treatment are transferred to Hong Kong Island.

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

Wan Chai Hospital

318. This small 30-bed hospital, originally intended for the inpatient 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 there.

319. 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

320. This small hospital of 17 beds serves the workers on the Shek Pik Reservoir project and the villagers on the south-west coast of Lantau Island. The Medical Officer-in-Charge is also responsible for the dispensary at Mui Wo, serves as Health Officer for the area and visits the sick bay at Her Majesty's Prison at Chi Ma Wan.

Prison Hospitals

321. Hospitals under the care of Medical Officers are maintained at the Stanley Male Prison, the Victoria Remand Prison, the Lai Chi Kok Female Prison and the Tai Lam Prison, the latter being used exclusively for the rehabilitation of prisoners who are also drug addicts. A small sick-bay at Chi Ma Wan Prison is visited regularly by a Government Medical Officer.

322. At Stanley Prison there is a hospital of 90 beds for the accommodation of prisoners who require treatment for conditions which do not warrant transfer to another hospital. Regular visits are paid by specialist staff from the units in general medicine, tuberculosis and social hygiene. In July 1960, an in-service course of training in elementary nursing for Prison Hospital staff was started.

323. At Victoria Remand Prison, the hospital has been expanded to a total of 59 beds to provide isolation facilities and to accommodate the numbers of drug addicts under remand who are suffering from withdrawal symptoms. One of the prison blocks was converted into a Psychiatric Observation Unit in June 1961 for the observation and treatment of mental cases. It is staffed by 2 Prison Officers qualified in psychiatric nursing and 14 Hospital Warders under in-service training. The unit is under the clinical control of the Senior Specialist in Psychiatry and members of his staff pay regular visits to all main prisons and training centres to advise on the numerous psychiatric and personality problems encountered amongst prisoners.

324. The specialist prison at Tai Lam Chung for the treatment and rehabilitation of convicted male drug addicts continues to give encouraging immediate results, but no assessment of the relapse rate after discharge has yet been possible.

GOVERNMENT-ASSISTED HOSPITALS

325. There are 26 voluntary bodies receiving direct subventions from Government for work in various medical fields including the maintenance of 16 hospitals and related institutions. Mention has already been made in paragraphs 186 to 192 and 195 of these dealing entirely with tuberculosis namely, the Grantham Hospital, the Ruttonjee Sanatorium and Freni Memorial Convalescent Home and the Haven of Hope Sanatorium.