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Health Department Annual Report

1956

1. Background Information

- 1. Zanzibar Protectorate consists of two islands—Zanzibar and Pemba. The former is about fifty miles long by twenty-five wide, and 640 square miles in extent, and the latter is about forty miles long by fifteen miles wide, and of about 380 square miles in area.
- 2. The climate is tropical and generally enervating. From December to March, when the north east monsoon blows, it is hot and dry. In Apri and May the heavy rains occur while from June to October when the south west monsoon blows it is coolest and driest. The average annual rainfall is about sixty inches in Zanzibar and seventy-three inches in Pemba.
- 3. The total population of the Protectorate as determined at the last census (1948) was approximately 265,000. Of this total approximately 150,000 live in Zanzibar Island and 115,000 in Pemba.
- 4. The racial composition of the population was stated in 1948 to be as follows:—

 Africans
 ...
 199,860

 Arabs
 ...
 44,560

 Indians
 ...
 15,211

 Europeans
 ...
 296

 Others
 ...
 4,235

5. The majority of the population live in the rural areas of the two islands, the only towns, with their approximate populations, being—

 Zanzibar
 ...
 45,000

 Wete (Pemba)
 ...
 10,000

 Chake Chake (Pemba)
 ...
 3,500

 Mkoani (Pemba)
 ...
 1,000

- 6. The vast majority of the population profess the Muslim faith.
- 7. The majority of the people are engaged in agricultural pursuits and in fishing. Those in the towns are in public or private employment or in business and trading.
- 8. The staple diet of the rural communities is rice or cassava supplemented by fish, coconut, fruits and vegetables.
- The country's revenue is derived chiefly from taxes on the export of cloves and copra, and from import dues.
- 10. With the exception of a small nursing home in Zanzibar town, maintained by the Ismaili Khoja community, and a small maternity home, administered by the Zanzibar Maternity Association, all hospitals in the Protectorate are Government institutions.

- 11. There are twelve private medical practitioners in Zanzibar island and four in Pemba.
- 13. There are six licensed druggists all of whom are established in Zanzibar town.
- 14. The estimated Protectorate expenditure for 1956 was £2,429,044 of which £273,888 was devoted to Health Services representing approximately ten per cent of the total budget.

2. General Remarks

- 1. The most memorable event of the year was the visit in October of Her Royal Highness Princess Margaret to the Protectorate. Apart from the pleasure which the occasion afforded to all it had many side effects not the least of these being the spontaneity of effort on the part of so many people to tidy up their homes and environs. Houses were redecorated, dead tree stumps, old motor cars and chassis, surplus building stone and general items of rubbish were removed, compounds were tidied and all this without any organised effort by public authorities. The result was most gratifying and what is more many of the people have since said "we must keep it this way".
- 2. As the Executive Council has been enlarged during the year by the addition of unofficial representatives, one of the unofficial members of Executive Council has recently been attached to the Health Department and is in the process of being introduced to the various aspects of the department's work.
- 3. The only event of epidemiological interst during the year was an outbreak of smallpox in Pemba. The infection was however quickly brought under control and no deaths occurred. Details are given in the body of the report.
- 4. Rains have been scarce particularly in Zanzibar island and in consequence water is generally in short supply. Some wells normally adequate throughout the year are now dry and shamba owners are even having to obtain water by tanker.
- 5. Possibly as a result of the dry weather the latter part of the year saw a heavy invasion of hairy caterpillars particularly in the residential district of the town. These have caused quite widespread urticaria amongst the townpeople and have even been the subject of questions in Legislative Council. The trees particularly affected were sprayed with endrin with temporary improvement but the Government Entomologist is of the opinion that this measure has destroyed in large numbers a natural parasite of the caterpillar and he now questions the wisdom of the widespread use of insecticide. A new method of control is under trial which consists of "ringing" the trees with endrin in resin in the hope that the caterpillar, descending, as it does, the tree trunk before pupation, will be destroyed.

3. Staff

The Staff of the Department as at 31st December, 1956 was as follows:—

Post		E	Approved stablishment	Actual Staff
Director of Medical Service	es		1	1
Surgical Specialist			1	1
Senior Medical Officer*			1	1
Pathologist			1	1
Medical Officers			9	8
Medical Officers (E.A.)			2	2
Assistant Medical Officers			8	8
Dental Surgeons			3	3
Matron			1	1
Superintendent, Mental Ho	ospital		1	1
Sister Tutor			1	
Nursing Sisters			13	12
House Keeper			1	1
Health Superintendents			2	2
Pharmacist/Storekeeper			1	1
Laboratory Technologist			1	1
Radiographer			1	1
Office Superintendent			î	1
Assistant Laboratory Supe	rintenden	t	1	1
Assistant Health Superinte			i	1
Accounts Assistant			î	î
Storekeeper			î	1
Senior Dispensers			2	2
Senior Laboratory Assistan			ī	-
Senior Health Inspectors			4	4
Senior Staff Nurses			4	9
Staff Nurses			225	164
Dispensers			5	5
Laboratory Assistants			5	5
Health Inspectors			30	19
Clerks and Stenographers	The second	***	18	18
Miscellaneous and Subordin	nata Staff		373	
Miscenaneous and Subordi	nace stan		010	353

*Held against Medical Officer grade.

- The senior staff position improved steadily during the year and by December all senior posts were filled with the exception of that of the sister tutor.
- 3. In respect of the junior posts there is still a great shortage of trained nursing staff as is shown by the difference between the actual and the approved establishment in the preceding staff table. This illustrates the need to press forward with nurses' training. It is estimated that at the present rate of intake it will be seven to eight years before all vacancies can be filled.
- 4. The private practitioner in Mkoani, Pemba, who was engaged on a part-time basis to help at the local hospitals resigned in September. The hospital is now in charge of a locally trained staff nurse who is visited weekly by the doctor from Chake Chake.
- 5. Mr. Mohamed Ali Remtulla, Assistant Health Superintendent, was awarded the Brilliant Star of Zanzibar (4th Class) during the year.

4. Visitors

The following visitors from overseas were shown various aspects of the Department's work.

- Dr. G. W. Gale, Professor of Preventive Medicine, Makerere College.
- Dr. D. Bagster-Wilson, O.B.E., Director Institute of Malaria and Vector-borne Diseases, Amani.
- Professor T. H. Davey, O.B.E., Professor of Tropical Hygiene, Liverpool.
- Dr. K. A. T. Martin, Public Health Officer, W.H.O. Nairobi.
- Miss Lyle Creelman, Chief of Nursing Section, W.H.O. Geneva.
- Dr. A. M. M. Wilson, Lecturer in Bacteriology, Makerere College.
- Dr. F. J. C. Cambournac, Regional Director for Africa, W.H.O. Brazzaville.
- Dr. V. Sutter, Assistant Director General, W.H.O. Geneva.
- Hon. Dr. S. Radhakrishnan, Vice-president of India.
- Dr. W. D. Lovett, O.B.E., Acting Director of Medical Services, Somaliland Protectorate.
- Sir Gordon Covell, c.i.e., Adviser on Malaria, Ministry of Health United Kingdom.
- Dr. K. W. C. Sinclair-Loutit, W.H.O. Medical Adviser to UNICEF Paris.
- Mr. Neale B. S. Hewett, UNICEF Representative for Eastern area of Africa.
- Dr. R. B. Baird, Director, Public Health Laboratory, Salisbury, S. Rhodesia.

5. Training

Overseas Training

- The Assistant medical officer sent last year to the United Kingdom to attend the D.P.H. Course at St. Andrew's University returned in July having obtained his qualification.
- A second assistant medical officer continues her studies in London with a view to obtaining a registrable qualification.
- One medical officer obtained his Diploma in Tropical Medicine and Hygiene during the year.
- 4. A senior health inspector was awarded a scholarship by the World Health Organisation to attend a six weeks course of instruction in public health at the London School of Tropical Medicine.
- A locally trained dispenser is at present attached to the pharmaceutical department of the University College Hospital, London, for a six months course of practical instruction.

- A health inspector was sent to Kapsabet in Kenya to study the technique of residual spraying using dieldrin and on his return undertook the training of local spraying teams.
- 7. Another health inspector was sent to the East African Institute of Malaria and Vector-borne Diseases at Amani in Tanganyika to work with the Institute's entomologist and has since been conducting field experiments under the former's direction.
- 8. One Zanzibar student obtained his medical qualification at Makerere College in December, 1956, and is about to start his compulsory internship at Mulago early in 1957. There are thirty-one students from Zanzibar studying medicine overseas.

Local Training

1. The training of male and female staff nurses was continued during the year but only under considerable difficulties, as the post of sister tutor has been vacant throughout the entire year. The situation was made no easier by the fact that for the first nine months of the year the Department was also without the services of a matron. This post has now, however, been filled by an officer who possesses a sister tutor's qualification, and she is thus able to direct the training work which in the absence of a tutor is being conducted by one of the nursing sisters. There were sixty-three probationer nurses in training during the year, forty-three being males and twenty females. These were distributed as follows:—

		Male	Female	Total
First year probationers		21	.8	29
Second year probationers		10	7	17
Third year probationers	***	12	5	17
Total		43	20	63
		-	-	

In December, 1956, ten of the third year probationers passed the final examinations, two were deferred for a year and the remaining five failed and were offered posts as hospital orderlies.

The failure rate is high and is likely to continue so until candidates for training are available with a higher standard of education. Relatively few secondary school boys and girls appear interested in nursing as a profession with the result that only those who are Standard VIII failures apply. The reasons for this evident disinterest have been discussed with those most concerned with training and with the Director of Education and they appear to be as follows:—

- (a) The long hours of work as compared with other Government appointments.
- (b) The lack of hostel or other suitable accommodation especially for female probationers.
- (c) The aversion to "mixed" classes.

- (d) The relatively poor prospects of promotion to the higher grades in the service.
- (e) The unwillingness of the male nurse to accept female authority.
- (f) The dislike of the term "nurse" as applied to male staff.
- (g) The objection in the case of male nurses to the wearing of short trousers as part of the uniform.

An ad hoc committee under the chairmanship of the Director of Medical Services recently considered these points and is now formulating plans which it is hoped will create a greater local interest in nursing as a profession.

- 2. Plans for the training of rural health workers and health visitors with the help of World Health Organisation and United Nations Children's Fund were formulated during the year. A health visitor tutor has already been nominated by World Health Organisation and is expected to arrive in June, 1957. Meanwhile a group of fifteen trainees for rural health work is being engaged by the Health Superintendent who plans to give them an introductory course of instruction in anticipation of the early arrival of the W.H.O. tutor. It is gratifying to record that nine of these trainees are secondary school products.
- 3. In the absence of a Pathologist and also (for the earlier part of the year) of a Laboratory Technician no systematic training of laboratory assistants was possible. A syllabus has now, however, been planned and "in service" training will commence in January, 1957. One of the candidates recruited for training has the Cambridge School Leaving Certificate and will, it is hoped, after preliminary training in Zanzibar, go overseas to obtain a full technological qualification.
 - 4. The "in service" training of dispensers continued as usual.
- 5. It was not possible in the absence of a sister tutor to conduct any course in midwifery for female staff nurses during the year.

6. Hospitals and Dispensaries

General Hospitals

The distribution of beds in the various hospitals of the Protectorate was detailed in the 1955 Report. During the year an additional eighty-five beds were made available in the Hassanali Karimjee Jivanjee Hospital for the treatment of tuberculosis by the commissioning of the main block of the old hospital for the purpose. These together with the tuberculosis beds at the Zenubbai Karimjee Hospital at Dole make a total of 115 beds for the treatment of this disease. The revised bed state for 1956 is therefore:—

Zanzibar	 324	(including Dole
Wete (Pemba)	 78	Hospital).
Chake Chake (Pemba)	 55	or module Jose
Mkokotoni	 12	
Selem	 8	
Mkoani	 23	

500

There are thus 500 general hospital beds available for a population of 265,000 or very nearly two beds per 1,000 of the population.

All hospital out-patient treatment is free and the majority of the hospital beds are also free. In Zanzibar, Wete and Chake Chake however there are a certain number of paying wards to which patients who wish to enjoy certain amenities may be admitted. These are of two grades depending on whether the wards are of the single or multiple bedded variety. In addition to the appropriate daily maintenance charges paying patients other than officials, their wives and children are charged for operations, and accouchements according to scales laid down. The total number of paying beds available is seventy-five or fifteen per cent of the total bed state.

Dispensaries and Rural Health Centres

- 1. There are twelve rural dispensaries in Zanzibar and nine in Pemba. All those in Zanzibar Island are readily approached by tarmac road, and it is possible to communicate with the majority by telephone through the local District Office. In Pemba communications are more difficult and in the case of several dispensaries the only motor transport which is able to reach them is a Land Rover.
- 2. In Zanzibar Island, in addition to those mentioned above which are truly rural in character, the Department maintains in the Zanzibar township, dispensaries in the Ngambo District (Raha Leo Dispensary), at Police Headquarters (Ziwani Dispensary) and at the Central Prison, where there is also a small hospital of twenty-seven beds. The attendants posted to the rural areas spend a considerable part of their time making regular visits to neighbouring schools, where, in addition to giving the school children necessary attention, they take the opportunity of talking to them on health matters.
- 3. During the year a medical officer was attached on a full time basis to rural services in Zanzibar. This made it possible to reorganize the service, to standardise all district centre requirements and review the treatment available to the public. In this connection a hand-book of dispensary treatment has been prepared and will shortly be issued to all treatment centres. The District Medical Officer, Zanzibar, was also able to visit Pemba for six to eight weeks in the latter part of the year during which time he reorganized the district centres there on the same lines as those established in Zanzibar.
- 4. The new treatment centres were completed and officially opened during the year. One of these has since proved to be the busiest centre on Zanzibar Island. It was officially declared open by Seyyid Jamshid, eldest grandson of His Highness the Sultan, before a crowd of several hundred villagers. The other though already treating patients will be officially opened early in 1957.

- 5. The district work though still largely concerned with treatment has been strengthened during the year by the frequent visits made to every centre by the medical officer now fully engaged on this work. The medical officer and those in charge of the centres under his guidance have made frequent contact with the people both individually and on a community basis. Health films have been shown and health talks and demonstrations have been given. In Pemba a health stall was a special feature of the annual agricultural show and proved to be one of the most popular. Health talks have also been given in many of the district schools.
- 6. Mudirial teams have been established in both districts of Zanzibar Island during the year. These consist of the local Administrative Officer (mudir) as chairman and various sectional officers. The rural Health Inspector is a member of the mudirial team and health matters are a frequent topic of discussion.

General Hospital and Dispensary Returns

 The number of in-patients (new cases) treated in the general hospitals are set out below, the previous year's figures being shown alongside.

Hospitals			In-pe	atients	Out-patients		
			1955	1956		1955	1956
Zanzibar	Town		 2,890	3,070		48,260	61,207
Wete			 1,261	1,617		15,268	22,662
Chake			 1,453	1,300		18,267	19,808
Mkoani			 120	197		5,007	6,642
Selem			 130	. 117		4,290	4,562
Mkokoto	ni		 141	59		2,827	5,032
		Total	 5,995	6,360		93,919	119,913
			30122 Y 202	1000000		1 1000000000000000000000000000000000000	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

This indicates a general increase in the work done in hospitals during the year with the notable exception of the two small bedded-dispensaries at Selem and Mkokotoni. This is explained by the fact that there is now a rural ambulance in Zanzibar and patients who previously had little option but to accept the limited facilities available to them in the district are now referred to the central hospital.

- 2. The total number of new cases treated at Rural Dispensaries was 96,817 compared with 80,611 in 1955 and 54,299 in 1954. The district work has therefore nearly doubled itself in the past three years. This suggests that the Department is steadily winning the confidence of the people in the rural areas.
- 3. A study of the detailed sick returns appearing as Appendices I and II to this report shows that affections of the respiratory system are still the commonest cause of morbidity. With the sulphonamide drugs and penicillin now freely available it is interesting to observe that the majority of the pneumonias can be successfully treated as out-patients.

The second commonest condition returned by dispensaries is anaemia. What this means is difficult to assess. Undoubtedly many of the anaemias are of malarial origin, others are associated with an ankylostome infection while malnutrition must also play its part: in many cases all three factors may well be contributing. There is no doubt that anaemia is a very common presenting symptom throughout the Protectorate.

Malaria takes third place in the sick returns but there must undoubtedly be many cases which are never reported at hospital or dispensary and it is still reckoned to be the most common cause of morbidity amongst the indigenous inhabitants.

There has been a marked increase in the incidence of scabies, the number of cases reported being 11,538 as compared with 7,658 in 1955. The suggestion has been made that the general water shortage resulting from the long dry spell of weather may account for this. Tropical ulcer is still a common condition 11,422 cases having been treated as out-patients. This is an increase of 1,000 over the previous year. There was a considerable reduction in the number of cases of yaws treated and it is tempting to conclude that this indicates a downward trend which is likely to continue in view of the introduction, more than a year ago, of penicillin as a routine for the treatment of both cases and contacts at rural dispensaries. Much time is spent in every dispensary attending to patients with minor injuries of one kind or another, many of which with the exercise of a little care or forethought on the part of the individual might have been prevented.

- 4. As mentioned in last year's report pneumonia in one of its various forms continues to be the commonest cause of hospitalisation while malaria takes second place. In the surgical wards hernias and hydroceles accounted for the majority of the admissions, totalling, together, 827 cases compared with 534 in 1955. Forty-nine fractures of the spine were treated, representing just under forty per cent of all fractures dealt with in hospitals during the year. These cases are a heavy strain on the nursing staff and of necessity tie up surgical beds for many months.
- 5. Four hundred and forty-six deaths occurred in hospitals during the year. This represents 6.7 per cent of the total yearly admissions. Excluding the deaths reported under the heading "Senility" from the old people's home at Walezo, the commonest cause of death was "heart disease". Fifty three such cases were reported as compared with only fifteen in the previous year. This may be explained by the occurrence in Pemba during the year of what amounted to almost a minor "epidemic" of congestive heart failure of quite unexplained aetiology. Pneumonia took its toll particularly at the extremes of life, accounting for forty-four deaths. Twenty-eight patients died of pulmonary tuberculosis and twenty-one from malaria. There were thirteen deaths in children from gastro-enteritis. The commonest cause of death in the surgical wards of the hospitals continues to be acute intestinal obstruction, resulting from the strangulation of a hernia in the majority of cases.

7. Special Hospitals

Holmwood Mental Hospital

1. During the year a new fifty bedded ward block was built for male patients at a cost of £12,000 as part of the Protectorate's five-year development programme. Certain items of equipment are awaited from the United Kingdom on receipt of which it is hoped to open the unit in

January, 1957. As a result of this addition the Hospital now has 185 beds, sixty-seven of which are for women. The number of patients in hospital on 31st December, 1955, was 187. During the year there were ninety-four admissions, eighty-four discharges, eleven deaths, and one 'escape'. The number remaining as at 31st December, 1956, was therefore 185.

- Of the eleven deaths representing four per cent of the total number of patients treated four were from pulmonary tuberculosis and two from cerebral thrombosis.
- 3. The various types of mental disorder treated consisted of the following: —

Schizophrenia		106
Paranoia.		34
Toxic Psychosis		26
Senile Dementia		23
Manic-depressive Psychosis		25
Epilepsy		21
Neuro-syphilis		20
Mental Deficiency		18
Delusional Insanity		7
Involutional Melancholia		2
Confusional States		1
	10-10	

Zenabhai Karimjee Hospital

281

- 1. During the year the main block of the old hospital in Zanzibar was renovated and later commissioned for the treatment of tuberculosis cases and is now known as the Sewa Haji Wing of the Hassanali Karimjee Jivanjee Hospital. It has provision for eighty-five beds twenty-one of which are for women. As a result of this development the majority of the tuberculosis beds are now concentrated in Zanzibar town and the Zenubhai Karimjee Hospital of thirty beds is now regarded for administrative purposes as an annexe of the Hassanali Karimjee Jivanjee Hospital.
- 2. In the 1955 report reference was made to the use being made of the Walezo Institution as an overflow for the more advanced forms of tuberculosis. With the increase in bed state made possible by the opening of the Sewa Haji Wing all but old people with chronic fibroid phthisis have now been removed from the Walezo home. Details of the work done by the Tuberculosis Unit are given in chapter 8 of this report.

Walezo and Makondeni Leprosaria

1. The treatment of leprosy is concentrated in two leprosaria; the one in Zanzibar is maintained by Government and staffed by a Roman Catholic Mission and the other in Pemba is a wholly Government institution. Both are under the care and direction of a Government medical officer. Each is capable of accommodating 100 patients, but neither have

been filled to capacity in view of the improvement in treatment now being achieved by the use of the sulphone drugs. A total of fifty four cases were admitted for treatment during 1956 while there were sixty discharges and two deaths. The number of cases under treatment as at 31st December, 1956 was one hundred and eighty. These figures are significant, for they show, for the first time, an increase in the discharge rate over that of the admissions. This is considered to be due to the good response to treatment which has resulted since the introduction of the sulphone drugs some three years ago.

2. In the Pemba settlement the patients re-roofed two of the houses, constructed a concrete plinth round the well and rebuilt one of the communal latrines. The lepers in Walezo show less inclination to work on a community basis.

Infectious Diseases Hospitals

- 1. With the outbreak of smallpox in Pemba early in the year the small infectious diseases hospital in Wete was soon full to over-flowing almost immediately and it was necessary to provide additional accommodation by the erection of palm leaf shelters. In all over forty patients were treated in the hospital. It was apparent that the hospital was too small to cope with any sudden outbreak of infectious disease while during recent years the growth of the town had so encroached on it that it was no longer sufficiently isolated for its purpose. Arrangements were therefore made to take over a prison camp which had recently been abandoned as a site where patients suffering from infectious diseases of a serious nature could be accommodated when necessary, and provision has been made in the 1957 Protectorate estimates for the construction on the site of a store where essential items of equipment can be secured for use at short notice and for the provision of cement foundations on which tents or palm leaf shelters can be quickly erected as required. The camp is five miles from the town and has a good water supply.
- 2. In Zanzibar no epidemic disease was reported and there was no occasion to use the Infectious Diseases Hospital on Changuu island.

Walezo Home for Aged and Indigent

- 1. This institution is maintained by Government but staffed and administered by the local Roman Catholic Mission authorities. It is visited once a week by the District Medical Officer who is in charge. During the year a new ten-bedded dormitory for women was built at a cost of £800. With the transfer of tuberculosis cases to the Hassanali Karimjee Hospital further accommodation became available for men. On 31st December, 1955, there were 150 inmates in the home. During the year eighty-one were admitted, thirty-one were discharged and sixty-six died leaving 134 in the institution on 31st December, 1956.
- 2. The Welfare Department staff made regular visits during the year to help those with domestic and other problems, to assist with rehabilitation, and to provide occupational therapy for the immates, and the Information Office continued to provide entertainment in the shape of regular cinema shows.

3. There is a dispensary attached to the home at which the old people receive treatment from the Sister-in-Charge.

8. Specialised Services

Maternity Services

1. In the month of March the first district maternity centre in Pemba was opened. This is situated at Mkoani near the small bedded-dispensary. Much of the equipment was provided by the World Health Organisation and it was appropriate that the W.H.O. public health officer for the Eastern area of Africa should have been invited to visit Pemba and declare the centre officially open. The total number of maternity beds now available in the Protectorate is as follows:—

Hassanali Karimjee Jivanjee Hospita	al	20 (579)
Wete Hospital		9 (142)
Chake Chake Hospital		6 (93)
Makunduchi Maternity Centre		6 (173)
Mkoani Maternity Centre		6 (27)
Mwembeladu Maternity Home	o ogbi	8 (522)*
and it mechadosembleses budgewe	_ Mile	n Hawara
Tota	l	55

*This includes cases attended to by the domiciliary midwives.

- 2. The number of confinements conducted in these various centres during the year is shown in brackets against each. The total being 1,536 as compared with 1,509 in 1955. In addition a further 532 cases were treated at home by the Mwembeladu district midwives. The last three centres are solely in the charge of trained midwives who refer abnormal cases to the appropriate hospital centre.
- 3. An analysis of the cases handled in the maternity wards of the Hassanali Karimjee Jivanjee Hospital shows the following:—

Total number of deliveries	 579
Number of primipara	 146
Number of multipara	 433
Number of abnormal confinements	 57
Number of twins	 15
Number of premature infants born	 118
Number of infant deaths	 45
Maternal deaths	 4

4. Antenatal clinics are conducted weekly at all these centres. A total of 2,925 women attended these clinics during the year compared with 1,357 in 1955. This marked increase in number reflects the growing appreciation of these clinics.

Dental Services

- 1. The superintending dental surgeon was on leave for two and a half months during the year. Part of this leave was taken during the school vacation thus allowing the other dental surgeon in Zanzibar to cover the work during his colleague's absence.
- The school dental service was maintained during the year. In all forty-one schools were visited and a total of 11,214 pupils were examined and treated.
- The mental hospital was also visited and fifty-three patients were given attention.
- 4. A total of 17,464 attendances were recorded at the dental clinics, 17,478 teeth were extracted, 3,344 were filled and 167 "scalings" were performed.
- During the year the Government Chemist was asked to examine certain water supplies to determine their fluoride content with a view to determining whether fluoridation of the drinking water should be considered.

The results were as follows: -

Zanzibar to	wn	supply		0.4	parts	per	million.
Mkokotoni	,,	,,		0.5	,,	,,	**
Wete	,,	,,	74.0	0.5	,,	,,	**
Makunduchi	we	ell	***	0.5	-17		,,,
Jambiani w	ell			1.0			,,

The indication therefore is that with the exception of Jambiani the flouride content is low. The Government Chemis writes "I would like to repeat the analysis next year (1957) when apparatus for a more accurate method of determination will be available".

6. One little known activity of the Dental Service is the medico-legal work undertaken at the request of the Police Force in connection with age determination of juvenile delinquents and of young men applying for driving licences whose ages are not known to them. During the year considerable assistance was given in this connection.

School Medical Service

1. The School medical service in Zanzibar is the responsibility of the medical officer in charge of district work. Because of his other commitments it is not possible for him to devote more than one day a week to school medical inspections. In view of the recent growth in the number of rural schools and the great increase in the number of children attending, it has been decided that any attempt to conduct an annual medical examination of every school child is impossible, and that instead the policy should be to examine thoroughly each child on first admission to school and again preparatory to leaving.

- 2. A total of 1,724 children were examined in the rural schools during the year. 15.9 per cent of the children showed evidence of anaemia, 13.9 per cent had splenic enlargement, and 8.1 per cent presented with umbilical hernias. 106 children or 6.1 per cent were suffering from haematurial attributed to bilharzia. The incidence of this condition varied considerably from school to school. No cases were reported from those schools situated in the drier coral rag country, whereas Langoni school which is located in a highly agricultural district where considerable quantities of rice are grown returned an incidence of 13.9 and in last years report reference was made to Kinyasini school with an incidence of 45.5 per cent. These figures illustrate the patching distribution of bilharzia throughout the island. 3.4 per cent of the children had tropical ulcer.
- 3. It was not possible during the first nine months of the year to undertake any school medical inspections in Pemba owing to pressure of work connected largely with the smallpox outbreak. In the last three months, however, all the school children in the Wete schools were examined. No analysis of this examination has been made as the numbers are too small to allow of any very useful conclusion being reached.

Laboratory Services

- 1. During the year the laboratory service was strengthened by the appointment of a fully qualified laboratory technologist (see Head 3.—Staff). While towards the end of the year the post of Pathologist which had been vacant since February was filled. It is thus again possible to undertake medico-legal work which for some months had to be referred to Dar es Salaam by arrangement with the Director of Medical Services, Tanganyika.
- 2. The pathologist and technologist both participated in the detailed planning of a new laboratory to be built in conjunction with the new out-patient block at the Hassanali Karimjee Jivanjee Hospital.
- The number of investigations undertaken by this service during the year was as follows:—

		Z	anzibar		Pemba
Parasitological		***	21,302	***	6,622
Serological			2,331		390
Bacteriological			7,745		1,122
Biochemical			4,208		4,092
Haematological			2,438		3,104
Histological			31		-
Medico-Legal	***		30		2
Post-mortem Exar	minatio	ms	33		_
Miscellaneous			10		-
			38,128		15,332
		Total		53,460	a done

Tuberculosis Services

 The curative side of this work is conducted through the Tuberculosis Clinic in Zanzibar and by the provision of beds for the institutional treatment of those who for clinical or other reasons are not considered suitable for out-patient attention. The number of beds available for tuberculosis patients is as follows: -

Hassanali Karimjee Jivanjee
Hospital (Sewa Haji Wing)

Zenabhai Karimjee Hospital
(Dole)

Wete Hospital, Pemba

Total

Total

85 (of which 57 are at present in commission)

at present in commission)

of these, twenty-four are for women.

2. During the year 283 patients were admitted for treatment the average stay in hospital being five to six months. On discharge those in Zanzibar are followed up through the medium of the chest clinic while the relatively small number treated in Pemba are followed up in the hospitals' out-patients departments.

The use of P.A.S. and isoniazid in treatment has during the year given place to the earlier combination of one or other of these drugs with streptomycin, though the latter is still used in specially selected cases. This has resulted in a considerable reduction in the cost of treatment and has thus allowed for the treatment of a considerably greater number of patients at no extra expense to the Service.

3. The Tuberculosis Clinic is both diagnostic and therapeutic in character, and no patients are treated through the medium of the clinic until they have first had a full clinical assessment conducted in hospital and have received at least twelve weeks institutional treatment. If they are then sufficiently improved clinically, they continue treatment as outpatients through the medium of the Clinic. Here a combined P.A.S. and isoniazid tablet is in use in order to reduce as far as possible the temptation on the part of the patient to discard his P.A.S. and take regularly only the isoniazid. A proportion of patients tend to default in their attendance for treatment and to prevent this as much as possible a welfare officer seconded to the Health Department is advised by the clinic of the defaulters and so follows them up and encourages regular attendance.

In all 675 patients passed through the clinic during the year and 5,014 attendances were recorded.

4. One of the Clinic's functions which is really more a public health responsibility is that of contact tracing and follow up. This is done in conjunction with the Welfare Office and by the officer of that office who is referred to above in connection with out-patient defaulters. These contacts are then examined, Tuberculin tested, X-rayed if necessary, and then given appropriate advice and treatment. All tuberculin negative reactors are offered B.C.G. vaccination. Further details of this work is given in the section on communicable diseases.

Surgical Services

- 1. While medical officers in charge of hospitals are required to deal with surgical emergencies in the absence of a surgical specialist, and to undertake simple routine surgical work, Government maintains a specialist surgical officer on the establishment of the Hassanali Karimjee Jivanjee Hospital who is responsible for the surgical unit of approximately eighty beds. All surgical work of a specialised nature is referred to him from other hospitals and periodically he visits Pemba where he sees surgical patients in consultation with the medical officers at Wete and Chake Chake. In the Hassanali Karimjee Jivanjee Hospital he is assisted by a general duty medical officer.
- The work done during the year has shown a general increase as is seen from the table which follows. The figures in brackets are for the year 1955.

Zanzibar		major	operations		895	(674)
11	***	minor	,,		1,821	(1,510)
Wete		major	,,		152	(127)
add , section and		minor	daningel bin		814	(653)
Chake Chake		major	,,	***	120	(60)
		minor	,,,		1,314	(1,350)
			Total	100	5,116	(4,374)

3. In the Surgical Unit of the Hassanali Karimjee Jivanjee Hospital an analysis of the major surgical work undertaken reveals the following.

Abdominal operations	381	or	43 per cent	
Genito urinary operations	281	,,	31 .,	
Gynæcological operations	101	,,	11 ,,	
Others (mainly rectal, orthopædic, eye, ear, nose and throat)	132	,,	15 ,,	
	895	1	100 per cent	

The commonest operation undertaken was for repair of inguinal hernia 349 of which were performed. Of these seventy-three were admitted as strangulated hernias. In the genito-urinary group by far the commonest operation was for radical cure of hydrocele of which 186 were performed. Thus, these two operations alone represent almost 60 per cent of all major surgical work done in the unit.

In the field of minor surgery and minor surgical procedure the commonest operation was incision and drainage of abscesses, 702 of which were dealt with, a further 558 cases required the passage of sounds or catheterization, while repair of soft tissue injury was undertaken in 233 patients. 106 fractures were treated.

Ambulance Services

 The Department maintains three ambulances, two in Zanzibar, and one in Pemba.

During the year there was a considerable increase in the demands for assistance as is reflected in the figures given below:

		No.	of Calls		Miles Travelled		
		1955	1956		1955	1956	
Zanzibar		 1,122	2,083		23,705	27,980	
Pemba		 139	349		3,526	6,169	
	Total	 1,261	2,432		27,231	34,149	
	Total	 1,261	2,432	-000	27,231	3	

Of the 2,083 calls made on the Zanzibar ambulances during 1956, six hundred and forty-four were from the rural areas of the island.

X-Ray Services

- 1. The Department maintains three X-ray machines, and a screening unit in the chest clinic. Two of the machines are installed in the Hassanali Karimjee Jivanjee Hospital one of which is used for in-patient work while the other caters for the chest clinic and the out-patient departments. The third machine is in Wete Hospital in Pemba.
- 2. During the year a fully trained radiographer was appointed to the staff of the Hassanali Karimjee Jivanjee Hospital. This officer, besides successfully completing his training in the United Kingdom, spent six months working in the factory where the machines on which the department has standardized are made, studying in particular their care and maintenance.
- 3. In the Zanzibar hospital Unit 8,125 films were exposed during the year, and the number of separate investigations undertaken was as follows:—

Bone work					1,193
Chest work	***	***			829
Genito-urinar	y inve	stigation	s	***	89
Gall-bladder	invest	igations		70[61	36
Abdominal ar	nd inte	stinal in	vestigatio	ns	230
Obstetrical in	nvestig	ations	***		36
Screening					16
				1 mont	2,429

^{3.} The Dental Service has its own dental X-ray on which all intra-oral films are taken.

9. Legislation

1. The following Decrees and Rules relating to the Health Department were enacted durin the year:—

Food and Drugs Decree, 1956.

Dangerous Drugs (Amendment) Decree, 1956.

Births and Deaths Registration (Amendment) Decree, 1956.

Town and Country Planning Decree, 1955-Orders and Regulations.

Adoption of Children Rules, 1956.

Public Health Decree (Cap. 60)—Amendment Orders.

Town Decree (Cap. 100)-Towns (Hut Locations) Rules, 1956.

Township Decree, 1944—Z.T.C. Disposal of Refuse Orders, 1956.

10. Communicable Diseases

Smallpox

- 1. As mentioned in paragraph 3 of chapter 2, the only major communicable disease occurring during the year was an outbreak of smallpox in Pemba. The epidemic was limited. In all fifty-two cases were notified: no deaths were reported.
- 2. The highest incidence occurred in the month of February when twenty-one cases were admitted to the infectious diseases hospital in Wete.
- 3. Vaccination campaigns in both islands have been continued throughout the year and 90,994 vaccinations were recorded.

Yellow Fever

- 1. Following a revision of the International Sanitary Regulations the Protectorate changed its classification from that of a "receptive area" to that of a "local infected area" and so came into line with the other East African territories as from 1st October, 1956. Travel within the territories therefore no longer requires a valid yellow fever certificate, and as a result the number of yellow fever vaccinations performed during the year dropped from nearly 17,000 in 1955 to 10,066 in 1956.
- 2. The Aedes Index as ascertained by house to house searching in the town of Zanzibar remained at the low figure of 0.04 per cent.

Malaria

- 1. This condition is generally endemic throughout the Protectorate with levels of hyperendemicity being attained in several areas. It therefore continues to be the most prevalent single disease in the Protectorate.
- 2. Control of the disease has been confined largely to the urban areas where anti-larval methods are widely employed and where the provision and maintenance of sound drainage systems receives considerable attention.

- 3. During the year in Zanzibar township a "cordon sanitaire", running across the base of the triangular promontory on which the town is situated, was sprayed with dieldrin. In all 2,221 houses were sprayed, the cordon being to a depth of fourteen houses. The operation appears to have been successful in controlling anopheline invasion of the stone town area from the hut locations. Nine catching stations within the area of the town protected by the spraying have produced no anopheles on weekly catches despite breeding in areas outside the belt.
- 4. All swamps and other breeding places within a radius of three miles from the town centre are regularly oiled and an attempt has been made to drain the larger open areas.
- 5. Final arrangements have now been drawn up by the World Health Organisation, the United Nations' International Children's Emergency Fund and His Highness's Government for a scheme to eradicate the disease within the Protectorate. Dr. Gillies from the Malaria Institute, Amani, paid three visits during the year to initiate the collection of basic information on mosquito breeding prior to the arrival of the W.H.O. malaria survey team in 1957. Two interesting facts emerging from this initial investigation were that Anopheles gambiæ appears to survive throughout the dry season and that many were found to be harbouring microfilaria.

Plague

There has been no case of this disease for many years. A comstant watch is, however, kept on the ports and systematic trapping of rats is continued to ascertain whether the disease is present in the rat population. Daily testing of blood smears by the Laboratory yielded no positive results. "Warfarin" has proved very successful in controlling infestation in shops and godowns. This is mixed with rice and vegetable oil to form the bait. While only 449 rats have actually been collected after such baiting the poison is obviously a success judging by the reports of the public who have had their houses and shops treated. Routine trapping still continues, though as usual the results were somewhat disappointing with only 5,611 rats being caught from 174,064 traps set. In Pemba 4,760 rats were trapped.

Schistosomiasis

Bilharzia is prevalent on both islands in the Protectorate and yet the figure of patients treated is very low being 0.4 per cent of all in-patient and out-patient attendances. Lucanthone hydrochloride (Nilodin) is given at dispensaries as an out-patient treatment, but its success as yet is difficult to determine.

Yaws

 Along with chronic ulcer and malaria, yaws is one of the commonest diagnosed diseases in out-patient departments and rural dispensaries. Penicillin is now being used as a routine for the out-patient treatment of yaws and at rural dispensaries where the condition is most commonly seen contacts are also being followed up and treated. A "one dose" treatment regime is in force.

- 2. It is interesting to note that the number of cases treated rose from just over 3,000 in 1951 to a peak of 8,197 in 1955. Figures for 1956 show a fall to 6,414, following the introduction of penicillin treatment in 1955. Approximately 60 per cent of the cases were seen in Pemba.
- It is not now intended to seek assistance from the World Health Organisation with a yaws control campaign as was suggested in last year's report.

Poliomyelitis

There were only two notifications of poliomyelitis during the year. Outbreaks have been reported from all the East African territories throughout the year and with the constant passage of visitors through Zanzibar both by sea and air it is surprising that the disease has not been more prevalent in the Protectorate.

Ankylostomiasis

This is the most prominent of all helminthic infections and commonly reported from out-patient clinics. The problem will only be effectively tackled when trained rural health staff become available in the future to further the work of health education.

Leprosy

With more discharges than admissions being reported from the leprosaria in the Protectorate it would appear that the sulphone drugs are having a beneficial effect.

Tuberculosis

- 1. Reference has been made to this disease in chapter 8.
- 2. The only control measure at present carried out is contact tracing and follow-up. A welfare officer was seconded to this work at the beginning of the year to work in close liaison with the T.B. Clinic. Not only does he trace contacts but much of his time is taken up persuading clinic defaulters to attend regularly for treatment; it is now obvious that he will require additional assistance if this work is to prove effectual.
- 3. A total of 515 contacts were examined in Zanzibar by screening and mantoux testing. Of this total 191 were mantoux negative and twenty-four were given B.C.G. There were 229 cases notified with pulmonary tuberculosis during the year.
 - 4. It has not been possible to establish any B.C.G. clinics in Pemba.
- Pursuing a policy of Tuberculin testing all staff, 182 were mantoux tested with thirteen negative reactions.

Infectious Diseases

- 1. Apart from the conditions referred to above the incidence of infectious diseases in the Protectorate is generally very low and this position was maintained throughout 1956.
- 2. In no instance were any of the following diseases reported during the year: Replacing fever, typhus fever, meningococcal infections, anthrax, rabies and kala azar. While only six cases of typhoid were notified.

11. Hygiene and Sanitation

Refuse Disposal

- 1. The Health Department is responsible for refuse collection and disposal in the four towns, Zanzibar, Wete, Chake Chake and Mkoani.
- 2. In Zanzibar a twice daily sweeping of the main streets has been attempted with the more important areas being swept thrice daily.
- 3. The public tend to lack a sound sense of civic responsibility and throw rubbish into the streets instead of into dustbins.
- 4. The streets in town are for the most part too narrow for the refuse truck and so household refuse is loaded from the bins into hand-carts for transfer to the tipping area. The truck however removes refuse daily from suitable areas such as the Police Lines, Prison and Hospital.
- 5. With the development of the Mazizini suburb a refuse collection system is being organised there. A second truck will be employed for refuse collection in this area and for its transportation to the central tipping site.
- 6. The controlled tipping of refuse was started in the creek basin in August, 1956 and by the end of the year a large part of the canalised portion had been reclaimed. Darajani bridge will probably be reached early in 1957 when it is hoped permission will be obtained to continue tipping up to Hollis bridge.
- 7. A total of 18,995 tons of refuse were collected in Zanzibar town during the year.
- 8. In Pemba refuse is also disposed of by tipping, and 3,819 tons of refuse were removed from the three towns of Wete, Chake Chake and Mkoani during the year.

Inspection of Premises

1. The following is a list of registered premises within Zanzibar township, inspection of which is an important part of the health staffs' duties.

Lodging Houses	 60
Eating Houses	 88
Dairies	 16
Bakeries	 16
Laundries	37

- 2. Each of the premises is inspected prior to the issue of the annual Municipal licence. The standard obtaining generally in the towns in respect of these premises though still low is slowly but steadily improving as a result of the work being done by the various Health Inspectors and their staff.
- 3. Dairies are few in number, the milk being brought mainly in small quantities direct from the farm to the householder, thus missing the dairies. The milk testing depot in Zanzibar has been discontinued and sampling is now done as the milk purveyor hands the milk over to the purchaser. There were twenty-nine convictions for milk adulteration during the year. In the Pemba townships central testing depots are still maintained.
- 4. In all townships routine inspection of foodstuffs is carried out by the Health Inspectorate staff. A large quantity of sugar sweepings from the holds of cargo ships was condemned during the year. In all 53,503 lb. of sugar, 8,297 lb. of rice and 700 lb. of flour were condemned as unfit for consumption in addition to tinned foods of various types.

Sewage and Drainage

- 1. No general water-borne system of sewage disposal operates in any of the towns. In the low-cost housing areas pit latrines are universal while many still exist within the stone houses. Efforts are continually being made, however, to introduce water-borne sanitation in the permanent stone houses and in Zanzibar 130 such water-closets were fitted during the year in sixty-five houses which were previously fitted with pit latrines. The closets discharge into septic tanks, the effluent from which is taken away in closed public drains, which discharge into the sea.
- Storm water is carried away mainly by closed drains but in certain areas swamps, which readily form during heavy rains, require constant anti-malarial control.

Water Supplies

- 1. Springs and wells are the source of the water supply for the population on both islands. During the heavy rains swamps form and these are also used by many as a source of supply.
- 2. The town of Zanzibar's source of supply is from two fresh water springs which are fully protected. The supply is for the most part adequate though during periods of drought it does not meet the peak period demands and so the high pressure supply is cut off for certain periods of the day during those times. The low pressure system, however, flows continually and so the town supply is never completely cut off.
- 3. The average consumption is approximately 1,800,000 gallons per day and is of a very high standard of purity. Only when the supply is low is there any necessity for chemical treatment of the water.

Port Health Work

- 1. Zanzibar is the main port of the Protectorate at which all ships, and ships' passengers are cleared on arrival. Declarations of Health are demanded from all oceangoing vessels and coastal shipping, and valid certificates of vaccination against smallpox are required for all passengers and crew. Under a Government Notice published in 1953 certain coastal vessels are permitted to proceed direct to the port of Wete in Pemba where clearance is effected by the Health Inspector stationed there. All other shipping must first receive pratique in Zanzibar.
- 2. During the year 538 ships and 2,847 other craft including dhows were cleared in the port of Zanzibar and a total of 23,826 passengers arrived by sea.
- 3. At the airport which is five miles from Zanzibar town there were 2,727 aircraft arrivals bringing 18,203 passengers.

12. Housing and Town Planning

- 1. Housing in the rural areas is almost entirely of a temporary type, consisting of mud and wattle walls with makuti (palm leaf) roofing. No rules exist for controlling these and any improvement in standards can only come with an advance in rural health education.
- 2. In the towns strict building rules operate and a constant control is kept on all building, whether it be new construction or alterations, to ensure that standards are maintained. The Towns (Hut Location) Rules, 1956 have allowed for much more control and the new Town Planning Decree will provide for proper development within the towns.
- 3. In Zanzibar town 617 plans for new huts were approved while fifty new stone houses were sanctioned. In addition 1,697 applications for alterations to huts were considered along with 439 applications for stone houses. In Pemba 312 new huts and 22 new stone buildings were approved while 396 applications for repairs to huts and other buildings were dealt with.
- 4. During the year a town planning consultant prepared a town planning scheme for Zanzibar and Wete and the first meeting of the respective Town Planning Authorities took place at the end of the year.
- 5. Development of the Jangombe area of Zanzibar town has continued during the year.

13. Health Education

- 1. Contact has been maintained with the Information Office and general health topics have been included in news reports etc.
- 2. The issue every two months of a department "News Sheet" has kept all members of the staff in contact with headquarters affairs. The news sheet also serves to propagate health education in the rural areas and with this end in view it is widely distributed to all rural health staff, and to Mudirs.

14. Prisons

- 1. There are two central prisons situated at Zanzibar and Wete. In addition four prison camps exist on Zanzibar Island and one in Pemba.
- 2. In Wete a daily sick parade is held at the hospital out-patient clinic for prisoners; those at the prison camp attend Chake Chake Hospital.
- 3. In Zanzibar the prison has its own treatment room and small twelve bedded ward under the control of the District Medical Officer and a resident staff nurse. All new admissions to the prison were examined by the District Medical Officer on his weekly visits.
- 4. In addition to the twelve beds mentioned above, three isolation cells are available for prisoners suffering from communicable diseases.
- 5. The camps in Zanzibar are supervised by staff nurses at the rural dispensary nearest to the camp. Two of the camps receive visits daily while the others have twice weekly visits. They are also visited monthly by the District Medical Officer.
- 6. During the year the health of the prisoners remained good. In Zanzibar only nineteen required transfer to the Government hospital, while the daily average number in the prison ward was only three.
- 7. Of a total of 925 admissions to the prison during the year 109 were diagnosed as cases of urinary bilharzia, while five were suffering from leprosy.

15. Building and Construction, etc.

- 1. Various Health Department buildings were constructed during the year as part of the Protectorate Development Programme.
- 2. A new male ward of fifty beds was built and occupied at the Mental hospital.
- The new Infectious Diseases hospital on Changuu Island, which was completed in 1955, was fully equipped during the year.
- 4. A further stage in the conversion of the former Zanzibar hospital buildings was completed. This included alterations to the Sewa Haji wing which enabled this building to be opened to accommodate cases of pulmonary tuberculosis.
- 5. Further alterations at the H.K.J. hospital included the conversion of the top floor of the Seyyida Matuka wing into an officials out-patient clinic and the conversion of the old hospital into a female out-patient clinic.
- Rural dispensaries were opened at Msufini and Mkokotoni while a new staff quarter for a Health Inspector was provided at Chwaka, all on Zanzibar Island.

- 7. Plans for the new headquarters and stores block were completed at the end of the year, while those for the new out-patient laboratory block for the Hassanali Karimjee Jivanjee Hospital reached an advanced stage.
- ,8. In Pemba a new kitchen was built at Chake Chake while the Dental Surgery at Wete was vacated to make way for a new male multiple bedded paying ward and is now accommodated in a smaller room formerly used as a ward pantry.

D. A. BAIRD, Director of Medical Services

Appendix I RETURN OF DISEASES: IN-PATIENTS, 1956

					naining			Remainin n Hospita
Code	List	No	Diseases	at	end of ec. 1955	Total cases	Deaths	at end o Dec. 195
			General Infectious and Parasitic Disc	ases				
001,008	A	1	Respiratory Tuberculosis		95	283	28	78
010	A	2	Tuberculosis of Meninges and Cen Nervous System	tral	_	6	3	-
011	A	3	Tuberculosis of Intestines, Peritone			1	_	-
010 010			and Mesenteric Glands Tuberculosis of bones and joints		_	5	_	2
012,013	A	5	Tuberculosis—all other forms		-	12	2	1
014-09	A	6	Congenital Syphilis		-	_	_	_
$020 \\ 021.0.021.1$	A	7	Primary Syphilis		_	_		My -
021,2-021,4	A	7	Secondary Syphilis		-	5	-	aly -
024	A	8	Tabes Dorsalis		-	-	-	-
025	A	9	General Paralysis of Insane		-	1	-	-
022,023		10	Cardio Vascular Syphilis		-	4	-	-
026-029		10	All other Syphilis		-	17	2	1
030,031		11	Gonorrhoea, Genito-Urinary		- 111	27	1	2
033	-	11	Gonococcal infection of eye		-	10	-	1
032,034,035		11	Other Gonococcal infections		-	6	-	-
040		12	Typhoid Fever		-	6	-	
041,042		13	Salmonella Infections		-	-	-	-
043		14	Cholera		-	-	-	one -
044	A	15	Brucellosis		-	1	-	-
045	A	16	Bacillary Dysentery		3	64	3	7
046	A	16	Amoebiasis		2	65	4	1
047,048	A	16	Other Unspecified Dysentery		5	68	8	2
050	A	17	Scarlet Fever		-	-	-	-
051	A	18	Streptococcal Sore Throat		-	6	-	
052	A	19	Erysipelas		-	-	_	other -
053		20	Septicaemia and Pyaemia		-	1.7	-	-
055		21	Diphtheria		-	14	1	_
056		22	Whooping Cough		-	16		_
057		23	Meningococcal Infections		17.0			NEW _
058		24	Plague		107	57	4	180
060		25	Leprosy		187	11	8	-
061		26	Tetanus		1	- 11	-	_
062	A	27	Anthrax		-	2	I	-
080	A	28	Acute Poliomyelitis			_		_
082		29	Acute infectious Encephalitis	fec-	- 7			
081,083	A	30	Late Effects Poliomyelitis and Ir		congr 2		ar lings	_
			tious Encephalitis		_		_	-
084		31	Variola major			52	_	_
084	A	31	Variola minor		0	12	1	ol -
085		32	Measles Yellow Fever		-	_	2	-
091		33	T C TT		1	59	6	-
092	A	34			_	_	_	-
094	A	35 36	Louse-borne Epidemic Typhus		-	_	-	-
100	100000	36	Flea-borne Endemic Typhus		-	_	_	-
101	A	36	Tick-borne Typhus		-	-	-	-
104 N.O.S	A	30	rick-borne ryphus					
N.O.S.	Δ	36	Other Rickettsial Diseases		_	-	_	-
102-108	A	37	B.T. Malaria		1	26	2	-
110								
110	A	01	D.I. Malaria		-		The second	

Code	Li	st No	Diseases	in I	naining Hospital end of ec. 1955	Totai cases	iı	Remaining a Hospital at end of Dec. 1956
			Brought forward		295	836	77	268
111	A	37	Qt. Malaria	***	7	4		70T and
112	A	37	S.T. Malaria		8	157	9	2
115 N.O.S.	A	37	Blackwater Fever		3	2	100	-
113-117	A	37	Other forms of Malaria		4	323	10	2
123.0	A	38	Schistosomiasis (haematobium)		3	23	_	_
123.1	A	38	Schistosomiasis (mansoni)		=	-	-	-
123.2	A	38	Schistosomiasis (japonicum)		and Street	-	-	
123.3	A	38	Other Unspecified Schistosomiasis		-	21	2	and Total
125	A	39	Hydatid Diseases		-	-	-	-
127 127	A	40	Onchocerciasis Loiasis	***	miude / in	elm S	m =	1000011
127	A	40	TMI and a size (bear and Chi)		100	2	_	_
127	A	40	Other Filariasis		3	59		1
129	A	41	Ankylostomiasis		3	38	2	ī
126	A	42	Tapeworm and other cestode infesta	tion	THE THE	100	_	102,000
130.0	A	42	Ascariasis		9 9 10 19	1	-	-
130.3	A	42	Guineaworm		IUMA 1996	-	-	- 011
N.O.S.		40	00 1: 1 17 1 - 0					
124-130 037	A	42	Other diseases due to Helminths		-		-	-
038	A	43	Lymphogranuloma Venereum Granuloma Inguinale		12000	1		2000
039	A	43	Other Unspecified Venereal Disease			11	10 0	1072 700
049	A	43	Food Poisoning, infective and toxic					
and the same of			cepting Salmonella infections)		-3 1000	4	-	-
071	A	43	Relapsing Fever		paralellah	HOSE	10 4	-100
072	A	43	Weil's Disease		oln-one s	1000	-	-
073	A	43	Yaws	***	-	12	-	- 101
087	A	43	Chickenpox			8	-	-
090 095	A	43	Dengue Trachoma		-	4		
096.7	A	43	Com Jan Conson		_	*	_	
120	A	43	Leishmaniasis		W S m		_	2
121.0	A	43	Trypanosomiasis (gambiense)		-	_	-	_
121.0	A.	43	Trypanosomiasis (rhodesiense)	***	-	-	-	10± 000
121.2	A	43	Other Unspecified Trypanosomiasis		-	-	-	
131	A	43	Dermatophytosis (Tinea)		-	2	-	-
135 N.O.S.	A	43	Scabies		3	15		
N.O.S. 036-122	Λ	43	Other infectious and protozoal dise	0000		1	n a.	PEGGGE
N.O.S.	A	40	Other infectious and protozoai dise	ases		1		OH
132-138	A	43	Other Parasitic Diseases		-	13	-	_
		1000				Mole		
			New Growths					
140-148	A	44		and				
150			Pharynx		-	-	-	7,000
150	A	45	Malignant Neoplasm of Oesophegus		7	-	-	- 386
151 152,153	A	46 47	Malignant Neoplasm of Stomach Malignant Neoplasm of Intestine		1	1		102 102
154	A	48	Malignant Neoplasm of Rectum		-		-	-
161	A	49	Malignant Neoplasm of Larynx		-	_	-	4114
162,163	A	50	Malignant Neoplasm of track					
			bronchus and lung not specified					
100			secondary		-	-	-	-
170	A	51	Malignant Neoplasm of Breast		-	1	-	-
171 172-174	A	52 53	Malignant Neoplasm of cervix uter		-	1	-	1
112-114	A	00	Malignant Neoplasm of other unsp fied parts of uterus	ecı-		1	-	-
177	A	54	Malignant Neoplasm of prostate			2	1	31-115
190,191	A	55	Malignant Neoplasm of skin		-	2	-	1
1			THE RESERVE THE PARTY OF THE PA		-	100000		070
			Carried forward		321	1,545	101	276
To the second								

Code		st No	Diseases	in I	maining Hospital it end of	Total	Remaining in Hospital Deaths at end of	
				I	Dec. 1955	cases		Dec. 195
			Brought forward	ı	321	1,545	101	276
196,197	A	56	Malignant Neoplasm of bone and nected tissue	con-		3	1	
N.O.S.			noted tissue					
155-199	A	57	Malignant Neoplasm of all other unspecified sites		to carnot	8	2	711.51
			Treated Interested Street Street					
204 200-203,205	A	58 59	Leukaemia and Aleukaemia Lymphosarcoma and other neop		-	1		-
			of lymphatic and haematopo systems		and bit	7	1	-
210-239	A	60	Benign Neoplasms and unspecified	neo-				
			plasms	***	HIT HA	69	4	6
			Allergic, Metabolic and Blood Dise	0000				
950 951	Λ	61		uoto				
250,251 252	A	62	Nontoxic goitre Thyrotoxicosis				2/	3.0
260	A	63	Diabetes Mellitus		1	42	1	1
280	A	64	Beriberi		-	-	-	
281	A	64	Pellagra	***	-	1	0 =	111-11
282	A	64	Scurvy		lon-spol	-	-	-
286.6	A	64	Kwashiorkor		1	11	1	1
283-286 290	A	64 65	Other Deficiency States Pernicious and other hyperchr	omio	Harrier Land	14	1	-
290	ZA.	00	anaemia	onne	_	1		_
291	A	65	Iron deficiency anaemias		1	159	18	8
292,293	A	65	Other anaemias		4	19	1	1
241 N.O.S.	A	66	Asthma		2	69	4	-
240-299	A	66	Other allergic endocrine, metabolic	and				
			blood diseases		-	5	80 =	-
			Diseases of Nervous System and	Sense				
			Organs					
300-309	A	67	Psychoses		187	96	11	186
310-324,326	A	68	Psychoneuroses and disorders of P	erso-				
					-	2	9 6	-
325	A	69	Mental deficiency		-	1	-	-
330-334	A	70	Vascular lesions affecting central	ner-	and said of	0	2	
340	A	71	vous system Meningitis (except meningococcal	and	-	0	2	77.
010	-	-	tuberculous)		-	2	1	801.8
345	A	72	Multiple sclerosis		-	-	_	-
353	A	73	Epilepsy		1	5	-	-
370-379	A	74	Inflammatory diseases of eye	***	- Jan	15	-	1040
385	A	75	Cataract		2	15	_	1
387	A	76	Glaucoma		-	-	-	-
390	A	77	Otitis externa	***	-	1 2	-	-
201 202	A	77	Otitis media and mastoiditis Other inflammatory diseases of ea	r		25		1
		100	Other innaminatory diseases of ea		ne 7. I man	20	14 14	
394		78	All other diseases of nervous sys	stem.				
394 N.O.S.	A	8.63	sense organs and auditory syste		no andro	39		3
394 N.O.S. 341-369	A	.0	sense organs and additory syste					
394 N.O.S. 341-369 395-398 N.O.S.	A	255				1000		
394 N.O.S. 341-369 395-398 N.O.S.	A	78	All other diseases and conditions of		onle - No	38	10 5	-
394 N.O.S. 341-369 395-398 N.O.S.		255			ndery nen-Prop nant Neo nant Neo	38	10 E	-9
391-393 394 N.O.S. 341-369 395-398 N.O.S. 380-389		255	All other diseases and conditions of		viene one des one Nee one Nee	38	10 10 10 10 10 10 10 10 10 10 10 10 10 1	- 1 1
394 N.O.S. 341-369 395-398 N.O.S. 380-389	A	78	All other diseases and conditions of Circulatory Diseases		collection of the collection o		- - 1	- 1 1 1

Code	Li	st N		Remaining in Hospital at end of Dec. 1955	Total	Deaths	Remaining Hospital at end of Dec. 1956
			Brought forward	520	2,216	150	485
420-422	A	81	Arteriosclerotic and degenerative heart	to etainm			
	-		disease		1	-	4
430-434	A	82	Other diseases of heart		114	50	7
440-443	A	83	Hypertension with heart disease	. 1	19	2	-
444-447	A	84	Hypertension without mention of heart	-	7	-	-210
450-456	A	85	Diseases of arteries		1	-	-
460-468	A	86	Other diseases of circulatory system	. 1	6	-	-
			The same party designation of the same and the				
			Respiratory Diseases				
470-475	A		Acute upper respiratory infections		41	1	
480-483	A	88	Influenza Lobar pneumonia	. 1	12	- 0	-
490	A	89	Lobar pneumonia	. 12	364 199	8	9
491	A	90	Bronchopneumonia	. 0	199	10	10
492,493	A	91	Primary atypical, other and unspecified	1	94	17	-2
=00		00	pneumonia		39	1	1
500	A	92	Acute bronchitis Bronchitis, chronic and unqualified		41		_
501,502	A	93 94	Hypertrophy of tonsils and adenoids		- 41	-	
510	A		Empyema and abscess of lung	. ī	4	1	
518,521	A	95 96	Pleurisy		6	_	
519	A	97	Pneumoconiosis		_	- 1	-
523 N.O.S.	-24	91	Theumocomosis				
511-527	A	97	All other respiratory diseases	2	68	E1 24-	5
			Alimentary Diseases				
530	A	98	Dental Caries		7	-	-
531-535	A	98	All other diseases of teeth and support-	mir of billion and	H SELECT		
			ing structures	-	12	11/-	-
540	A	99	Ulcer of stomach	. 1	9	2	=
541	A	100	Ulcer of duodenum		20	2	3
543	A	101	Gastritis and duodenitis		6	-	-
550-553		102	Appendicitis		31	3	1
560,561,570	A	103	Intestinal obstruction and hernis		539	16	17
571.0	A	104	Gastro-enteritis and colitis between	1	0	0	
			4 weeks and 2 years	Told Told	16	3	-001
571.1	A	104	Gastro-enteritis and colitis, ages 2 years		100	10	2
			Chronic enteritis and ulcerative colitis	2	120	10	2
572		104	Chronic enteritis and ulcerative colitis	-	-		1
581		105	Cirrhosis of liver		4	1	1
584,585		106	Cholelithiasis and Cholecystitis	0	72	2	8
536-587	A	107	Other diseases of digestive system	. 6	12	-	0
			Genito-Urinary Diseases				
500		100			12	-	-
590		108	Acute nephritis Chronic, other and unspecified nephritis		2	1	_
591-594		109	Infections of Kidney		4	_	_
600		110	Calculi of urinary system	9 10 10	10	-	1
602,604		111	Hyperplasia of prostate		4		-
610		112	Diseases of breast		11		1
620,621		113	Hydrocele	0	288	-	5
613		114	Disorder of Menstruation		_		-
634 N.O.S		114	Other diseases of genito-urinary system				
N.O.S. 601-617	-21	114	and male genital organs		171	4	.5
N.O.S.	4	114	Other diseases of uterus and female	,			
6224637	24	111	genital organs	3	53	-	-
022-037			Bounton by Branch				
			Diseases of Pregnancy Puerperium				
640-641,681,	A	115	Sepsis of pregnancy, childbirth and the	,			
682,684	-		puerperium		7	-	-
			Correlat Consent Labour 1		4.000	000	700
			Carried forward	597	4,626	290	560

Code	List No	Diseases in	emaining Hospital at end of Dec. 1955	Total	in Deaths	emaining Hospita at end of Dec. 1956
		ones doll and	Jec. 1999	cases		Dec. 1950
		Brought forward	597	4,626	290	560
642,652, 685,686	A 116	Toxaemias of pregnancy and the puer-	dend with	7		III
643,644	A 117	Haemorrhage of pregnancy and child-	tentrih v		-6	101-10
650	A 118	birth Abortion without mention of sepsis or	cousinho.	2	-	-
650	A 119	toxaemia Abortion with sepsis	1 -	117	1 1-	2 -
660 N.O.S.	A 120 A 120	Delivery without complication Other complications of pregnancy,	4	329	-	4
645-689		childbirth and puerperium	1 20-11	80	5	651-17
200 200	4 101	Skin and Musculo-Skeletal Diseases				
690-689	A 121	Infections of skin and subcutaneous tissue	7	246	1	13
720-725 726,727	A 122 A 123	Arthritis and spondylitis Muscular rheumatism and rheumatism	I de la constante de la consta	14	-	-
730	A 124	unspecified Osteomyelitis and periositis	-	7 10	-	1
737,745,749	A 125	Ankylosis and acquired musculo-skele- tal deformities	THE WATER	imig_ 0	-	Hill and
715 700-714,716	A 126 A 126	Chronic ulcer of skin All other diseases of skin	5 4	193	7	10 2
731-736, 738-744	A 126	All other diseases of musculo-skeletal	lyays mills	o nilii b	1	
130-144		system	8	64	1	4
751	A 127	Diseases of Newborn Spina bifida and meningocele			-	30-10
754	A 128	Congenital malformations of circulatory system			1-	_116
N.O.S. 750-759	A 129	Other congenital malformations	bout to s	man b	45	- 110
760-761 762	A 130 A 131	Birth injuries	-	-	1	002-10
764	A 132	Postnatal asphyxia and atelectasis Diarrhoea of newborn (under 4 weeks)	10-9-0	4	01 42	EN
765 763,766,768	A 132 A 132	Ophthalmia neonatorum Other infections of newborn	-	2	2	Ē w
770 769,771,772	A 133 A 134	Haemolytic disease of newborn All other defined diseases of early in-	riotae aug		or A	-
773,776	A 135	fancy Ill-defined diseases peculiar to early	vil - Sinor	6	2	365.18
		infancy, and immaturity unqualified	- db a	23	13	194-110
mo.4	1 100	Ill-Defined Diseases				
794 788.8	A 136 A 137	Senility without mention of Psychosis Pyrexia of unknown origin	151 5	97 128	77 6	135
793	A 137	Observation, without need for further medical care	5	20	1	102.00
N.O.S. 780-795	A 137	All other ill-defined causes of morbidity		20	12	
N800-N804 N805-N809		Fracture of skull Fracture of spine and trunk	1 2	35 49	10	1
N810-N829 N830-N839	AN 140	Fracture of limbs	6 2	52 7	5	4
N840-N848		Dislocation without fracture Sprains and strains of joints and adja-	reason .		ti L	1
N850-N856 N860-N869		cent muscle Head injury (Excluding fracture) Internal injury of chest, abdomen, and	2 4	55 32	7	3
	A 80	pelvis		110- 6	11-11	THE LAND
		Carried forward	805	6,275	430	745

Code List N	o. Diseases		Remaining in Hospita at end of Dec. 1955	2	i	Remaining n Hospital at end of Dec. 1955
230-260	Brought forwa	ard		6,275	430	745
N870-N908 AN 145			. 4	151	4	7
N910-N929 AN 146	ing with intact skin surface		. 6	144	7	3
N930-N936 AN 147		g throug		1	- 01	-
N940-N949 AN 148	D			51	5	4
N960-N979 AN 149			0	15	_	1440
N950-N959 AN 150	All other and unspecified effective	ets of ex				
N980-999	A comment of the comm		mp.	112	-	4
Tay of the	Т	otal	. 895	6,749	446	763

N.O.S. means "Not Otherwise Specified", i.e. N.O.S. 102-108 means all other diseases included between these numbers in the International Classification to be entered in this line if not otherwise specified in any line elsewhere.

RETURN OF DISEASES: OUT-PATIENTS

Infectious and Parasitic Diseases

Code	Managalah of g	Dis	eases						
001-008	Respiratory Tube	rculosi	8						795
010-019	Other Tuberculos	is						***	39
020-029	Syphilis								1,037
030-035	Gonorrhoea								2,523
036-039	Other Veneral Di		***				***		461
045	Bacillary Dysente		***	***	***	***			437
046	Amoebic Dysente	ry			***			***	168
055	Diphtheria		***	***	***			***	ero
056	Whooping Cough		who would	lania)			***		658
057,340	Meningitis (Exclu				***				9
058	Plague				***				59
060	Tetanus	***		***					-
061 062	A 41			***		***			
071	Relapsing Fever					***		***	_
073	Yaws								6,714
080	Acute Poliomyelis								-
084	Variola major								_
084	Variola minor								-
085	Measles								407
086	Rubella							***	_
087	Chicken Pox								408
089	Mumps							***	119
092	Infectious Hepati								189
095	Trachoma								100
110	B.T. Malaria								517
111	Qt. Malaria	***	***	***					472
112	S.T. Malaria								4,072
113-117	Other forms of Ma	alaria							12,463
115	Blackwater			***					-
121	Trypanosomiasis						***	***	-
123.0	Schistosomiasis (h	naemat	obium)		***	***			1,957
123.1	Schistosomiasis (1	manson	i)			***		***	36
126	Tapeworm								17
127	Onchocerciasis	***		***	***				
129	Ankylostomiasis								4,343
130.0	Ascariasis	***	***	***		***	***		506
131	Tinea						***	***	321
135	Scabies	***	***		***	***	***	***	11,523
N.O.S.	Other infection	ad nor	mitic di	000000					589
036.138	Other infective as	na para	isitie di	seases		***	***	***	909
			New G	routhe					
140-205	Malignant Neople	sms	Trem Cr	Julies		201	7,481		38
210-239	Benign and other	Neonl	asms					***	688
210-200	Delligh and other	ricola	CHOSTAGO						000
	Allergie	. Meta	bolic an	d Bloc	d Dise	ases			
241	Asthma								1,361
286.6	Kwashiorkor								2
290-293	Anaemia	***			***		***		15,932
N.O.S.									
240-299	Other allergic, end	docrine	, metab	olic a	nd nuti	ritional	diseas	es	1,150
	Diseases	of Ner	vous Sy	stem a	nd Sen	se Orge	ans		
300-326	Mental Disorder								21
353	Epilepsy		***	***	***	***			14
						c			B0 100
				(Carried	forwa	rd		70,139

Code		Disc	ases					
N.O.S.				Broug	ght for	ward		70,139
330-369	Other diseases of	the nervous	system	and se	nse or	rans		1,137
370	Conjunctivitis and	Ophthalmi	1			Sumo		6,131
373								317
389	Blindness							53
N.O.S.								
371-388	Other diseases of	eye (not trac	homa)					1,227
390-398	Diseases of ear an	d mastoid p	rocess					4,345
		Circulator	-	1868				
400-447	Diseases of the He		***	***	***	***	***	216
450-468	Other Circulatory	diseases	***		***			248
		D	n'					
490-493	D	Respirato	-					1 450
N.O.S.	Pneumonia Other diseases of	Abo morning	tones or	akama (include		***	1,478
470-527	Other diseases of							28 850
410-021	pharyngitis and	bronemers)	***		***	***		26,659
		Alimenta	ru Diser	1808				
530	Dental caries		9 2000					10,372
538	Stomatitis and oth	her diseases	of the b	ouceal o	cavity			1,862
560-561,570	Intestinal obstruc							1,031
571.0	Gastroenteritis un	der 2 years						1,107
571.1	Gastroenteritis ov							2,184
N.O.S.		Manager Contracting						
537-587	Other Diseases of	Digestive Sy	ystem					10,028
010		Genito-Urin						1000
613	Hydrocele		***			***	***	827
N.O.S.	001 - 11			,	,			2.100
590-716	Other diseases of g						rgans	2,130
636 N.O.S.	Sterility (female)		***	***	***	***	***	179
620-637	Other diseases of	ntorns and f	omalo a	onital	organe			3,163
-	Normal pregnancy				organs			4,101
650-652	Abortion		***			***	***	106
N.O.S.								
640-689	Other diseases of	childbirth						28
1224		and Muscul						
690-698	Boils, and infection		d subcu	taneou	ıs tissu	e		9,525
715	Chronic ulcers		***	***	***		***	11,422
N.O.S.	00 11 6							
700-716	Other diseases of			1 10-				5,535
720-759	Diseases of bones,	joints, mus	cies and	mano	rmatic	m		5,507
	m	Defined Dise	mees an	d Inim	ries			
760-776	Neonatal diseases		uses un					141
788.8	Pyrexia of unknow							4,051
N.O.S.	- Jacobs of diffillion		200	7000	1000			2,00%
780-795	All other ill-define	ed causes of	morbid	ity				11,601
N800-N839	Fractures and dis							214
N840-N848	Sprains							1,237
N930-N936	Foreign bodies							580
N940-N949	Burns and Scalds		***				***	885
N960-N979	Poisoning						***	169
N.O.S.	0.1							** ***
N850-N999	Other injuries and				***			12,098
Y00-Y18	Examination	***		***		***		7,699
					n	Cotal		219,732
						Loual	***	210,702
				Re	attend	ance		259,264
				210		10000000		
				G	rand T	Cotal		478,996

-850.1 :		
	Name of the state	