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THE GAMBIA.

**REPORT ON THE MEDICAL AND HEALTH
SERVICES FOR THE YEAR 1954.**



BATHURST:

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CONTENTS.

	<i>Page.</i>
I. NOTES OF INTEREST... ..	1
A. Medical and Health Units	1
B. Medical Research Laboratory, Gambia	2
C. British Red Cross Society, Gambia Branch	3
D. Visitors	3
II. ADMINISTRATION	4
A. Staff	4
B. Legislation	5
C. Finance	6
III. PUBLIC HEALTH	7
A. Hospital, Dispensary and Clinic Statistics	7
B. Medical Units	8
C. Laboratory Services	8
D. Dental Services	9
E. General Remarks	9
F. Epidemic and Endemic Diseases	9
IV. VITAL STATISTICS	12
V. HYGIENE AND SANITATION	15
VI. SCHOOL HYGIENE	18
VII. PORT HEALTH ADMINISTRATION	18
VIII. MATERNITY AND CHILD WELFARE	18

APPENDIX.

DISEASES CLASSIFIED ACCORDING TO THE INTERMEDIATE LIST OF
OF THE INTERNATIONAL STATISTICAL CLASSIFICATION OF
DISEASES, 1948.

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1954

REPORT ON THE MEDICAL AND HEALTH SERVICES FOR THE YEAR 1954.

I. NOTES OF INTEREST.

A. MEDICAL AND HEALTH UNITS.

1. *New Victoria Hospital.* The female wing, private block and isolation wing were completed. Because of inadequate electric power generating facilities the private and isolation blocks have not yet been occupied. The female wing is occupied which means that for this type of patient there is a great improvement in the facilities now available for them as compared with the temporary and generally unsuitable building previously in use. It is expected that a new power station will be completed and in use early in 1955, and it should then be immediately possible to bring into use the remainder of the new hospital buildings completed. One of the buildings forming part of the old Victoria Hospital is now being considered for conversion into a small children's hospital with 20 beds. The building has a steel framework in good condition and it is hoped that for a fairly small expenditure it will be possible to provide this badly needed amenity.

2. *Sanatorium.* During 1954 only male pulmonary Tuberculosis patients were admitted, as owing to shortage of female staff it was impossible to make use of the female section. However, there are hopes that in 1955 it will be possible to obtain female staff for this work. The Ramage Salaries Commission recommendation that an inducement element of £1 per month be paid to Junior Hospital Staff when employed at the Sanatorium was accepted and this should in due course have the effect of encouraging recruitment of staff for this important branch of nursing. At present the Sanatorium consists of 15 beds for male patients and there will be a further 10 for females. Little difficulty is experienced in persuading patients to enter the Sanatorium for treatment and there is at present a long waiting list. Difficulty is, however, sometimes experienced in persuading patients to remain a sufficiently long time in hospital to complete treatment. Treatment given consists of rest in bed, the supplying of a well-balanced and sufficient diet, the supplementing of this diet with Yeast and Cod Liver Oil, and Chemotherapy using Streptomycin, Para-aminosalicylic acid and insonicotinic Acid Hydrazide with occasional pneumoperitoneum for selected cases. Response to chemotherapy in early and moderately early cases is so good that one can only regret that more of these drugs are not available and that accommodation for patients is so limited. Improved facilities for early diagnosis and treatment are regarded as an immediate necessity. The more difficult and long-term question of improvement in living conditions is one presenting many difficulties in Bathurst, but the re-housing scheme (now in its planning stages) envisaging the proper lay-out of the re-claimed land to the West of Bathurst and the erection on it of controlled and properly planned housing offers some hope of improvement in this direction.

B.C.G. vaccine has not yet been used. U.N.I.C.E.F. and W.H.O. were approached during the year in this respect, but it appears that the general policy regarding prophylaxis for Tuberculosis is under discussion by these International Bodies and until final decision is reached there is little prospect of help from them.

B. MEDICAL RESEARCH LABORATORIES, GAMBIA.

The following notes on the activities of the Laboratories during 1954 were prepared by the Director:—

A. During the year Dr. J. Newsome resigned his appointment and Dr. I. A. McGregor was appointed in his place as Resident Director.

Research Activities:

1. *Permanent Staff.* Throughout 1954 the following problems were investigated by the permanent staff of the Laboratories:

- (a) Effect and efficiency of long term prophylactic administration of the anti-malarial drugs Chloroquin and Daraprim.
- (b) Assessment of the contribution of malaria to mortality and morbidity rates in Gambian children.
- (c) Investigation of the aetiology of the enlarged livers found commonly in Gambian children.
- (d) The investigation of the effects of para-amino-benzoic acid and breast milk diets on the frequency and virulence of primary malaria infection in infants.
- (e) Effect of malaria control on the health of a rural village community.
- (f) Determination of the relative efficiency of D.D.T., B.H.C. and Dieldrin as residual insecticides.
- (g) Investigation of the bionomics of the prevalent Gambian anopheline and culicine mosquitoes.
- (h) Investigation of the plasma and serum proteins in Gambian children.
- (i) Determination of the Mass Hetrazan therapy as a means of controlling Bancroftian filariasis.
- (i) Determination of the incidence of sickle cell trait and anaemia in the various tribes of the Gambia.

2. *Visiting Workers.*

- (a) Investigation of the transmission of schistosomiasis in the Gambia.
- (b) Observations of mosquito behaviour.
- (c) Investigation of plasma-serum proteins in adult Gambians by paper electrophoresis.
- (d) Investigation of anaemias of pregnancy.
- (e) Treponematoses. Investigations have been made into the forms of treponematoses occurring in the Gambia.

- (f) Leprosy. Attempts are being made to infect experimental animals with leprosy.
- (g) Malaria. Investigations are being made into the influence of malaria on the routine serological tests for treponemal infections.

Much of the work mentioned under points (e) to (g) above have been undertaken in co-operation with Dr. J. F. McCourt, Medical Officer of Health, Gambia.

C. GAMBIA BRANCH, BRITISH RED CROSS SOCIETY.

The following notes were supplied by the Colony Director:—

“Lady Limerick visited the Colony in January and made a short trip on the Red Cross launch, the “Nema Cuta”.

“A library has been started at the Victoria Hospital and there is now a regular distribution of magazines and papers to patients in the Hospital and Sanatorium.

“Toys have been given to the children’s ward and games to the other wards. A gramophone and records have been given to the Sanatorium. First aid instruction has been continued in Bathurst and trained members have been in attendance at public functions.....Protectorate teachers also received a refresher course in First Aid during their Annual Conference.

Junior Red Cross.

“As a result of the cards and materials received from Juniors in the United Kingdom all the links have been able to make scrap books which were taken to children in the Victoria Hospital by the Juniors themselves. Concerts have been given in the wards and all links have received instruction in First Aid.”

D. VISITORS.

The under-mentioned visited the Gambia during the year:—

1. Sir Eric Pridie, Chief Medical Officer, Colonial Office.
2. Lady Limerick, Deputy President of the British Red Cross Society.
3. Dr. Cecily Williams, Senior Lecturer in the Department of Human Nutrition, London School of Hygiene and Tropical Medicine.
4. Dr. F. E. Byron, Food Technologist in the Applied Nutrition Unit of the School.
5. Dr. J. Karefa-Smart, Regional Officer, World Health Organisation.
6. Mr. Karl Borch, Deputy Chief Representative, U.N.I.C.E.F.
7. Dr. C. J. Hackett, W.H.O. Specialist on Trepanematoses.

II. ADMINISTRATION.

A. STAFF.

ESTABLISHMENT, 1954.

1	Director of Medical Services.
1	Medical Officer of Health.
7	Medical Officers.
1	Dental Surgeon.
1	Senior Nursing Sister.
5	Nursing Sisters (Medical).
2	Nursing Sisters (Health).
1	Senior Health Superintendent.
2	Health Superintendents.

(a) *Medical Officers.*

Dr. S. H. O. Jones, Director of Medical Services, Dr. J. F. McCourt Medical Officer of Health, Dr. G. E. Porter, Medical Officer in charge, Victoria Hospital, and Dr. P. J. N'Dow were all on duty throughout the year.

Dr. T. S. Derola and Dr. (Mrs.) A. Derola were on leave from May to November.

Dr. J. A. Mahoney was on leave from January to May and Dr. S. J. Palmer from May to September.

Dr. M. R. Witney went on leave in September, prior to termination of his contract.

(b) *Nursing Sisters.*

Miss J. A. M. Henderson, Senior Nursing Sister went on leave in September prior to retirement and Miss M. M. Shepherd, who was on duty all year, acted in her absence.

Miss M. W. Crawford went on leave in February prior to transfer to Nigeria.

Miss C. N. Michie went on leave in February prior to retirement.

Miss K. J. D. Shouksmith returned from leave in March and Miss P. M. Cook, the other Health Sister was on leave from March to November, during which time she attended a 3 month refresher course in Midwifery and Infant care. Miss J. S. T. Williams was on leave from May to August, and Miss H. M. Forster from January to March.

During the year two new sisters, both Gambians, were appointed: They are Miss H. A. Mahoney and Miss B. E. Peters and they assumed duty in April and May respectively.

(c) *Health Superintendents.*

Mr. J. L. Roscoe went on leave in October and was away for the remainder of the year.

Mr. J. G. Rees was on duty all year.

Mr. J. A. Watt who went on sick leave in November, 1953 has been invalided from the service.

(d) *Dental Surgeon.*

Mrs. P. M. S. Mitchell resigned from the service in April, 1954.

The appointment of two nursing sisters on first appointment, already referred to, only fills the vacancies caused by the retirement of Sister Michie and the Roman Catholic Mission Sister at Basse. There is still a shortage of Sisters for Hospitals and Out-stations, particularly now that the new Victoria Hospital is working to nearly full capacity, with consequently more patients to be attended to and greater need than ever for more supervision.

The retirement of the Dental Surgeon again sees the Gambia without a Dental Officer. Through the courtesy of the Government of Sierra Leone, Major D. Gollan again came for a short visit to Gambia to fill the gap. The absence of a permanent dental surgeon is greatly felt.

By Notification No. 8 of 1954 there has been a change of title from Sanitary Superintendent to Health Superintendent, and from Sanitary Inspector to Health Inspector. The invaliding of Mr. Watt from the service has caused staff difficulties and acute shortage arises during leave or illness. It has still not been possible to post a Health Superintendent to the Protectorate, where there is a much felt need for his services. An additional Health Superintendent has been approved on establishment for 1955 raising the existing vacancies to two. It appears likely that very considerable difficulty will arise in filling these posts.

It is perhaps of interest to note that the number of doctors available in the Gambia is only equivalent to one per thirty thousand approximately of the population, and that in the United Kingdom it is often considered excessive for a doctor to have more than 2,000 patients on his panel.

Junior Staff.

29 Probationer Dressers and Nurses were appointed during the year.

Promotions:	9.
Resignations:	12.
Dismissals:	1.
Terminations:	4.
Deaths:	—

It is pleasing to be able to record that with effect from 1st December, 1953, Mr. M. O. Manga, who has been Medical Storekeeper for many years, and Mr. R. W. Phillott, Chief Dispenser also for many years, have been up-graded from the Special Grade to Division 1 Posts on Scale C1.

B. LEGISLATION.

<i>Serial No.</i>	<i>Date.</i>	<i>Short Title.</i>	<i>Provisions.</i>
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ORDINANCES.

9/1954.	18th October, 1954	Dogs Amendment Ordinance, 1954.	Alters conditions for licensing of dogs and in particular requires as a precedent condition that the dog has been vaccinated against rabies. The inoculation is accepted as being valid for two years for dogs over six months of age.
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<i>Serial. No.</i>	<i>Date.</i>	<i>Short Title.</i>	<i>Provisions.</i>
REGULATIONS.			
1/1954.	18th February, 1954	The Public Health (Amendment) Regulations, 1954.	Substitutes stringent provisions as to certification by M.O.H. prior to issue of licences to hawkers of fresh food.
2/1954.	1st June, 1954	Town of Bathurst Building (Amendment) Regulations, 1954.	Strengthens principal Regulations and in particular increases participation of M.O.H. in control of new building.

PROCLAMATIONS.

1/1954.	23rd March, 1954	Under Section 13 of Dogs Ordinance, 1916.	Authorising the destruction of all dogs found at large in the Island of Saint Mary and in the Kombo Saint Mary Division, also all dogs wheresoever found suspected of being infected with hydrophobia.
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BYE-LAWS.

Nil.

ORDERS.

Nil.

C. FINANCE.

				1953 <i>Estimated.</i>	1953 <i>Actual.</i>	1954 <i>Estimated.</i>
				£	£	£
Revenue	...	...	...	2,500	2,406	2,800
Expenditure	...	...	...	103,935	103,051	108,159

EXPENDITURE ON MISCELLANEOUS SERVICES.

				£	£	£
Contribution to	Medical					
Organisations	...	...	...	404	1,193	1,359

THE COLONY OF THE GAMBIA.

				£	£	£
Total Revenue	...	...	...	1,327,190	1,201,068	1,490,989
Total Expenditure	...	...	...	1,448,308	1,085,693	1,490,989

(It should be noted that figures for Revenue include Grants from C.D. & W. Funds, etc.)

Estimated *Ordinary* Revenue for 1954—£1,021,240. Estimated Expenditure on Medical and Health Services as a percentage of ordinary revenue for 1954—10.6%. This compares with a figure of 10.2% in 1953.

III. PUBLIC HEALTH.

A. HOSPITAL, DISPENSARY AND CLINIC STATISTICS.

The attendances at Hospitals, and minor Medical Units are given below:—

(a) HOSPITALS.

<i>Year.</i>	<i>Total Admissions.</i>	<i>Outpatient New Cases.</i>	<i>Total outpatient Attendances.</i>
1950	4,369	34,363	52,052
1951	4,906	41,437	62,106
1952	4,505	47,142	63,802
1953	4,710	52,482	66,162
1954	4,687	39,234	64,442

(b) HEALTH CENTRES AND DISPENSARIES.

<i>Year.</i>	<i>Number of Units.</i>	<i>New Cases.</i>	<i>Total Attendances.</i>
1950	34	51,101	126,481
1951	43	87,687	215,857
1952	43	101,414	255,636
1953	44	96,991	234,593
1954	44	109,323	263,390

(c) ANGLICAN MISSION DISPENSARIES.

<i>Year.</i>	<i>Number of Units.</i>	<i>New Cases.</i>	<i>Total Attendances.</i>
1950	2	4,567	10,642
1951	3 and 1 Mobile Disp.	5,222	12,797
1952	do.	4,701	12,408
1953	do.	3,742	8,801
1954	do.	4,450	11,253

(d) MATERNITY AND CHILD WELFARE CLINICS.

<i>Year.</i>	<i>Number of Centres.</i>	<i>Ante-Natal Attendances.</i>	<i>Child Welfare Attendances.</i>	<i>Total Attendances.</i>
1950	9	7,131	26,166	33,297
1951	13	10,832	45,425	56,284
1952	12	11,811	48,479	60,290
1953	12	14,658	61,747	76,405
1954	12	16,061	63,345	79,406

The total attendances for 1954 represent an increase of 3.9% over those of 1953, and an increase of 138.4% over those of 1950.

B. MEDICAL UNITS.

(a) *Victoria Hospital, Bathurst.* During the year there were 3,455 admissions to the Hospital, which is a fall in admissions of 121 as compared with 1953. However, the total days stay in Hospital of all patients was 51,127 days as compared with 46,775 days in 1953, which represents a rise of 9.3% in the total effective work done. It is expected that in 1955, with the bringing into use of all the new Hospital buildings that there will be a further increase for throughout the year 1954, the hospital worked at 94% of capacity, and there were many occasions when the less seriously ill had to be turned away because of lack of space, in which to accommodate them.

(b) *Bansang Hospital.* Admissions during the year showed an increase of 108 over the figure for 1953, at 1,232 admissions during 1954. Total days spent in hospital by all patients increased from 13,411 for 1953 to 18,093 for 1954, which represents a rise of 34.9%. On the average, during the year the hospital worked to 76% of maximum capacity, with several periods when a greater number of beds could quite readily have been filled. 318 major operations were performed during the year and 56 minor operations, which compares with 243 major operations and 51 minor ones during 1953. It is of interest to note that the figures for operations during 1954 indicate that at least one operation was done on the average each day throughout the year, and that at Bansang Hospital at any one time there is only one doctor who has the whole supervision of the hospital, and all minor medical units in MacCarthy Island and Upper River divisions, in his charge as well.

(c) *Minor Medical Units.* There is nothing unusual to report about the Minor Medical Units during the year 1954. The organisation of the units remained as at the end of 1953, namely:—

6 Government Health Centres.

15 Dispensaries, all in District Authority Buildings, except at Yundum Airport.

23 Sub-Dispensaries, all in District Authority Buildings and visited once or twice weekly by the Government Dresser/Dispenser from the nearest Dispensary.

The Anglican Mission continued to maintain a Dispensary with a resident European Pharmacist at Kumbul who visited sub-dispensaries at Kristikunda and Passemassi, and also toured with a mobile dispensary during the dry season. It appears probable that during 1955 the Mission will succeed in placing on duty in Upper River Division a Male State Registered Nurse in addition to the Pharmacist.

C. LABORATORY SERVICES.

Staff and accommodation must still be considered inadequate in the clinical laboratory at the Victoria Hospital. The increasing scope of laboratory techniques and the increasing dependence (rightly) of doctors on laboratory tests to confirm and check clinical diagnoses makes it absolutely essential, if proper treatment is to be given, that laboratory facilities be overhauled and strengthened at the hospital. Increasingly, the need for a fully qualified pathologist becomes apparent, and it is hoped that in the near future such an appointment will be included on the Department's establishment. Although the cost of such an appointment may well be high, it could well lead to increased economy in the use of drugs, and a shorter stay of patients in the hospital, for without the full-scale use of a laboratory to assist in diagnosis, treatment cannot be sometimes other than empirical.

The following is a summary of the work done in the Victoria Hospital Laboratory during 1954:—

Blood Films	10,603
Blood Counts	513
Kahn Tests	2605
Blood Sedimentation Rates	151
Urine examinations	7,509
Faecal examinations	2,168
Gland Punctures	186
Urethral and Vaginal Smears	1,771
Cerebro-Spinal Fluid Examinations	11
Other Bio-chemical Tests	28
Sputum examinations	243
Skin-scrapings and nasal smears	368
Other Miscellaneous examinations	11

D. DENTAL SERVICES.

During the whole of 1954 the Gambia was without a Dental Surgeon held on its establishment. As has been previously stated, Major Gollan, Dental Surgeon, Sierra Leone was seconded from there to work here for a short period. The vacancy, however, is now in process of being filled, and there is every hope that there will be a Government Dentist on duty here during most of 1955.

E. GENERAL REMARKS.

Health of Expatriates. (Europeans, Lebanese and Syrians). There were 54 admissions as in-patients, with an average stay in Hospital of less than 8 days. 305 out-patients were attended. There were no deaths in hospital. Infections of skin and sub-cutaneous tissues, acute upper respiratory infections, digestive disorders and malaria were again the commonest causes for seeking medical advice.

Health of Africans. Disorders of the digestive tract were again collectively the commonest cause for seeking attention, and 30,252 cases are recorded. This figure includes 13,056 cases of simple constipation which accounts for a large proportion of attendances at Outpatient Dispensaries. Diseases of the respiratory tract numbered 18,805. The total number of cases of malaria was 22,018 with a total of 19 deaths. It must be emphasised, however, that the great majority of these cases were diagnosed only clinically, and 13,469 of them were reported from Dispensaries. The number of cases of "rheumatism" treated was 9,010.

F. EPIDEMIC AND ENDEMIC DISEASES.

(1) *Smallpox.* During the year 107 cases of smallpox were reported, with only 1 death reported. The great majority of cases detected were in French subjects who entered the Gambia from neighbouring French territory. Prompt measures were taken by Health Inspectors on discovery of cases, when vaccination of all contacts, and isolation of patients was carried out. Routine vaccinations continued to be done by Health Inspectors.

(2) *Cerebro-Spinal Meningitis.* During the year 80 cases with 16 deaths were notified. All except one of these occurred in the Protectorate, this single case occurred in Bathurst. Prompt measures were taken in this latter case, and fortunately no other cases occurred.

(3) *Leprosy*. During the year, Dr. J. A. McFadzean of the Medical Research Council Laboratories at Fajara and the Medical Officer of Health undertook a survey of the incidence of this disease. The primary object of the survey was to determine the incidence of treponematoses in the Gambia, and it was decided that an examination for leprosy could easily be conducted at the same time. One village of each of the four main tribes in each of the four divisions of the Gambia was selected. A population of 500 in each village was aimed at, which is by Gambian standards, a fairly large village, and the one selected was as far from a Dispensary as possible, with at least 80% of its population of the pre-dominating tribe.

The incidence of leprosy was found to be high, and the disease widespread throughout the territory. An overall incidence of 2.4% was found. Ross in 1947 found an overall incidence of 2.5%. This incidence indicates that there are over 6,000 lepers in the Protectorate.

The problem of leprosy control was discussed with the W.H.O. and U.N.I.-C.E.F. representatives during their visit and hopes are held that assistance will be forthcoming. No decision can be reached, however, until March, 1955, when the Executive Committee of these two international organisations meets and plans their budget. Treatment of cases as outpatients using *Dapsone* will be the main feature of the scheme with a medical officer supervising.

(4) *Spirochaetal Diseases*. The leprosy survey was, as has already been indicated, primarily intended to determine the incidence of the treponemal diseases in the territory. Two types of disease were found. One was classical yaws. The other had many features resembling the so-called endemic syphilis of Bosnia, and Bechuanaland and the disease originally described by Hudson (Bejel). This latter disease was mainly characterised by primary sores at the corners of the mouth involving mucous membrane, and on the tips of the penis in small boys. Secondary manifestations most frequently seen were papular eruptions which coalesced to form circinate lesions and condylomatous lesions at the anus and vulva. Hyperkeratosis with or without de-pigmentation of skin mostly on hands and wrists, some bony lesions and destructive lesions of the nasal septum were common tertiary manifestations. All of these cases gave strongly positive Kahn and Wasserman tests and the primary and secondary lesions showed numerous spirochaetes morphologically identical with *Treponema Pallidum*, on dark ground examination. Spread of infection was mainly by communal drinking cups, and close personal contact. All the cases of the disease were confined to the one tribal group.

Generally speaking however, treponemal diseases were found to be on the decline, to a marked extent. That they were once prevalent is evident by the frequent finding of the late, inactive signs of the disease in adults. New and infectious cases were however rare. The credit for this must go by and large to the Protectorate Dispensaries who by constant treatment, have cured cases early and thus prevented others becoming infected. A few isolated pockets of yaws and the other treponemal disease described remain, which could be eradicated by penicillin therapy. It is interesting to note that Gambia with its climate, which is intermediate in type between the markedly tropical climate, further South (Nigeria, etc.) where classical yaws is common, and the arid climate of North Africa where endemic syphilis is common, seems to be able to support both diseases.

(5) *Influenza*. There were 284 cases recorded throughout the year. No deaths from this cause were recorded.

(6) *Trypanosomiasis*. 1,149 cases were recorded, of which 995 cases were clinically diagnosed at Outstation Dispensaries.

(7) *Schistosomiasis*. A total of 752 cases were reported, 351 of them from Outstation Dispensaries. It is probable, although records are not in fact kept, that the majority of the schistosomiasis is urinary.

(8) *Tuberculosis*. A total of 208 cases were reported, but of these 82 cases were clinical diagnoses at Outstation Dispensaries. This leaves a total of 126 cases that can be regarded as certain. A total of 27 deaths from *Pulmonary Tuberculosis* occurred in Bathurst during the year, and it should be noted that *none* of these were deaths occurring in Bathurst of people normally not resident there.

While it is likely that this figure is higher because of the better facilities now available for the diagnosis of the disease, including improved radiological facilities, and the provision of a sanatorium, with the resultant increase in the number of cases reporting for conventional treatment, it must be emphasised that the figure of deaths from this disease offers no grounds whatsoever for complacency. To make this more apparent, it is necessary to point out that included in the figure of deaths are only ones in which there has been a clear and un-equivocal diagnosis of *Pulmonary Tuberculosis*. All cases where the diagnosis has only been suggestive of the disease have been excluded.

The following are some death rates from *Pulmonary Tuberculosis* in Bathurst in so far as they are now available:—

Year.						Death Rates per 1,000 population.
1921	...	...	...	...	...	1.9
1931	...	...	...	...	...	2.2
1944	...	...	...	...	...	1.4
1946	...	...	...	...	...	1.1
1947	...	...	...	...	...	1.5
1948	...	...	...	...	...	1.7
1949	...	...	...	...	...	1.6
1950	...	...	...	...	...	1.3
1951	...	...	...	...	...	1.1
1952	...	...	...	...	...	1.7
1953	...	...	...	...	...	1.1
1954	...	...	...	...	...	1.4

(The average for the five years, 1950—1954 inclusive is 1.3 per 1,000 population).

The following are the number of notifications of *Pulmonary Tuberculosis* in Bathurst for the years indicated:—

Year.	No. of Cases notified.	Rate per 1,000
1949	28	1.4
1950	42	2.2
1951	32	1.7
1952	47	2.5
1953	40	2.1
1954	49	2.6

Here again it can be taken that part of the increase in notifications arises from improved facilities for diagnosis and part from the lessening resistance of patients to reporting for treatment when they are sick, but here again it must be emphasised that the incidence of tuberculosis in Bathurst should be a cause of grave

concern. It must be emphasised that the prevention of tuberculosis can never be tackled successfully on the one front of curative treatment, nor even is prophylactic treatment a complete answer. The successful solution must be one embracing treatment of the sick, prophylaxis for the most susceptible, *and*, most important, the improvement of housing and nutritional conditions, so as to increase resistance to the disease, and to do away with those conditions in which the disease may most rapidly spread. In other words, the solution is basically the improvement of environmental hygiene, in the broadest possible sense. This is obviously not only or even largely a matter for the Medical Department. It would be pleasing to be able to report that during 1954, improved medical facilities were accompanied by a greater consciousness in the public mind of the need for these other measures—unfortunately, this cannot be said.

(9) *Veneral Diseases.* (a) Syphilis: A total of 1,000 cases were recorded compared with 1,117 in 1953. 533 cases were recorded at outstation dispensaries.

(b) *Gonorrhoea:* 4,380 cases were recorded, of which 2,451 were from outstation dispensaries. This compares with 3,338 and 2,466 respectively for 1953.

(10) *General.* Improved housing, improved domestic sanitation, the provision of an improved and well-balanced diet, and the control of the important insect-borne diseases continue to be the most important health problems in the Gambia. It is axiomatic that a solution to these problems must go hand in hand with improved educational facilities and an improved agriculture, and that an improvement in the one without an improvement in the others may be disastrous.

IV. VITAL STATISTICS.

Returns of Vital Statistics outside Bathurst are still incomplete and unreliable and the following statistics apply to Bathurst only:—

(i) *Births and Deaths*—Actual numbers:—

Estimated Population, Bathurst, end 1954	...	...	...	20,370
Live Births	...	...	...	669
Still Births	...	...	...	44
Deaths	...	...	...	343
Deaths under 1 year	...	...	...	77

(ii) Number of births and deaths in Bathurst 1950 to 1954 showing natural increase:—

<i>Year.</i>	<i>No. of Births.</i>	<i>No. of Deaths.</i>	<i>Natural Increase.</i>
1950	803	356	447
1951	780	353	427
1952	710	298	412
1953	735	304	351
1954	669	343	326

N.B. It requires to be stated that an unknown number of births, deaths still births almost certainly fail to get registered, and included in the records,

(iii) Birth and Death rates in Bathurst (corrected) 1950 to 1954.

	1950	1951	1952	1953	1954
Death rates: deaths per 1,000 of the population	18	18	15	19	17
Birth rates: live births per 1,000 population ...	42	40	36	37	33
Infant Mortality Rates: Deaths under 1 year per 1,000 live births ...	101	117	86	106	115
Still Birth Rates: Still Births per 1,000 total births	66	67	92	59	62

Note: The above figures are calculated on the following population figures:—

1950 rates on 19,000 population.

1951 „ „ 19,600 „ . (Census figure)

1952 „ „ 19,863 „ (Estimated figure based on Census figure.)

1953 „ „ 19,823 „ . do.

1954 „ „ 20,370 „ . do.

(iv) Number of Births and Deaths, by month, in Bathurst.

Month.	Number of Deaths.	Number of Births.
January ...	26	49
February ...	27	56
March ...	25	63
April ...	12	59
May ...	36	58
June ...	19	43
July ...	39	51
August ...	31	45
September ...	33	63
October ...	31	61
November ...	35	62
December ...	29	59
Total ...	343	669

(v) Number of deaths by age and sex (exclusive of still births) in Bathurst in 1954.

Age Group.	Male.	Female.	Total.
Under 1 year of age	47	30	77
1—4	29	28	57
5—9	7	2	9
10—14	1	3	4
15—19	1	3	4
20—24	6	7	13
25—29	9	6	15
30—34	8	9	17
35—39	7	7	14
40—44	16	4	20
45—49	17	6	23
50—54	9	7	16
55—59	7	2	9
60—64	10	4	14
65—69	6	3	9
70—74	5	5	10
75—79	3	1	4
80—84	1	9	10
85 and over	7	7	14
Not stated	1	3	4
All ages	197	146	343

It is of interest to note that of all deaths in which age is known, 75.5% of the male deaths and 74.8% of the female deaths occurred before the age of 50 years. Of all deaths in which age is known, 24% of the male deaths and 21% of the female deaths occurred under 1 year.

(vi) Deaths under 1 year of age (exclusive of still births) by detailed age and sex in Bathurst, 1954.

<i>Age Group.</i>	<i>Male.</i>	<i>Female.</i>	<i>Total.</i>
Under 1 month	22	12	34
Under 1 day	4	4	8
1 day—under 1 week	11	6	17
1 week—under 1 month	7	2	9
1 month—under 6 months	12	7	19
6 months—under 1 year	13	11	24
Total deaths under 1 year	47	30	77

It is pleasing to be able to record that for the first time in the period for which statistics are recorded, neo-natal deaths in the first month of life have fallen BELOW 50% of all deaths under one year, and are in fact for 1954 only 44.2%. However of these infant deaths under 1 month 73.5% occur in the first week of life. Neither of these figures, although an improvement in some respects over those previously recorded leave any room for complacency on any absolute basis.

(vii) *Diseases causing high morbidity.*

The following figures are those given in Hospital and Dispensary Returns for the whole country in 1954:—

(a) Insect Borne Diseases:—	Malaria	22,018
	Trypanosomiasis	1,149
	Filariasis	391
(b) Internal Infections:—	Dysentery	465
	Ascariasis	5,001
	Ankylostomiasis	473
(c) Lung Infections:—	Bronchitis	15,163
	Pneumonia	528
	Respiratory Tuberculosis	178
(d) Venereal Disease:—	Gonococcal Infections	4,380
	Syphilis	1,060
(e) Miscellaneous:—	Yaws	7,586
	Otitis Media and Mastoiditis	1,659
	Eye Infections	6,697
	Skin Infections	865
	Diseases of Teeth and Gums	2,600
	Non-toxic Goitre	478
	Schistosomiasis	752

(viii) *Diseases causing high mortality showing the number of deaths recorded in Bathurst in 1954.*

Respiratory Diseases	...	...	...	...	...	...	81
Diseases of heart, circulatory system and old age	...	...	...	...	...	...	69
Pulmonary Tuberculosis	...	...	...	...	...	...	27
Premature birth, congenital malformations, birth injuries and diseases of early infancy	...	...	...	...	...	...	31
Sepsis and other surgical causes	...	...	...	...	...	...	15
Malaria	...	...	...	...	...	...	29
Cancer and other malignant diseases	...	...	...	...	...	...	6
Tetanus	...	...	...	...	...	...	8
Trypanosomiasis	...	...	...	...	...	...	2

V. HYGIENE AND SANITATION.

(i) *Mosquito Control.* Routine anti-mosquito measures continued throughout the year under the control of the Medical Officer of Health. The measures carried out during the dry season were mainly larvicidal, but twice during the wet season residual spraying was done of all houses in Bathurst whose owners agreed to the measure. The insecticide used was Gammexane (6.5% of B.H.C.) Water Dispersible Powder applied as a 5% solution. House catches of mosquitoes revealed that the Anopheline population was greatly decreased, but culicine mosquitoes were only slightly influenced. The big reduction in malaria-carrying mosquitoes more than justifies this measure but it is obvious that larvicidal measures will still need to be continued. The indirect benefit of residual spraying as a means of ridding property of other insect pests has also to be remembered, and it is considered that in many cases this is the main inducement to owners of property to agree to the spraying. In this connection, it must be noted that for work, especially in Bathurst, the grade of Gammexane used in 1954 is not eminently suitable as it leaves on coloured surfaced, a discolouration which is often found offensive by owners and occupiers. For reasons of cost, however, it was impossible in 1954 to procure any other preparation. Active consideration is being given to the substitution of a more suitable preparation for residual spraying under Bathurst conditions in future years, but increased cost is likely to be a considerable obstacle.

Much work was done by the Department on the reclaimed land in Bathurst. Numerous earth drains were dug and every effort made to improve the drainage of this area, which has proved an ideal breeding place for mosquitoes during the rains. The results so far have been encouraging, but there is still much work to be done both in this area and in other low-lying areas of the town. A sum of £800 was allotted during the year for the relief of unemployment in Bathurst. The labour engaged was employed to construct drains in the reclaimed area and to fill in some depressions.

The anopheline room densities recorded in Bathurst for the year were as follows:—

January	...	...	...	...	...	0.05
February	...	...	...	...	...	Nil
March	...	...	...	...	...	Nil
April	...	...	...	...	...	Nil
May	...	...	...	...	...	Nil
June	...	...	...	...	...	Not recorded
July	...	...	...	...	...	0.03
August	...	...	...	...	...	0.13

September	...	...	...	...	...	Not recorded
October	...	...	...	...	...	Not recorded
November	...	...	...	...	...	Nil
December	...	...	...	...	...	Nil

N.B. Results for June, September and October were not recorded because all staff was then employed on carrying out the residual spraying of Bathurst with Gammexane.

(ii) *Yellow Fever Control*.—No cases of Yellow Fever were recorded during the year. Continued vigilance is exercised and immunisation against Yellow Fever is carried out as often as supplies and cost of the vaccine permits. No aedes mosquitoes were found in the town of Bathurst, but breeding was found in typical aedes breeding place, in a kettle containing clear water, in a compound in the town. Close search failed to lead to the discovery of any other breeding places in the area, and since then no further aedes breeding has been found. (The identification was done from the hatched-out larvae).

(iii) *Pest Control*.—No cases of human rabies were notified during the year, but confirmed cases occurred in dogs. As a result, the usual proclamation was made and dogs found at large seized and destroyed. The new legislation whereby the licensing of dogs cannot be done without the production of a certificate that they have been inoculated against rabies with the approved vaccine will, it is hoped, go some of the way to easing this particular problem. The inoculation is being carried out by Officers of the Veterinary Department, in the Health Office, Bathurst, at a charge of one shilling using Lederle Laboratories (United States) Rabies Vaccine, Modified Live Virus of Chick Embryo Origin, Vacuum Dried Avianised. It has been agreed that the inoculation will be regarded as conferring immunity from rabies, on dogs over 6 months of age, for a period of two years, for local purposes.

Rodent control continued during the year. Because of the fact that bait takes were falling using Zinc Phosphide as a poison it was decided to suspend the use of poisons for rodent control during the year except in selected places. Traps, both cage and break-back, were used instead. During the year a total of 10,424 traps were set, after prebaiting, and a total of 3,989 rats and mice were destroyed. The use of poison baits in a town like Bathurst is open to objections on other grounds. Particularly, it is always to be feared that however carefully poison baits are laid young children may gain access to them. Trouble has also been experienced through domestic pets gaining access to poison baits and becoming ill in consequence. It is difficult under Bathurst conditions to consider any poison safe to be used for rodent control work, other than in warehouses and such like places where there can be control of access while poison baiting is being carried out.

(iv) *Fly Control*.—D.D.T. 5% in Kerosene and Gammexane Water Dispersible Powder continued to be used for spraying public dustbins, the refuse disposal ground, public latrines in Bathurst and Cape St. Mary and the composting site as a help in fly control. There is some suspicion that flies are becoming resistant to Gammexane, but it has not been possible to scientifically assess the validity of this suspicion. However, an effort is being made to as far as possible alternate the use of the two insecticides so as to reduce the risk of developing resistance in the insect.

GENERAL MEASURES OF SANITATION.

(i) *Cleansing Services*.—The cleansing services of Bathurst continue to be operated by the Bathurst Town Council. The previous holder of the post of Sanitary Superintendent to the Council—an officer seconded from the Government Health

Service - was invalidated. Since then it has been impossible to obtain a replacement, in spite of repeated advertisement. As a result the work of Supervision of the Council's Cleansing Services has devolved on a Health Superintendent employed by Government, who can, of course, spare only a limited amount of time for this extra duty. A Health Inspector is still seconded from Government to the Town Council.

The manufacture of compost using all the night soil from Bathurst and ground-nut shell, instead of town refuse, continues with good results. The work is undertaken by the Town Council with the assistance of the Agriculture Department, who also arrange the distribution of the finished product to farmers. A grant in aid of this work is paid to the Council by Government to cover the extra cost of transport and labour in so disposing of night soil. Town refuse is being disposed of by controlled tipping, two miles from the town of Bathurst, and the method is being utilised to reclaim a swamp.

(ii) *Inspection of Nuisances.*—This is carried out by Sanitary Inspectors. The number of notices served and prosecutions during the year 1954, were as follows:-

<i>Bathurst.</i>	Abatement Notices served	...	...	...	203
	Number of Prosecutions	...	...	...	12
	Total Fines imposed	...	...	...	Approx. £6.
<i>Kombo St. Mary Division.</i>	Abatement Notices served	...	...	...	113
	Number of Prosecutions	...	...	...	Nil
	Total Fines imposed	...	...	...	Nil
<i>Protectorate.</i>	Abatement Notices served	...	...	...	588
	Number of Prosecutions	...	...	...	100
	Total Fines imposed	...	...	...	Approx. £33.

(iii) *Health propaganda.*—Sanitary Inspectors continue to give lectures on Hygiene and Sanitation to school children and the adult population in their districts.

FOOD HYGIENE.

(i) Bakeries, Restaurants, Bars, Hotels and premises used for the sale of fresh food were regularly inspected. Mineral water factories in the town of Bathurst, where alone in the Gambia they are to be found, were also regularly inspected and samples taken for bacteriological examination. This work was performed by the Laboratory Superintendent at the Veterinary Department. No samples were found to be contaminated. Difficulties did however, arise as a result of porcelain and metal filters not being regularly cleaned and boiled.

(ii) The Albert Market continued to be regularly inspected. Some additional restaurants were put into use during the year and these have to some extent improved the general condition of the market, but it is unlikely that any great improvement in conditions there will come about until more additional accommodation is provided for vendors.

(iii) In Bathurst, all meat was examined directly after slaughter as a routine and all fish landed was examined before sale. In the Protectorate the system is as far as practicable the same, but is affected by the greater areas to be covered.

The following are the meat inspection returns for 1954.

	<i>Cattle</i> <i>Slaughtered.</i>	<i>Sheep and Goats</i> <i>Slaughtered.</i>	<i>Pigs</i> <i>Slaughtered.</i>	<i>Approx. Amount</i> <i>condemned.</i>
Bathurst ...	2,216	906	855	11,624 lbs.
Kombo St. Mary ...	300	153	39	466 lbs.
Protectorate ...	2,168	1,132	36	1,716 lbs.

N.B. The figure for meat condemned of 1,716 lbs. for the Protectorate, is compiled from the records available, but these are incomplete in this respect, for weights have not infrequently been omitted against the items shown as condemned.

(iv) *General*.—For purposes of record, it is desired to draw attention to the possible effects over a long period, of a shortage of senior Health Service Staff. At the present time, the establishment of Four Health Superintendents is only half filled. It is thus impossible to spare one of the two Health Superintendents to carry out a properly laid out programme for the training of Health Inspectors. The ultimate effects of this cannot but be serious, both on the standards of the Health Inspectors themselves, and, ultimately, on the health of the general population.

VI. SCHOOL HYGIENE.

Periodical visits were made to all schools in the Colony by the Medical Officer of Health during the year. The Health and Welfare Sisters also made regular visits to the schools and carried out some cleanliness inspections.

Snacks of milk, yeast and sugar, continued to be given in certain schools in the Colony, and it is hoped as a result of assistance from U.N.I.C.E.F. that during 1955 it will be possible both to increase considerably the number of children receiving such snacks and to increase the actual quantities given to each child. It is hoped to extend the scheme into the Protectorate as well.

VII. PORT HEALTH ADMINISTRATION.

No infected or suspected cases of dangerous infectious diseases arrived by Sea or Air during the year. The number of ships which arrived at Bathurst during the year was 180, as compared with 179 in 1953. All aircraft arriving at Yundum Airport were sprayed with aerosols (Cooper's) containing pyrethrins and D.D.T. on arrival and again prior to departure.

VIII. MATERNITY AND CHILD WELFARE.

The ante-natal and infant Welfare Clinics continue to do excellent work.

(i) CASES AND ATTENDANCES.

<i>Centre.</i>	<i>Ante-natal Clinics</i>		<i>Child Welfare Clinics</i>	
	<i>New Cases.</i>	<i>Attendances.</i>	<i>New Cases.</i>	<i>Attendances.</i>
Bathurst	827	3,750	1,034	12,699
Bakau	145	803	146	2,316
Serrekunda	—	—	78	2,259
Brikama	310	1,025	743	7,281
Essau	340	1,136	667	4,497
Gunjur	384	1,174	491	8,003
Lamin	84	434	117	2,659
Sukuta	375	1,716	366	6,768
Bansang	279	953	928	4,689
Georgetown	243	844	693	2,504
Kuntaur	273	1,785	483	4,940
Basse (including Bakadaji) ...	374	1,441	1,439	4,730
Total ... 1954	3,634	16,061	7,185	63,345
... 1953	3,403	14,658	7,210	61,747
... 1952	3,339	11,811	6,749	48,479
... 1951	3,071	10,832	6,179	45,452
... 1950	1,734	7,131	2,735	26,166

(ii) Results of domiciliary confinements attended by Government midwives were as tabulated below:—

				<i>Live Births.</i>	<i>Still Births.</i>	<i>Total.</i>
Bathurst	...	...	...	387	9	396
Bakau	...	...	...	100	6	106
Brikama	...	...	...	84	4	88
Sukuta	...	...	...	192	8	200
Gunjur	...	...	...	65	4	69
Essau	...	...	...	44	4	48
Bansang	...	...	...	44	11	55
Kuntaur	...	...	...	84	—	84
Basse	...	...	...	65	3	68
Totals	...	1954		1,065	49	1,114
		1953		1,029	47	1,076
		1952		827	43	870
		1951		649	24	673
		1950		654	28	682

(iii) The following table gives particulars of all births attended by private midwives and by the Government Service in Bathurst during 1954:—

				<i>Live Births</i>	<i>Still Births</i>	<i>Total</i>	<i>Percentage Still Births</i>
Private Midwives	...	...		157	4	161	2.5 %
Government District Midwives				387	9	396	2.3 %
Maternity Ward, Victoria Hospital.—Bathurst cases	...	...		249	23	272	8.5 %
Maternity Ward, Victoria Hospital.—Kombo cases	...	...		37	10	47	21.3 %
Total	...	...	...	830	46	876	5.3 %

It must be noted that as a general rule the maternity cases admitted to the Hospital are ones in which there is a possibility of complications. This applies particularly to the Kombo cases treated in the Hospital. This is accepted as being the real reason for the apparently high still birth rate for Hospital cases.

APPENDIX.
1954, Diseases Classified according to Intermediate List of Causes of Morbidity and Mortality.

Cause Group,		Detailed List Numbers.	In- patients.	In- patients, Deaths.	Out patients.	Dispensa- ries.	Total
A1	Tuberculosis of Respiratory System ...	001-008	55	10	41	82	178
A2	Tuberculosis of meninges and central nervous system ...	010	2	—	7	—	9
A3	Tuberculosis of intestines, peritoneum and mesenteric glands ...	011	1	—	1	—	2
A4	Tuberculosis of bones and joints ...	012, 013	4	—	12	—	16
A5	Tuberculosis all other forms ...	014, 019	3	2	—	—	3
A6	Congenital Syphilis ...	020	1	1	—	—	1
A7	Early Syphilis ...	021	42	—	475	503	1,020
A8	Tabes Dorsalis ...	024	1	—	6	—	7
A9	General paralysis of the insane ...	025	1	—	—	30	31
A10	All Other Syphilis ...	022, 023, 026-029	1	—	—	—	1
A11	Gonococcal Infection ...	030-035	201	—	1,728	2,451	4,380
A12	Typhoid Fever ...	040	1	—	—	—	1
A16	Dysentery (all forms) ...	045-048	27	2	86	352	465
A18	Streptococcal Sore Throat ...	051	3	—	41	396	440
A20	Septicaemia and Pyaemia ...	053	5	2	1	—	6
A22	Whooping Cough ...	056	11	1	151	—	162
A23	Meningococcal Infections ...	057	9	6	10	63	82
A25	Leprosy ...	060	3	—	33	231	267
A26	Tetanus ...	061	33	12	8	6	47
A30	Late effects of acute poliomyelitis and acute infectious encephalitis ...	081, 083	1	1	—	—	1
A31	Smallpox ...	084	4	—	3	100	107
A32	Measles ...	085	2	—	14	—	16
A34	Infectious Hepatitis ...	092	6	1	—	48	54
A37	Malaria ...	110, 117	477	19	8,072	13,469	22,018
A38	Schistosomiasis ...	123	21	—	380	351	752
A40	Filariasis ...	127	22	1	369	—	391
A41	Ankylostomiasis ...	129	23	—	271	179	473
A42	Ascariasis ...	130	25	—	1,093	3,883	5,001
A42	Other diseases due to helminths ...	124, 126, 128, 130.1 & 130.2	22	1	2,164	212	2,398
A43g	Yaws ...	073	15	2	1,442	6,129	7,586
A43m	Trypanosomiasis ...	121	29	6	125	995	1,149

APPENDIX —(contd.)

Cause Group		Detailed List Numbers.	In- patients.	In- patients, Deaths.	Out patients.	Dispensa- ries.	Total
A43	All other diseases classified as infective and parasitic ...	036-039,049,054,063-072,074,086-090,093,095,096,120-122,131-138.	29	—	642	1,907	2,578
A44	Malignant neoplasm of buccal cavity and pharynx ...	140-148	1	—	—	—	1
A46	Malignant neoplasms of stomach ...	151	3	1	—	—	3
A47	Malignant neoplasm of intestine except rectum ...	152-153	3	—	—	—	3
A50	Malignant neoplasm of trachea, of bronchus and lung not specified as Secondary ...	162-163	1	—	—	—	1
A52	Malignant neoplasm of cervix uteri ...	171	3	—	—	—	3
A56	Malignant neoplasm of bone and connective tissue ...	196,197	3	—	—	—	3
A57	Malignant neoplasm of all other and unspecified sites ...	175,176,178-181,192-195,198,199	15	6	29	—	44
A60	Benign neoplasms and neoplasms of unspecified nature ...	210-239	14	—	47	107	168
A61	Nontoxic goitre ...	250,251	14	—	159	305	478
A63	Diabetes mellitus ...	260	5	—	1	—	6
A64	Avitaminosis & other deficiency states	280-286	38	4	580	—	618
A65	Anaemias ...	290-293	67	3	592	—	659
A66	Allergic disorders, all other endocrine metabolic and blood diseases ...	240-245,253,254,270-277,287-289,294-299.	56	—	265	—	321
A67	Psychoses ...	300-309	4	1	—	—	4
A68	Psychoneuroses and disorders of personality ...	310-324 & 326	8	2	12	—	20
A73	Epilepsy ...	353	21	—	21	49	91
A74	Inflammatory diseases of the eye ...	370-379	101	—	2,103	4,493	6,697
A75	Cataract ...	385	6	—	71	—	77
A76	Glaucoma ...	387	3	—	2	—	5
A77	Otitis media and mastoiditis ...	391-393	16	—	382	1,261	1,659

APPENDIX —(contd.)

1954, Diseases Classified according to Intermediate List of Causes of Morbidity and Mortality.

Cause Group.		Detailed List Numbers,	In- patients,	In- patients, Deaths.	Out patients,	Dispensa- ries,	Total
A78.	All other diseases of the nervous system and sense organs	341-344, 350-352, 354-369, 380-384, 386, 388-390, 394-398	49	3	222	829	1,100
A82.	Other diseases of the heart	430-434	59	16	24	—	83
A84.	Hypertension without mention of heart	444-447	6	—	—	—	6
A85.	Disease of arteries	450-456	17	3	14	—	31
A86.	Other diseases of circulatory system	460-468	74	3	94	999	1,167
A87.	Acute upper respiratory infections	470-475	21	—	560	—	581
A88.	Influenza	480-483	3	—	257	24	284
A89.	Lobar Pneumonia	490	61	7	31	—	92
A90.	Broncho-pneumonia	491	115	25	27	—	142
A91.	Primary atypical, other and unspecified pneumonia	492-493	33	6	45	216	294
A93.	Bronchitis, chronic and unqualified	501,502	191	3	3,345	11,627	15,163
A95.	Empyema and abscess of lung	521,518	2	—	—	—	2
A96.	Pleurisy	519	1	—	7	408	416
A97.	All other respiratory diseases	511-517, 520-522, 524-527	7	—	1,824	—	1,831
A98.	Diseases of teeth and supporting structures	530-535	28	1	959	1,613	2,600
A99.	Ulcer of stomach	540	2	1	—	—	2
A100.	Ulcer of duodenum	541	2	—	5	—	7
A101.	Gastritis and duodenitis... ..	543	17	—	67	—	84
A102.	Appendicitis	550-553	15	3	7	—	22
A103.	Intestinal obstruction and hernia	560, 561, 570	252	19	940	257	1,449
A104.	Gastro-enteritis, colitis, except diarrhoea of the newborn	571,572	85	3	2,466	5,046	7,597
A105.	Cirrhosis of liver	581	5	2	6	—	11
A106.	Cholelithiasis and Cholecystitis	584,585	13	—	340	—	353
A107.	Other diseases of digestive system	536-539, 542, 544, 545, 573-580, 582, 583, 586, 587	59	4	1,808	18,860	20,727
A108.	Acute nephritis	590	6	—	5	—	11
A109.	Chronic, other and unspecified nephritis	591-594	57	5	68	57	182
A110.	Infection of kidney	600	7	—	81	—	88

APPENDIX —(contd.)

Cause Group.	Detailed List Numbers	In- patients,	In- patients, Deaths,	Out patients,	Dispensa- ries,	Total,
A111. Calculi of urinary system	602, 604	2	—	—	—	2
A113. Diseases of breast	620, 621	8	—	31	—	39
A114. Other diseases of genito-urinary system	601, 603, 605-609, 611-617, 622-637	307	4	1,575	310	2,192
A115. Sepsis of pregnancy, childbirth and puerperium	640, 641, 681,, 682-684	6	4	—	—	6
A116. Toxaemias of pregnancy and the puer- perium	642, 652, 685, 686	47	—	—	—	47
A117. Haemorrhage of pregnancy and child- birth	643, 644 670-672	13	3	—	—	13
A118. Abortion without mention of sepsis or toxaemias	650	64	—	91	278	433
A119. Abortion with sepsis	651	2	—	—	—	2
A120. Other complications of pregnancy, child- birth and the puerperium	645-649, 673-680, 683, 687-689	70	3	5	—	75
A121. Infections of skin and subcutaneous Tissue	690-698	190	4	675	—	865
A122. Arthritis and Spondylitis	720-725	49	—	181	1,918	2,148
A123. Muscular rheumatism and rheumatism unspecified	726-727	43	—	2,301	9,010	11,354
A124. Osteomyelitis and periostitis	730	23	1	220	—	243
A125. Ankylosis and acquired musculoske- letal deformities	737, 745-749	1	—	1	—	2
A126. All other diseases of skin and musculoske- letal System	700-716, 731-736, 738-744	162	—	3,255	8,114	11,531
A128. Congenital malformation of circulatory System	754	1	1	—	—	1
A129. All other congenital malformations ...	750-752, 753, 755-759	8	2	—	—	8
A130. Birth injuries	760-761	7	5	—	—	7
A131. Postnatal asphyxia and atelectasis ...	762	9	9	—	—	9
A132. Infections of the newborn	763-768	5	—	258	—	263
A133. Haemolytic disease of newborn ...	770	1	—	—	—	1
A134. All other defined diseases of early in- fancy	769, 771, 772	2	—	—	—	2
A135. Ill-defined diseases peculiar to early infancy, and immaturity unqualified	773, 776	10	8	—	—	10

APPENDIX —(contd.)

Cause Group.	Detailed List Numbers.	In- patients.	In- patients. Deaths.	Out patients.	Dispensa- ries.	Total.
AI36 Senility without mention of psychosis	794	6	1	9	1,549	1,564
AI37 Ill-defined and unknown causes of morbidity and mortality ...	780-793,795	159	12	948	—	1,107
"E" Code Alternative Classification of Accidents, Poisoning and Violence (External Cause)						
AE138 Motor vehicle accidents ...	E810-E835	3	1	1	—	4
AE139 Other transport accidents ...	E800-E802	2	—	—	—	2
AE141 Accidental falls ...	E840-E866	—	—	54	—	54
AE143 Accident caused by fire and explosion of combustible material ...	E900-E904	—	—	—	—	—
AE144 Accident caused by hot substance, corrosive liquid, steam and radiation ...	E916	35	2	151	—	186
AE145 Accident caused by firearm ...	E917-E918	—	—	11	—	11
AE146 Accidental drowning and submersion ...	E919	5	—	39	—	44
AE148 All other accidental causes ...	E929	2	—	—	—	2
	E910, E911, E913-E915, E921-E922, E924-E926, E930-E965, E970-E979	4	—	2,975	—	2,979
AE149 Homicide and injury purposely inflicted by other persons (not in war) ...	E980-E985	—	—	1	—	1
"N" Code Alternative Classifications of Accidents, Poisonings and Violence (Nature of Injury)						
AN140 Fracture of limbs ...	N810-N829	94	1	44	22	160
AN141 Dislocation without fracture ...	N830-N839	18	—	1	—	19
AN142 Sprains and strains of joints and adjacent muscles ...	N840-N848	18	—	432	—	450
AN145 Laceration and open wounds ...	N870-N908	44	—	3	—	47
AN146 Superficial injury, contusion and crushing with intact skin surface ...	N910-N929	139	—	1,168	3,422	4,729
AN147 Effects of foreign body entering through orifice ...	N930-N936	6	—	90	—	96



