



EAST AFR. PROT.
57647

57647
REC.
Regd. J. DEC. 18

Sos.
Belfield 676

1916
Oct. 27

MEDICAL DEPT. REPORT 1915-6

Last previous Paper.
57/49048/16

Mrs. Calls attention to responsibilities imposed on Dept by war and expresses appreciation of services of P.M.O. and staff. Considerable additions will have to be made to Medical and Sanitation Votes when normal conditions are restored. Public Health Order is in course of preparation.

W. Fiddian

HasB

2.12.16

Mr. Butt

Mr. Butler

I have been through the report & dressed it for printing, as far as was necessary. There are two or three passages to which special attention should be drawn.

Last para on page 19 & the middle paragraph on page 22, might be read as reflecting on the military authorities. It should be considered whether these should not be modified or omitted in a report which will require a wide circulation in East Africa, including the East.

A somewhat similar phrase is to be found in the last three lines of the middle para on page 22.

Page 53 - "Legislation affecting the"

Report to the Comd. 11 Dec 16

50624

Had Ref^s - is a very confused statement. I have endeavored to remodel it.

2 To SA as altered for printing 250 copies - rather from 600 sent to the other P. of AF. de fenderman than in Feb. last (on 6/66) Proof I can't say TAMS & the AF 7/1/16

Thurs 11/17

AF see my suggestions in file 19, 21, 22. Also page 20. I do not think we need furnish material for the action of the East of India in connection with the material equipment of its Expeditionary Forces.

WCS 8/12/16

W. Read

I agree

203

8/12/10

at once
H. J. L.
8/21/16

Report report circulated to TAMS 25 Feb 1917

The Fiddian

The matter of the Report was discussed at the meeting of 6 March in the interview with Col. Miles & Major Knapp. A copy of the minutes (22 p.) is attached. The report came up again at the meeting of 2 April, but the Committee decided that all points of interest had been discussed at the previous meeting. My 11/4/17

Mr. Butler

18/6/17

373

~~Mr. Butler~~

I think that we should wait
for the discussion between the Council
and Sir H. Balfour, who left
Cape Town yesterday. That discussion
is sure to cover all points of importance
- water supply - Indian Bazaar -
Sephoe tank in the street at Windeke, &c.
A despatch sent now would probably
contain little more than a compliment
to the staff for their excellent work
under difficult conditions, and a
promise of a further despatch after
discussion with the Govt.

W. Read

It is most unfortunate that
now that Sir H. Balfour is coming home
Professor Simpson will be away. The
T. A. M. S. Committee will have to do
their best with the Govt.

Harb.

55.7

at once
P. 2/2
5/1/17

I understand
Prof. S. will
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to 2 R

EAST AFRICA PROTECTORATE
No. 878.



57647
REC
GOVERNMENT HOUSE
NATROGI
BRITISH EAST AFRICA

October 27th, 1916.

Sir,

I have the honour to transmit herewith the Annual Report of the Medical Department for the year 1915-16.

Report

2. I desire particularly to refer to the summary contained in pages 16 - 28 of the Report detailing the responsibilities which were imposed on the Department by the outbreak of war and I am glad to be able to take this opportunity of expressing my high appreciation of the organizing powers and the energy evinced by the Principal Medical Officer and his staff. Each member of the Department, without exception, has worked loyally and untiringly throughout, and the satisfactory condition of the medical arrangements on the arrival of the Indian Expeditionary Forces

18

THE RIGHT HONOURABLE

ANDREW BONAR LAW, P.C., M.P.,

SECRETARY OF STATE FOR THE COLONIES,

DOWNING STREET,

LONDON, S.W.

EAST AFRICA PROTECTORATE.

No. 676.



57847
REC
10/16
GOVERNMENT HOUSE,
NAIROBI.

379

BRITISH EAST AFRICA

October 27th, 1916.

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ANDREW BONAR LAW, P.C., M.P.,

SECRETARY OF STATE FOR THE COLONIES,

DOWLING STREET,

LONDON, S. W.

is entirely due to their efforts.

3. It was, I fear, inevitable that the advent of large numbers of troops in the Protectorate should be followed by an increase in the incidence of disease throughout the country. It is therefore very gratifying to be able to record that no epidemic of a serious nature appeared during the year, but it is nevertheless imperative that early steps should be taken to prevent if possible any further impairment to the general conditions of health, and considerable additions to the Medical and Sanitation Votes will be necessary as soon as normal conditions are restored.

4. The Public Health Ordinance is in course of preparation and I hope that it will be shortly introduced before the Legislative Council.

I have the honour to be,

Sir,

Your humble, obedient servant,

Alfred B. ...

GOVERNOR

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I have the honour to be,

Sir,

Your humble, obedient servant,

Alfred Powell

GOVERNOR

Gen. EAP

57667

381



~~For~~

DRAFT

C. A.

MINUTE.

- Mr. Fiddian g/r 26
- Mr.
- Mr.
- Mr.
- Mr. Read.
- Sir H. Jost.
- Sir G. Fiddian
- Mr. Sir J. Maudslayi
- Mr. Bonar Law.

Hand 1000/19

Gent,

I am to thank you for the
the affiance of you arranging
for the printing of two hundred
and fifty copies of the enclosed
Annual Medical Report of the
C. A. P. for the year 1915, at
the expense of Post funds.

Two hundred and
fifty copies of the Report should
be sent to the Post Office, the
master to the Dept. a number
the balance being disposed

as follows -

Gen. of the U.S. Army	10 copies
Department of the Army	5
Department of the Navy	10
Department of the Interior	2
Department of the War	15
Field Post	2
Carlia	20
Nigeria	6
Medical Officer of Health	2
Personnel Commission	1 copy

Heinrich Heine, 1819-1856
The German

Library, London School of Economics
The

Dr. J. G. Taylor
Director, East Asiatic Museum
Copenhagen

Reference to the fact that

copy of the 1914 publication

sent to Copenhagen; I did

not send two copies of that

at the time sent as well.

4. Three foot copies of
report should be sent to
the Dept. for correction before
they are finally printed off.

Yours truly,
[Signature]

EAST AFRICA PROTECTORATE.

ANNUAL MEDICAL REPORT.

FOR THE

Year ending 31st December 1915.

EAST AFRICA PROTECTORATE.

ANNUAL MEDICAL REPORT.

FOR THE

Year ending 31st December 1915.

EAST AFRICA PROTECTORATE

[illegible]

ANNUAL MEDICAL REPORT.

FOR ~~5000~~

2025 RELEASE UNDER E.O. 14176

[illegible]

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No. 16/478.

Medical Department,
Head Offices,
Nairobi, 21st October, 1916.

Sir,

I have the honour to submit, for the
information of His Excellency the Governor and
for transmission to the Right Honourable the
Secretary of State, the Medical Report on the
health and sanitary condition of the East Africa
Protectorate for the year 1915, together with the
Returns, &c., appended thereto.

I have the honour to be,

Sir,

Your obedient servant,

A. S. M. L.

Principal Medical Officer,
East Africa Protectorate.

THE HONOURABLE,

THE CHIEF SECRETARY,

NAIROBI.

I. - ADMINISTRATION.

Section I. - Departmental.

1. - Establishment.

The Medical Staff of the Protectorate as sanctioned for the year 1915-16 was as follows:-

ADMINISTRATIVE DIVISION.

Principal Medical Officer	1
Deputy Principal Medical Officer...	1
Medical Storekeeper	1
Office Superintendent..	1
European Clerks..	2
3rd Grade Clerks.	2
4th Grade Clerks.	3
Issuer Medical Stores..	1
Messengers and Packers.	10

MEDICAL DIVISION.

Senior Medical Officers	2
Medical Officers.	20
Assistant Surgeon.	1
European Dispensary	4
Baron	1
Nursing Sisters..	9
Superintendent, Lunatic Asylum	1
Nurses, Lunatic Asylum.	1
Assistant Surgeons	6
Sub-Assistant Surgeons.	40
Compounders	15
Natal Attendants	(as necessary)

SANITATION DIVISION.

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Principal Sanitation Officer ...	1
Medical Officers of Health ...	3
Pathologists... ..	1
Nurses... ..	1
Sanitary Inspectors. ...	7
Assistant Surgeons... ..	6
Sub-Assistant Surgeons ...	4
Chief Vaccinator ...	1
Vaccinators... ..	12
European Clerk ...	1
3rd Grade Clerk ...	1
4th Grade Clerks ...	5
Compounders... ..	4
Engineers for Clayton Disinfectors ...	4
Menial Attendants... .. (as necessary).	

The Laboratories Division was organised as a separate Department under Dr. F. H. Moss as Director from the 1st April 1915.

2.- APPOINTMENTS.

The following appointments were made during the year:-

Medical Officers.

Dr. H. F. Jewell to date 28th December 1914.

Government Dental Surgeon.

Dr. V. G. L. van Someren antedated to 1st April 1913.

Nursing Sisters.

Miss A. E. Hobson 13th October 1913.

A. E. Drews 24th November 1915.

R. S. Blyth 24th November 1915.

Mr. J. P. Cook, on 2nd February 1915.

European Clerk.

Mr. P. Gibbs, on 25th April 1915.

Subordinate Establishment.
Medical.

Assistant Surgeon A. G. L. de Souza, on 3rd August 1915.

Sub-Assistant Surgeon B. R. Coomal, on 22nd July 1915.

" " Z. K. Durrani, on 17th August 1915.

Clerical.

Mr. H. de Souza, on 1st May 1915.

Mr. P. M. Pinto, on 13th September 1915.

3.- REDUCTIONS IN STAFF.

Resignations.

Dr. A. Maquet, on 16th November 1915.

Dispenser, Mr. G. Gillespie, on 27th June 1915.

Matron, Miss M. A. Alker, on 30th May 1915.

Nursing Sister, Miss A. A. Horston, on 12th April 1915.

" " A. F. Dunsden, on 15th August 1915.

Expiration of tour.

Dr. R. M. Russell, on 13th April 1915.

Dr. F. Cellar, on 2nd August 1915.

Assistant Surgeon H. L. Braganza, on 14th April 1915.

Compounder S. B. Mehta, on 9th November 1915.

Transferred to other Department.

4th Grade Clerk, Mr. M. Hussein, on 14th March 1915.

4.- PROMOTIONS.

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Dr.A.D.J.B.Williams, Probationary Medical Officer, was appointed Medical Officer on the permanent establishment on completion of three years service.

Senior Nursing Sister Miss E.B.Brown was promoted Matron to fill vacancy caused by the resignation of Miss M.A.Aitken.

5.- CHANGES.

A Laboratories Department was created with Dr.P.H.Ross as Director and the personnel of the Laboratories Division including Dr.Ross, Dr.J.H.M.Pirie, Pathologist, and Mr.V.H.Kirkham, Analyst, transferred from the Medical Department accordingly.

6.- LEAVE OF ABSENCE.

Name	Appointment.	Period granted.	
		From	To
Dr.V.C.L.van Someren.	Dental Surgeon.	8.1.15	14.8.15
" C.L.Chevallier.	Medical Officer.	30.1.15	1.10.15
" J.O.Prichard.	Sen.Medical Officer.	9.6.15	1.11.15
" J.F.Samb.	Medical Officer.	2.9.15	31.12.15
" I.D.Lewsey.	Senr.Medical Officer.	29.11.15	31.7.16
" J.A.Hagan, C.M.G.	Op.Prac.Medical Officer.	13.12.15	31.6.16
Mr.R.Stanley.	Office Superintendent	8.1.15	31.6.15
" F.Cairns.	Sanitary Inspector.	15.4.15	1.11.15
" W.Henfrey.	Epidemiologic Asylum	7.9.15	12.3.16
Mrs.L.A.Henfrey.	Matron. "	7.9.15	12.3.16
Mr.T.Preston.	Clerk.	28.10.15	31.3.16
Miss H.M.Whitburn.	Nursing Sister.	28.10.15	14.6.16

7.- RESUMPTION OF DUTY.

Name.	Appointment.	Date.
Dr. J. G. L. van Someren	Dental Surgeon.	14th Aug. 1915
* C. L. Chevallier.	Medical Officer.	1st Oct. 1915
* E. O. Prichard.	Senr. Medical Officer.	1st Nov. 1915.
Mr. R. Stadler.	Office Superintendent	21st Aug. 1915
* F. Cairns.	Sanitary Inspector.	1st Nov. 1915.

8.- STAFF POSTINGS THROUGHOUT THE YEAR.

The Coast Zone.

Dr. F. L. Henderson acted as Senior Medical Officer on the departure of Dr. L. D. Laveley on leave from 30th November 1915, to the 21st December 1915, and was succeeded by Dr. C. L. Chevallier in this capacity on the latter's return from leave.

Dr. Henderson and Dr. Shircore remained in medical charge of the European and Native Hospitals at Mombasa respectively throughout the year. These hospitals were also the base hospitals at Mombasa for the reception of sick and wounded during military operations.

THE MOUNTAINOUS ZONE.

The undermentioned charges were held continuously throughout the year by the officers named.

Native Civil Hospital, Nairobi.

Lunatic Asylum

Dr. J. H. Thompson.

European Hospital, Nairobi, Dr. J. L. Gilks.

Native Civil Hospital, Nakuru, Dr. R. W. Spence.

The European Hospital and the Native Civil Hospital at Nairobi were also utilized for the reception of sick and wounded during military operations, the former receiving troops of the Protectorate Forces and the latter as the African Base Hospital those of the local natives engaged.

Dr. H. P. Jewell was Medical Officer in charge at Kisumu from January to November when he was posted for duty with No. 2 East Africa Field Ambulance vacated by Dr. J. Pugh who relieved him at Kisumu as officer in charge of the Native Civil Hospital. This hospital also received the sick and wounded of natives engaged in military operations in the Eastern Lake Area throughout the year.

Dr. F. F. Munan continued in medical charge at Fort Hall throughout the year.

THE DESERT ZONE.

Dr. T. F. Lumb and Dr. H. H. V. Welch were doing duty in the Northern Frontier District the former from January to November when he proceeded home on sick leave and the latter from January to May when he was relieved and posted for duty with the military forces.

Dr. G. R. H. Chell was posted for duty in the Northern Frontier District early in September where he still remains.

Dr. T. H. Massey continued in medical charge at Kisumu throughout the year.

Assistant Surgeon A. N. Nyse was in medical charge of Kisumu until relieved in October by Assistant Surgeon P. G. Cruz.

MILITARY OPERATIONS.

All the Medical Officers of the Protectorate Service were gazetted during the year to military rank, with four exceptions, for active service with the forces operating in East Africa. The exceptions were those at stations not involved in the sphere of active operations.

The East Africa Medical Service and East Africa Nursing

Nursing Service were organised with fixed military establishments composed of the Protectorate Staffs and others enrolled locally and in South Africa.

The following members of the Protectorate Medical and Nursing Services were absorbed into the above named units:-

EAST AFRICA MEDICAL SERVICE.

Dr. A. D. Milne -	Lt.-Colonel - A.B.M.S., Protectorate Forces, and A.B.M.S., Lines of Communications.
Dr. J. A. Haran -	Major, R.A.M.S. Dy. P.H.O., Pret. Forces
Dr. W. J. Radford -	Major, Sanitary Adviser to the Forces.
Dr. L. B. Lewisley -	Major, R.A.M.S.
Dr. W. O. Frichard -	Major, R.A.M.S.
Dr. C. L. Chevallier -	Captain, R.A.M.S.
Dr. F. L. Henderson -	" "
Dr. J. O. Chirats -	" "
Dr. G. R. E. Orell -	" "
Dr. A. A. Olick -	" (local Major)
Dr. S. E. Cherratt -	" "
Dr. J. Pugh -	" "
Dr. C. J. Wilson -	" "
Dr. R. E. Russell -	" "
Dr. V. G. Van Ganssen -	" "
Dr. A. E. Williams -	" "
Dr. H. E. Hodge -	" "
Dr. J. A. Miles -	" "
Dr. J. Thomas -	" "
Dr. J. A. H. Hodge -	" "
Mr. E. Stanley -	Lieutenant
Mr. J. B. Robertson -	"
Mr. F. Knott -	Sergeant Major R.A.M.S.
Mr. M. Ogden -	"
Mr. C. A. J. Speller -	"

EAST AFRICA NURSING SERVICE.

Miss A. R. Brown -	Natron.
Miss E. M. Whitburn -	Senior Nursing Sister.
Miss L. Merryweather -	Nursing Sister.
Miss R. Paul -	"
Miss L. E. Majendia -	"
Miss I. Wilson -	"
Mrs. E. J. Harrison -	"
Miss A. E. Hobson -	"
Miss E. E. Drews -	"
Miss R. Blyth -	"
Miss E. A. Thomlinson -	"

SECTION II. - MEDICAL DEPARTMENTAL.
B. - Registration of Medical Practitioners and Dentists.

This Ordinance came into force on the 24th September 1910 and between that time and the end of 1915 there have been placed on the Register the following:-

Registered Medical Practitioners	30
Licensed Medical Practitioners	6
Dentists	6

37 of the Medical Practitioners were in Government service, and 34 were private practitioners.

During the year the following were admitted to the roll:-

- Dias, Edward, L.R.C.P., L.R.C.S., (Edin.), L.F.P.S. (Glasg.)
- Allen, Kenneth Watson, M.D., C.M., (McGill U. Can.)
- Jones, Stanley Ellis, L.R.C.P., L.R.C.S., (Edin.)
- L.R.F.P.S., (Glasg.).

The Board convened for the purposes of the Ordinance consisted of:-

- Dr. W.E. Kelke.
- Dr. W. Owen-Prichard.
- Dr. S. Lawson.
- Dr. J. H. Bedford.
- Dr. J. A. Haren, C.M.C.

with the Principal Medical Officer as President and Registrar.

The Board only held one meeting during the year.

15. - THE DRUGS AND POISONS ORDINANCE 1909.

This Act controls the licensing of chemists and druggists as provided for under the above Ordinance as well as the sale of poisons throughout the Protectorate.

Thirteen names have been placed on the register from the introduction of the Ordinance to the end of 1915. Three of these were by examination.

The Board appointed under the Act consisted of the following:-

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* Mr. L. A. Howe,

* Mr. J. G. G. G.

* V. H. Kirham,

Dr. W. Owen-Prichard,

* L. D. Loveley,

Dr. W. J. Radford,

* J. A. Haran, C.M.C.,

with the Principal Medical Officer as President and Registrar.

The Board held two meetings during the year.

There was an amending Ordinance passed during the year to be read as one with the original Ordinance of 1909. This amending Ordinance provided for companies trading as druggists and also for the business of a deceased druggist to be carried on by an executor or trustee provided that the business was managed by a duly registered druggist.

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II. - PUBLIC HEALTH.

(a) GENERAL REMARKS.

(1) GENERAL DISEASES.

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THE PROTECTORATE.

Any report on the general health of the Protectorate and comparison with that obtaining formerly demands, this year, a brief resume of the circumstances under which the Medical Department has been working since the outbreak of war, if any sort of estimate is to be formed of what has fallen to the lot of the staff to undertake.

Last year the annual report followed the statutory lines laid down for its compilation. It embodied, in the absence of specific instructions to the contrary, only those cases of sickness and wounds which occurred amongst the forces locally enrolled and which appeared in the admission and discharge books of the hospitals during the last five months of the year. It failed to record the war in East Africa otherwise, endeavored to present the total picture of our military work, so far as it was possible to do so, in the following paragraphs.

Thus far, in view of the war, a statement of the report and the fact that the statistical figures submitted refer, as far as the local position held by the staff enabled this to be done, solely to the non-military cases of illness which came under review, it may not be considered out of place in these pages to place on record the following narrative of the part played by the Protectorate Medical Department in bearing its share, during the last 17 months, of the burden imposed on the military authorities in conducting the war in this country.

The outbreak of hostilities in August 1914 found the Medical

Medical Department in as better state of preparedness than the rest of the country to cope with a very emergent crisis.

In past years more than one effort had been made to create a small reserve of mobilization stores to meet unforeseen contingencies and military expeditions. Such a reserve at the outbreak of war would very greatly have eased the pressure on the Department.

It is unnecessary now to recall the inevitable disturbance of accepted conditions into which the whole country was thrown by the declaration of war; the pouring into Nairobi of the manpower of the country, clamorous to be enrolled in one capacity or another, for the conquest of German East Africa; and the embroilment of a newly constituted Headquarters staff coping with an unprecedented set of conditions for which no machinery was provided.

Needless to say the pressure was equally felt in the Medical Department the services of which had been immediately incorporated into the military forces with its Principal Medical Officer as Director of Medical Services but whose knowledge of military matters, as might be expected, was limited through military inexperience. The medical unit was fortunate in possessing at its inception with its civilian staff of medical officers, two who had been territorial officers, an office superintendent who was a retired warrant officer of the R.A.M.C. and a medical storekeeper, an ex-

non-commissioned

non-commissioned officer from the same corps. In addition there were 3 seconded sergeants as dispensary and reservist dispenser of the R.C.A.M.C. and 28 assistant surgeons and sub-assistant surgeons seconded from the Indian Subordinate Medical Department.

During the first week of the war I was absent on inspection duty when the Deputy Principal Medical Officer either under the orders of the Chief of Staff Officer, or as the necessity became apparent, had begun the posting of various members of the staff for specific military duties either singly or combined with their civil functions. With the founding of new horse and foot regiments, Transport, Supply, Ordnance, Pioneer, Intelligence, Signal, and Veterinary Departments, and all the other infinite details that go towards the organising of an army in being, coupled with the incessant activities of the enemy, the constant moving of troops and the opening up of new scenes of action, the demands made on the resources of the Medical Department were immediate and unending.

These demands on the personnel meant that all those of the ordinary medical staff that would be withdrawn for posting to special duty were quickly exhausted. It was necessary to supplement these by engaging outside assistance. Almost without exception every single local medical practitioner offered his services to the Government. That all doctors were not enrolled was simply due to the necessity of leaving the necessary few to carry on the general public practice of the country. At the end of 1915, of the total permanent staff of 28 Medical Officers, six had been seconded for purely military duties, 19 were combining their civil obligations with military work, and 13 additional had been locally engaged either here or in South Africa to help in the war.

Coincident with the increase of the medical staff

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came the necessity for more nurses. To meet this demand the enrolment of qualified local private nurses, and the selection of volunteers who, after a course of training held by the matron of the European hospital, were enlisted in order to release their qualified sisters for duties in newly opened centres. On the outbreak of war there were in the Protectorate 1 matron, 1 senior nursing sister, and 8 fully qualified nursing sisters. By the end of 1915 there had been passed through the ranks of the East Africa Nursing Service 1 matron, 4 senior nursing sisters, 38 nursing sisters, 14 probationers (paid) and 7 honorary nurses (unpaid).

All the available assistant surgeons, sub-assistant surgeons and hospital compounders who could be spared for duty in the theatre of war were allotted military duties in addition to their routine work, and others were locally engaged. At the beginning of the war the total number of these classes in the country was 56; at the end of December 1915 the number was 118.

The pressure of work at all the hospitals owing to the war meant a corresponding increase in the number of cooks, dressers, dispensers, whistles, ward servants, messengers, cleaners, sweepers &c. The African medical establishments of the various hospitals were increased automatically as the necessity became apparent.

Following the formation of new units came the need of adequate hospital accommodation for sick and wounded in Government hospitals. Owing to the fact that the Medical Department was not taken into the confidence of the Government as regards the projected arrival of overseas forces, or what would be required to supplement their medical equipment after reaching this Protectorate, the arrival of Forces "B" and Forces "C" found this country as unprepared to meet the situation as the declaration of war had found it in a position to deal with its own local conditions.

At the

At the beginning of August 1914 there were available for Government employees both white and black, and also for the indigenous native Indian and other sick in the existing Government hospitals in the war zone, a total of 214 beds. By the end of 1914 the number of these beds had been increased to 449. By the end of 1915 these Protectorate units had been enlarged to a total of 670 beds.

Apart from the increase in the number of beds, it fell to the Protectorate to organize three sections of an East African Field Ambulance of 30 beds each, and to start new hospitals at Voi, Kajiado and Mbuyuni, besides various Carrier Corps hospitals for the native porters.

The ordinary medical and surgical store budget to meet the civil requirements of the Protectorate is £3800 per annum. It was a fortunate fact that a special grant of £900 had been sanctioned in the early part of the year 1914, to replenish the stock owing to the arrears made on it by the Kericho Patrol 1913-14. The arrival of these goods coincident with the declaration of war just enabled the Protectorate to meet every demand made on it in the first five months of the war. This was all the more fortunate as before the war the Protectorate was an isolated place with no medical stores whatever, while before the war the only single advanced depot of medical stores to keep the military forces replenished. Both these overseas forces apparently relied on their base in India to contact. The fact is that the Protectorate medical store has acted and is still acting as the base medical store for not only the civil requirements but for all the forces brought from overseas. Between August 1914 and December 1915, orders amounting to nearly £28,000 were passed for drugs, medical and surgical and medical materials, and £1,000 for the purchase of hospital equipment.

The transport of the sick was one of the early difficulties

difficulties which had to be overcome with the means that the country permitted. This was at first done by ex-
posed, wheeled stretchers and rickshaws, and later, was
superseded very largely by motor transport. On the Uganda
railway there was only one ambulance coach, the property
of the Uganda Soda Co., the services of which had been
generously placed at the disposal of the Medical Department.
This started with a large number of bogies and carriages con-
verted into ambulance coaches by the Uganda Railway ended
in the formation of the existing ambulance train. What this
has meant will be understood when it is realized that in
12 months it has conveyed over 13,000 sick and wounded.

During the first five months of the war, the sanitation of the camps was placed in the hands of the Principal Sanitation Officer. The responsibilities of this office may be judged from the following. Three days before their arrival, intimation was conveyed to the Medical Department that the first of the overseas Indian regiments to come into the country, would be located in Nairobi. The Sanitation Department sent up to co-operate in the laying out of the camp, protested against the choice of site on account of local conditions which were obvious but was overruled for military reasons. The camp was accordingly laid out with electric light, incinerators, latrines, kitchens, piped water supply, roads and drains, and the various necessary buildings. The choice of this site dictated the disposal of every other military unit which had to have temporary or permanent habitation at headquarters.

The water supply of all camps occupied by the local forces during their operations was entrusted to the Government analyst. He devised what proved to be a simple and portable method of rendering water fit for drinking by the chlorination

chlorination method; sufficiently feasible of application to all these commands in the field who were not overdriven by the exigencies of military operations. That the spread of infectious and contagious disease throughout the Protectorate was not more serious than the record shows can be definitely attributable to the zeal and training of the medical officers of the regular services in their different commands.

The end of 1914 saw the arrival in the country of Force "C" and Force "B" with all their regimental medical officers, Indian Field Ambulances, Clearing Hospitals, Stationary Hospitals, and Combined General Hospital, and, as mentioned before, one advanced depot of medical stores, to assimilate and take over medical arrangements which the state of warfare in the country had called into being. On December 15th, 1914, the direction of all military medical matters was formally taken over by the Deputy Director of Medical Services of Force "B" the position of the Colonial Medical Service being more properly accorded its place as the East African Medical Service - a locally constituted unit with the Principal Medical Officer as officer commanding and Assistant Director of Medical Services of the Protectorate Forces. This service was ultimately absorbed into the temporary commissioned ranks of the regular army on the honorary, local and temporary list, it apparently not being possible to accord its members the same position granted to civilian doctors enrolled at home to assist the regular medical service.

It will be realised from the increase in the number of beds alone - statistical returns for which do not appear in these pages - that during the year the staff was working at high pressure and has been in the very difficult position

of having to serve two masters i.e., The King's Regulations for the Army, and the Code of Regulations for the Colonial Service.

The total number of civil cases which came under review during 1915, very nearly approximated the number treated during the first year of the war, with a lowered death rate. The comparison is shown as follows:-

	<u>Admissions</u>	<u>Deaths</u>
1915	217,373	649
1914	229,056	712
1913	202,533	1,052.

The most marked fact is the increase in the number of admissions for malaria, a reflex of the irregular and constant movement which had to be, rainy weather or dry season. The incidence of other diseases followed closely the lines of former years. Considering what a malarious country this Protectorate is, East Africa can only be regarded as having escaped lightly in the matter of infectious and contagious diseases, and that in a year, when were there ever before, there was cause for anxiety.

THE COAST ZONE.

The reports of the medical officers in the coast zone show that the average of health of the two provinces remained good throughout the year. There was a welcome absence of plague, though cerebro-spinal-meningitis, dengue, and other infectious and contagious diseases manifested their presence no more than was to be expected. The figures shown under malaric and dysentery inevitably cannot be accepted as giving the true incidence of the disease, as the necessities of a large outpatient practice amongst natives speaking many tongues demand the often too hurried inclusion under one or other of these headings of many pyrexias of uncertain origin. The two observers who have devoted most time to this point are Dr. Shiroore and Dr. Dunderdale. The former as a result of microscopical examination of over 1100 faeces has been enabled to show that many cases of dysentery should more probably be ascribed to helminthic causes. The latter has classified all his diarrhoea cases as "diarrhoea" and "enteritis", reserving the last mentioned description for the passage of blood and mucus. His experience has been that the majority of these cases depend on errors of diet and entozoa. At Lamu the proportion of malaria and filariasis to all diseases was about the same, viz. 35-40%. Many cases of mild fever diagnosed as malaria reveal, on blood examination, indisputable evidence of filariasis.

The comparative table of admissions and deaths for the past two years is as follows.

	Admissions.		Deaths.	
	1914.	1915.	1914.	1915.
European Officials ...	159	141	-	3
Native Officials ...	1,105	946	-	3
European General Population	122	73	7	4
Native General Population ...	3,571	4,240	224	149

THE MOUNTAINOUS ZONE.

As might have been expected from its position in the uplands and its relation to all war movements affecting Nairobi as the capital of the country and military headquarters, the general trend of health in these regions has not been towards improved conditions.

This is particularly marked in the great increase in malaria, blackwater, enteric, dysentery, and cases of general ailments.

The total admissions and deaths for the past two years were:-

	Admissions.		Deaths.	
	1914.	1915.	1914.	1915.
European Officials	299	384	2	-
Native Officials	1,567	1,322	4	4
European General Population	352	594	13	13
Native General Population...	3,775	3,683	281	332

THE KENIA AND NYANZA PROVINCES.

The labour of these provinces was profoundly affected by the war, and here again it must be said that the conditions obtaining militated against a satisfactory state of matters being produced. While there was a notable increase in admissions for dysentery, malaria and small-pox, there was a distinct drop in the number of entries for enteric and venereal diseases.

The comparison table of admissions and deaths for the past two years is as follows:-

	Admissions.		Deaths.	
	1914.	1915.	1914.	1915.
European Officials... ..	57	31	1	-
Native Officials	316	271	5	-
European General Population	40	32	-	1
Native General Population	2,299	2,402	157	125

THE DESERT ZONE.

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These two provinces were the only two untouched by the fringes of war, and show the same standard of health as in past years. The position of dysentery was very distinctly improved, due doubtless to less movement.

The comparison table for admissions and deaths for the past two years is as follows:-

	Admissions.		Deaths.	
	1914.	1915.	1914.	1915.
European Officials ...	24	11	-	-
Native Officials ...	72	100	-	-
European General Population	1	1	-	-
Native General Population	722	877	18	15

(11.) COMMUNICABLE DISEASES.

MOSQUITO-BORNE DISEASES.

MALARIA.

Statistics about the position of the disease in the Desert Zone show a marked drop in the death rate, the 1915 cases being only 18 as against 37 and 42 in the two previous years. Quinine prophylaxis at the police and other African establishments probably accounted for this drop. The admissions for the three years were respectively 7,112, 8,489, and 8,185. Pyretophorus Gestalis was noted as being the common carrier at Lami.

Blackwater Fever:- There were 6 cases during the year,

with one death in a European. Three of the cases were amongst Goans. In 1914 there were 7 admissions and 3 deaths and in 1913, 11 and 3 respectively.

Dengue.- There were 31 cases recorded at Mombasa and 22 at Malindi.

Filaria.- 5 cases came under treatment during the year.

THE MOUNTAINOUS ZONE.

Malaria.- The comparative table shows a great increase in the number of admissions:-

1915	5,352
1914	3,851
1913	3,536

Of 520 Europeans admitted 2 died. Nairobi was responsible for the largest number of cases, but every township appeared in the list. The only decrease that can be recorded is in the Guaso-Ngishu plateau which was very largely depleted by volunteers for the front.

Blackwater fever.- A total of 9 patients were treated by the medical staff during the year. Two of these were Europeans, and the one death occurred in the only native case. Last year there were 8 admissions (5 Europeans) and one death (also European). The year before the number was 3 with no deaths, one case being a Goan.

Trypanosomiasis.- Three cases were admitted to the Native Hospital, Nairobi.

KENIA AND NYANZA PROVINCES.

Malaria.- The yearly rise in the number of individuals who present themselves for medical treatment continued. There were

1915	4,227
1914	4,227
1913	3,267

55 of the admissions were Europeans.

Blackwater fever.- In 1915, 3 European cases with one death; in 1914, 3 non fatal cases in white men; in 1913 one case only which recovered.

Trypanosomiasis.- Only one case came to light during the year in Nyansa Province; 4 cases and 1 death occurred the previous year.

THE DESERT ZONE.

Malaria.- The average of previous years was maintained as regards admissions:-

1915	1,866
1914	1,547
1913	2,125

16 Europeans suffered from the disease.

Blackwater fever.- There was only one case this year in a European as against 2 (natives) last year.

Dengue.- Manifested itself in this corner of the Protectorate, 66 cases in all being treated.

INFECTIOUS OR EPIDEMIC.

THE COAST ZONE.

Cerebro-spinal-meningitis.- This menace to the troops manifested its presence this year though to a slightly less extent than last year. There were 27 cases with 12 deaths, contrasted with 35 and 12 in 1914, and 15 and 10 respectively in 1913.

Dysentery.- The figures for this showed a considerable diminution owing to a more accurate diagnosis as already referred to.

1915	517 admissions with 35 deaths.
1914	621 " " 75 "
1913	475 " " 58 "

56 Europeans were treated for the disease of whom 1 died.

Measles.- 12 cases were under treatment during the year of which 9 were Europeans; 2 of the latter had previously undergone preventive inoculation and both cases recovered. Of the 3 deaths 4 were Europeans. In 1914 there were 8 cases (5 Europeans) with 2 deaths amongst natives. In 1913 there were 3 admissions and all fatal cases amongst Europeans.

Leprosy.- One of the many things that the war and the financial conditions of the Protectorate has relegated to the background of things yet to be taken in hand is the provision of adequate accommodation for the care and maintenance of the lepers of the country. The Leprosy Ordinance of 1913 remains a dead letter. The coast, which is the region chiefly concerned, has three voluntary settlements: one at Mombasa maintained by the British Missionary Society which for a small monthly sum takes in Government patients. The other two are at Malindi and on one of the creeks; the Rocky Islands, both being under the supervision of the Medical Department at these places. The existence of 250 leprosy cases during the year 1914 is reported as follows:-

Measles.- Was not reported on the Coast during the year, one of the very few Measles epidemics during the war. In 1914 there were 2 cases; in 1913, 206. No infected rats were found.

Small-pox.- Only 6 cases were discovered during the year of whom 2 died as against 33 cases and 10 deaths in 1914, and 296 and 63 in 1913, a position of affairs which was as satisfactory to the military authorities as to the Sanitation Department.

Beri-Beri.- 41 cases with 1 death were noted at the Native Civil Hospital at Mombasa.

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THE MOUNTAINOUS ZONE.

Cerebro-spinal-meningitis.- 3 cases occurred amongst Europeans and 78 came to light amongst natives with 3 deaths, a total of 81 as against 136 in the previous year with 51 deaths. In the 1913 epidemic there were 288 cases of whom 152 died. The exceptionally lowered death rate points to the virulence of the infection dying down.

Dysentery.- This bugbear of African quintessence showed a marked increase over previous years as was to be expected under the changed conditions produced by war. There were 105 admissions amongst Europeans, fortunately with no deaths. Including these there was a total of 1,647 of whom 80 died. Last year there were 1,471 admissions with 49 deaths. Considering the continued movements of large bodies of natives which had to go on, rains or no rains, the numbers that were entered on the books of the hospitals cannot be deemed excessive. The great majority of the cases depended on bacillary infection.

Wateria.- The rise in the admissions for this disease was very noticeable and reveals the most serious state of matters affecting the protectorate. In 1913 there were 81 cases with 2 deaths. In 1914 there were 88 with 10 deaths. This year there were 183 admissions and 17 deaths. 36 of this number with 3 deaths occurred amongst Europeans. The menace this legacy bequeaths to the future can be well understood. A small epidemic occurred in the Nairobi jail - 47 cases in all. A systematic examination of a lock-up of some 600 cases brought to light the fact that no less than 21 were "carriers".

Of these cases, there is unfortunately no information to show how many had been previously protectively inoculated.

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Further information will be found in the Principal Sanitation Officer's report.

Plague.- Another of the fortunate occurrences of the year was that the sole reminder of its existence was the finding of the body of a native who had died of plague near the Native market in Nairobi. Last year there were 10 cases with 6 deaths.

Pneumonia.- This disease claimed about an average number of victims 347 (13 Europeans) with 62 deaths (2 Europeans) as against 377 with 52 deaths in the previous year.

Veneral.- A slight increase in the number of admissions for syphilis has to be recorded, while the number of cases of gonorrhoea remained the same:-

Syphilis.-	1915	...	...	...	410
	1914	...	...	...	363
	1913	...	...	...	471
Gonorrhoea..	1915	...	...	...	316
	1914	...	...	...	317
	1913	...	...	...	320

Scurvy.- 36 cases were admitted to the Native Hospital, Nairobi.

THE KENYA AND UYANZA PROVINCES.

Beri-Beri.- Last year 2 cases were recorded; this year there were 9 all told.

Cerebro-spinal-meningitis.- In 1915, 23 admissions, all natives, and 3 deaths. 1914, 45 cases and 28 deaths. 1913 was the year of the pandemic.

Dysentery.- In these provinces showed a notable increase, and totalled, including 2 Europeans, 411 admissions of whom 39 died. The two previous years recorded,

respectively, 492 with 18 deaths, and 428 with 9 deaths. The increase in the number of cases is not surprising when it is remembered what a reservoir these thickly populated native areas have been for the Carrier Corps to draw upon.

Bacteris.- Only 1 European and 1 native came under treatment during the year, as against 3 whites and 6 blacks the previous year, with 1 death. This improvement can only be regarded as temporary. If movements of large bodies of men into congested districts adversely affect these areas, the depletion of home centres may also sensibly improve local conditions.

Leprosy.- 7 cases were treated at the Native Hospital, Kisumu; a similar number occurred in the province last year.

Plague.- In Kisumu cases continued to recrudesce, as the following figures will show:-

				Total.	Deaths.
1915	Europeans.	...	...	-	-
	Natives	...	...	35	14
1914	Europeans	...	...	1	-
	Natives	...	...	41	38
1913	Europeans	...	...	-	-
	Natives	...	...	32	27

The Kania Province was reported free.

Small-pox.- In 1915 there were 24 admissions of whom 2 died. As during the two previous years there had been only one admission, and that in the Nyeri district, this increase in the number of cases pointed to a recrudescence of the disease in the Nyanza Province and at a time when it was least wanted.

Venereal.- Syphilis showed a distinct decrease.

balanced by the number of gonorrhoea cases that presented themselves for treatment. The comparative table for the three years is as follows:-

<u>Syphilis.</u> -	1913	...	...	...	312
	1914	...	...	...	407
	1915	...	...	...	413
<u>Gonorrhoea.</u> -	1913	...	...	...	197
	1914	...	...	...	125
	1915	...	...	...	162

Typh.- 126 cases were shown on the books during the year compared with 71 the previous year.

Tetanus.- During 1915 there were 2 fatal cases. Last year there was one.

THE DESERT ZONE.

Beri-Beri.- The record this year shows that there were only 9 men fatal cases. In 1914 there were 72 and 2 in 1913. The sanitation of life, food, water, soil and climate are not dissimilar to those obtaining in the Town District.

Infantile Mortality.- This disease still continued to manifest its presence in Kiboko. Out of 4 cases one died as compared with the 2 fatal cases last year.

Measles.- This disease showed a decrease, 107 admissions as against 372 the previous year.

Leprosy.- As in last year's report one case was noted in the Northern Frontier District.

Small-pox.- This disease did not seem to light at all in these provinces. It is probable that this statement represents truly the state of matters, the more so when one realizes the sparsely populated areas separated by wide distances of desert sands.

Tetanus. - One case was admitted this year - a similar record to 1914.

Malaria. - 39 cases were treated.

HELMINTHIC.

THE COAST ZONE.

The diagnostic importance of studying the entozoa causes of disease in East Africa has been indicated in the remarks under section (ii) Communicable Diseases of the Coast Zone of this report, and Appendix I. of last year's report. Of 1,010 examination^s of faeces made in the Native Hospital, Mombasa, 594 gave positive results, many of them being multiple infection. Of the infections the following were recognized:-

<i>Ankylostomiasis</i>	249
<i>Trichocephalus dispar</i>	234
<i>Ascaris lumbricoides</i>	196
<i>Taenia saginata</i>	126
" <i>H. nana</i>	1
" <i>H. diminuta</i>	1
<i>Schistosoma mansoni</i>	14
<i>Schistosoma haematobium</i>	3
<i>Oxyuris vermicularis</i>	2

At Lamu, *ankylostoma*, *lumbricoides*, *taenia*, *strongyloides intestinalis*, and *bilharzia* were noted.

THE MOUNTAINOUS ZONE.

The following parasites were diagnosed during the year:- *taenia solium* 50, *ascaris lumbricoides* 40, *trichocephalus dispar* 2, and 3 cases of *ankylostomiasis*.

THE KILIMA AND NYANZA PROVINCES.

These provinces provided admissions for the following:- *taenia solium* 6, *taenia saginata* 3, *ascaris lumbricoides* 656, and *dracunculus* 1.

THE DESERT ZONE.

Following on the note made in last year's report there is this year recorded by the medical officers as occurring in these regions the following intestinal parasites:- *Taenia solium* 50, *taenia saginata* 10, *ascaris lumbricoides* 70, *oxyuris vermicularis* 15, and 6 cases of *ankylostomiasis*.

(b.) EUROPEAN OFFICIALS.

GENERAL REMARKS.

THE COAST HOSP.

The standard of health maintained was about the same as last year, 141 cases were admitted to hospital as against 189 the previous year. In addition 169 received treatment as out-patients. The outstanding causes of admissions were

dysentery	6
enteric	2
malaria	84
blackwater fever	2
digestive troubles	12

Three deaths occurred, due to dysentery, blackwater fever, and heatstroke.

There were no deaths last year.

The involvements that took place were 2 in number as against 4 in 1914 and were occasioned by the following conditions:-

tuberculosis.
iritis.
asthma.
fistula antralis.
gunshot wound.

THE MOUNTAINOUS HOSP.

In 1915 there were admitted to hospital, or treated in quarters,-

in-patients	204	} with no deaths.
out-patients	174	

In 1914,-

in-patients	220	} with 2 deaths.
out-patients	166	

The most common cause of sickness was malaria, 140 admissions, followed by diseases of the digestive system 61,

dysentery 24, and enteric 9.

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16 people had to be invalided on account of the following diseases:-

debility and anaemia	5
malaria	2
nervous system	2
digestive system	2

and dysentery, enteric, blackwater fever, tuberculosis and injuries- 1 each.

The general health was not satisfactory compared with former years. The complex conditions produced by war - both mental and physical - and delayed leave would be contributory causes. The fact that the number of invalidings this year was exactly double that of last year is significant.

THE KENIA AND NYANZA PROVINCES.

As compared with the 57 cases off duty and treated in quarters last year, the record of the last 12 months was 31 admissions only with no deaths as against the solitary fatality of 1914. 58 people received treatment as out-patients.

There were two invalidings on account of malaria and nervous diseases - one more than last year.

THE DESERT ZONE.

The number of patients treated in quarters in these two provinces also showed a drop - 11 as against 24 last year and again without a death. 23 officials received treatment as out-patients.

Three invalidings were carried out as against four

the previous year- 1 for splenitis, 1 for disease of
the urinary tract, and 1 for heatstroke.

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**TABLE SHOWING THE SICK, INVALIDING AND
DEATH RATES AMONGST EUROPEAN OFFICIALS
AT THE COAST ZONE.**

	1913.	1914.	1915.
1 number of officials resident.	250	242	238
age number resident.	133	158	137
1 number on sick list.	134	159	141
1 number of days on sick list.	797	1284	1243
age daily number on sick list.	2.18	3.52	3.40
centage of sick to average number resident.	1.64	3.24	2.48
age number of days on sick list to each patient.)	6.98	8.08	9.81
age sick time to each resident.	3.12	8.31	8.22
1 number invalided.	4	4	5
centage of invaliding to total residents.	1.60	1.65	2.10
1 deaths.	3	-	3
centage of deaths to total residents.	1.20	-	1.26
centage of deaths to average number residents.	2.25	-	-
of cases of sickness contracted away from residence.	1	-	-

**TABLE SHOWING THE SICK, INVALIDING AND
DEATH RATES AMONGST RUSSIAN OFFICIALS
AT THE COAST ZONE.**

	1913.	1914.	1915.
Number of officials resident.	354	435	35
Number on sick list.	295	899	364
Number of days on sick list.	3570	3256	3542
Age daily number on sick list.	7.04	8.92	12.44
Percentage of sick to average number resident.	1.63	1.67	2.40
Age number of days on sick list to each patient.)	8.71	10.89	17.82
Age sick time to each resident.	3.93	4.20	6.22
Number invalided.	5	8	16
Percentage of invaliding to total residents.	.76	1.83	2.19
Deaths.	3	2	-
Percentage of deaths to total residents.	.46	.26	-
Percentage of deaths to average number resident.)	.69	.37	-
of cases of sickness contracted away from residence.	-	-	-

**TABLE SHOWING THE SICK, INVALIDING AND
DEATH RATES AMONGST EUROPEAN OFFICIALS
IN THE KENYA AND UGANDA PROTECTORATE.**

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	1913.	1914.	1915.
1 number of officials resident.	138	157	148
average number resident.	84	102	109
1 number on sick list.	71	87	31
1 number of days on sick list.	614	418	296
average daily number on sick list.	1.68	1.14	.81
percentage of sick to average number } resident. }	2.00	1.12	.74
average number of days on sick list to } each patient. }	8.64	7.33	9.55
average sick time to each resident.	4.45	2.66	2.00
1 number invalided.	2	1	2
percentage of invaliding to total } residents. }	1.45	.64	1.35
1 deaths.	-	1	-
percentage of deaths to total residents.	-	.64	-
percentage of deaths to average number } resident. }	-	.98	-
number of cases of sickness contracted } away from residence. }	-	-	-

**TABLE SHOWING THE SICK, INVALIDING AND
DEATH RATES AMONGST EUROPEAN OFFICIALS
IN THE DESERT ZONE.**

	1913.	1914.	1915.
1 number of officials resident.	46	42	27
average number resident.	32	26	13
1 number on sick list.	6	24	11
1 number of days on sick list.	98	193	218
average daily number on sick list.	.27	.53	.59
percentage of sick to average number } resident. }	.84	2.04	4.53
average number of days on sick list to } each patient. }	16.33	8.04	19.54
average sick time to each resident.	3.06	4.59	7.96
1 number invalided.	2	4	3
percentage of invaliding to total } residents. }	4.33	9.82	11.11
1 deaths.	1	-	-
percentage of deaths to total residents.	2.17	-	-
percentage of deaths to average number } resident. }	3.12	-	-
number of cases of sickness contracted } away from residence. }	-	-	-

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TABLE SHOWING THE SICK, INVALIDING AND DEATH
RATES AMONGST EUROPEAN OFFICIALS IN THE
EAST AFRICA PROTECTORATE.

	1913.	1914.	1915.
Total number of officials resident.	1088	1217	1031
Average number resident.	682	821	777
Total number on sick list.	506	539	567
Total number of days on sick list.	4079	5151	6296
Average daily number on sick list.	11.17	14.11	17.24
Percentage of sick to average number resident.	1.64	1.72	2.22
Average number of days on sick list to each patient.	8.06	9.56	11.10
Average sick time to each resident.	3.74	4.23	6.10
Total number invalided.	13	17	26
Percentage of invaliding to total residents.	1.19	1.40	2.52
Total deaths.	7	3	3
Percentage of deaths to total residents.	.64	.25	.29
Percentage of deaths to average number resident.	1.02	.37	.36
Number of cases of sickness contracted away from residence.	1	.	.

THE COAST ZONE.

There were 946 cases treated as in-patients during the year, as against 1,105 the previous year. Three cases died in 1915, the causes being, enteric, malaria, and respiratory; in 1914 there were no deaths.

The principal disease was, of course, malaria, there being 682 in-patients, and 154 out-patients; in 1914 there were 657 cases.

While there were 4 cases invalided in 1914, there were 7 in 1915 for the following causes:-

dysentery	2
debility	2
Valve disease of heart	1
bronchitis	1
cystitis	1

THE MOUNTAIN ZONE.

There were 1,328 admissions, and 907 out-patients were treated. The number of deaths was the same as in the previous year, 12, and were due to dysentery 2, enteric fever 1, malaria 2, and unknown causes 7.

The principal diseases were, malaria 822 in-patients and 105 out-patients, and diseases of the respiratory tract 205 in-patients and 212 out-patients. 10 in-patients were invalided, 5 for malaria, 2 for enteric fever, 1 for dysentery, 1 for unknown causes; 10 out-patients were invalided, 5 for malaria, 2 for enteric fever, 1 for dysentery, 1 for unknown causes.

THE KINIA AND NYANZA PROVINCES.

There were, this year, 271 in-patients and 156 out-

patients; last year the total of those treated in quarters came to 116. Of the admissions this year, malaria was responsible for 195 in-patients and 33 out-patients. There were no deaths.

As against one case invalided last year, there were two this year - one for malaria and one for nerves.

THE DESERT ZONE.

The hospital cases totalled 100 as against 72 in 1914, while 954 out-patients were attended to. As in other provinces malaria was the chief factor in the admissions, 30 in-patients and 132 out-patients being treated.

There were no invalidings and but one death from malaria contrasted with the nil return last year.

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TABLE SHOWING THE SICK, INVALIDING AND DEATH RATES
AMONGST NATIVE OFFICIALS AT THE COAST
ZONE.

	1913.	1914.	1915.
Total number of officials resident.	600	655	639
Average number resident.	424	500	463
Total number on sick list.	785	1105	946
Total number of days on sick list.	4183	5681	4430
Average daily number on sick list.	11.46	15.56	12.13
Percentage of sick to average number resident.	2.70	3.11	2.62
Average number of days on sick list to each patient.	5.33	5.14	4.68
Average sick time to each resident.	6.97	8.67	6.43
Total number invalided.	2	4	7
Percentage of invaliding to total residents.	.33	.61	1.01
Total deaths.	2	.	3
Percentage of deaths to total residents.	.33	.	.43
Percentage of deaths to average number resident.	.47	.	.64
Number of cases of sickness contracted away from residence.	.	.	.

TABLE SHOWING THE SICK, INVALIDING AND DEATH RATES
AMONGST NATIVE OFFICIALS IN THE
MOUNTAINOUS ZONE.

	1913.	1914.	1915.
Total number of officials resident.	881	1037	1015
Average number resident.	618	736	678
Total number on sick list.	1184	1667	1322
Total number of days on sick list.	14253	12148	7730
Average daily number on sick list.	39.05	33.28	21.17
Percentage of sick to average number resident.	6.31	4.52	3.12
Average number of days on sick list to each patient.	7.98	7.75	5.84
Average sick time to each resident.	16.17	11.71	7.61
Total number invalided.	6	15	9
Percentage of invaliding to total residents.	.68	1.44	.88
Total deaths.	4	4	4
Percentage of deaths to total residents.	.45	.38	.39
Percentage of deaths to average number resident.	.64	.54	.58
Number of cases of sickness contracted away from residence.	.	.	.

TABLE SHOWING THE SICK, INVALIDING AND DEATH RATES
AMONGST NATIVE OFFICIALS IN THE KENYA
AND UYANZA PROVINCES.

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	1913.	1914.	1915.
Total number of officials resident.	201	240	275
Average number resident.	139	166	198
Total number on sick list.	335	316	271
Total number of days on sick list.	1485	775	1680
Average daily number on sick list.	4.06	3.12	4.40
Percentage of sick to average number resident.	2.92	1.28	2.32
Average number of days on sick list to each patient.	4.43	2.45	6.19
Average sick time to each resident.	7.38	3.23	6.10
Total number invalided.	.	1	1
Percentage of invaliding to total residents.	.	.42	.36
Total deaths.	1	5	.
Percentage of deaths to total residents.	.49	2.08	.
Percentage of deaths to average number resident.	.71	3.01	.
Number of cases of sickness contracted away from residences.	.	.	.

TABLE SHOWING THE SICK, INVALIDING AND DEATH RATES
AMONGST NATIVE OFFICIALS IN THE DESERT
ZONES.

	1913.	1914.	1915.
Total number of officials resident.	46	32	30
Average number resident.	34	22	1
Total number on sick list.	16	72	14
Total number of days on sick list.	112	184	27
Average daily number on sick list	.30	.60	.43
Percentage of sick to average number resident.	.88	2	1.05
Average number of days on sick list to each patient.	6.22	2.55	1.96
Average sick time to each resident.	2.43	5.41	3.12
Total number invalided.	2	.	.
Percentage of invaliding to total residents.	4.34	.	.
Total deaths.	.	.	1
Percentage of deaths to total residents.	.	.	2
Percentage of deaths to average number resident.	.	.	2.50
Number of cases of sickness contracted away from residences.	.	.	.

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TABLE SHOWING THE SICK, INVALIDING AND DEATH RATES
AMONGST NATIVE OFFICIALS IN THE BRITISH
EAST AFRICA PROTECTORATE.

	1913.	1914.	1915.
Total number of officials resident.	1728	1966	1888
Average number resident.	1215	1427	1379
Total number on sick list.	2922	3065	2832
Total number of days on sick list.	20033	18788	13990
Average daily number on sick list.	54.88	51.47	38.34
Percentage of sick to average number resident.	4.51	3.61	2.78
Average number of days on sick list to each patient.	6.85	6.14	5.30
Average sick time to each resident.	11.59	9.56	7.41
Total number invalided.	10	20	17
Percentage on invaliding to total residents.	.57	1.02	.90
Total deaths.	7	9	8
Percentage of deaths to total residents.	.40	.46	.42
Percentage of deaths to average number resident.	.37	.43	.58
Number of cases of sickness con- tracted away from residence.	.	.	.

(d.) GENERAL EUROPEAN POPULATION.

THE COAST ZONE.

There were 73 admissions to hospital, the chief causes being, malaria 28, enteric 7, and dysentery 4; last year the admissions were 64.

The 4 deaths recorded were due to enteric, three less than last year.

No estimate of the resident population can be ventured on this year owing to the upset caused by military operations.

The births registered numbered 9. In 1914 there were 7, and in 1913 the number recorded was 13.

The deaths registered were 23, as compared with 12 in 1914, and 8 in 1913.

THE MOUNTAINOUS ZONE.

Of the 557 cases admitted for treatment 13 died the same number of deaths as in 1914 when 352 admissions were recorded. The admissions were chiefly for:-

malaria	222
dysentery	49
enteric	24
blackwater fever	6
digestive	60
injuries	47

The deaths were caused by enteric 3, malaria 2, blackwater fever 2, pneumonia 2, and syphilis, endocarditis, abscess of liver, and tumour 1 each.

The number of births registered was 120 and deaths 51 throughout the zone. The figures in 1914 were 137 and 49 respectively.

No estimate of population can be submitted this year.

KABIA AND NYANZA PROVINCES.

32 cases received treatment as against 40 the previous year. There was 1 death from blackwater fever.

	1913.	1914.
Births registered	15	12
Deaths	8	2

No estimate of population can be given.

THE HIGHLAND ZONE.

1 case of blackwater fever, 1 birth and no deaths are recorded.

The population may be taken as the same as last year, viz:- 60.

(c.) GENERAL NATIVE POPULATION.

THE COAST ZONE.

4,240 cases were treated as in-patients as compared

with 3,371 last year. The chief causes of admission were:- malaria 2,079, dysentery 221, respiratory 111, diarrhoea 284, skin 237, and injuries 394.

149 deaths occurred in hospitals the chief causes being:- cerebro-spinal-meningitis 12, dysentery 18, malaria 13, pneumonia 12, enteritis and diarrhoea 16, ankylostomiasis 13, and injuries 7.

The estimated native population in the coast zone was last year given as 246,756 but military requirements have occasioned large numbers being drafted to and fro throughout the year.

Registration of births and deaths is not compulsory.

THE MOUNTAINOUS ZONE.

The total number of cases treated as in-patients was 3,685 as compared with 3,775 last year. The deaths recorded were 332 as against 281 in 1914.

The chief causes of admission were:- cerebro-spinal-meningitis 54, dysentery 466, malaria 500, chicken pox 215, enteritis 120, pneumonia 215, bronchitis 222, diarrhoea 155, and injuries 321.

The principal causes of mortality were:- cerebro-spinal-meningitis 37, dysentery 35, enteritis 16, malaria 22, pneumonia 52, diarrhoea 16, and injuries 14.

The estimated population in the two provinces may be regarded as that given last year - 480,250.

Registration of births and deaths is not compulsory nor practicable at present.

THE KENIA AND NYANEA PROVINCES.

The total number of in-patients was 2,402 with 125

deaths.

Dysentery with 230 cases and 39 deaths, and malaria with 823 admissions were the principal ailments.

The estimated population is nearly 2,000,000.

Births and deaths are not registered.

THE DESERT ZONE.

No compiled annual tables or reports have been received from the Northern Frontier District and Berenli, and such figures as are incorporated in the statistical tables have been obtained from monthly returns forwarded.

Included in these figures were 577 admissions and 15 deaths.

The estimated population is probably the same as that recorded last year, viz:- 12,000.

No births, deaths or census have been recorded.

III.- SANITATION.

EAST AFRICA PROTECTORATE.

MEDICAL DEPARTMENT.

SANITATION DIVISION.

By

W.J. RADFORD.

PRINCIPAL SANITATION OFFICER.

(i.) ADMINISTRATION.

1. The personnel of the Sanitation Division at the commencement of the year 1914 was as follows:-

- 1 Principal Sanitation Officer.
- 1 Plague Officer.
- 3 Medical Officers of Health.
- 1 Nurse.
- 6 Sanitary Inspectors.
- 4 Assistant Surgeons.
- 3 Sub Assistant Surgeons.
- 1 Compounder.
- 3 Nurses.

2. APPOINTMENTS DURING THE YEAR.

- 1 Sanitary Inspector.

3. RESIGNATIONS DURING THE YEAR.

- 1 Plague Officer (Promoted on leave to England).
- 1 Medical Officer of Health (Resigned the service).

4. LEAVE DURING THE YEAR.

- 1 Sanitary Inspector.

MILITARY DUTY.

All the European members of the staff have been engaged in military duties in various capacities, in addition to those in their own Department. Dislocation in the routine work has resulted, at a time when extra supervision was much needed.

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LEGISLATION DURING 1915 AFFECTING THE
MEDICAL DEPARTMENT.

- (1) "Drugs and Poisons Amendment Ordinance No. 28 of 1915"
Regulations to be observed in the sale of poisons by
Companies trading as Druggists.

Confers powers to carry on the business of a deceased
Druggist.

- (2) "Lunacy Amendment Ordinance No. 17 of 1915".

Powers of Courts in case of a lunatic residing without
the Protectorate, re charges and fees. (Powers of
disallowance not exercised).

- (3) "Vaccination Ordinance, 1912".

Applied to North Kavirondo and Kisumu Districts.

- (4) "Township Ordinance, 1903".

Certain breaches of Sanitary Regulations made
cognisable by Police, Mombasa.

Inclusion of "Mumps" as a notifiable disease.

Regulates sale of poultry in markets only, Nairobi.

Regulates Municipal Stock Yards, Nairobi.

Service of Notices, Nairobi.

- (5) "Regulation of sale of Native Intoxicating Liquor
Ordinance No. 22 of 1915".

(Powers of disallowance not exercised.)

(11.) PREVENTIVE MEASURES.

MOSQUITO AND INSECT-BORNE DISEASES.

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MALARIA.

The continuance of hostilities and the difficulties that have been experienced in collating returns are responsible for the somewhat incomplete notification of diseases. But reports from all provinces are unanimous in stating that malaria is on the increase; and energetic measures, combined with an intelligent and well supervised quinine prophylaxis, will be necessary as soon as opportunities present themselves, if any headway is to be expected in combating this preventable disease.

This year every medical station in the country has been reported to be infected with malaria.

MALARIA, RECORDED CASES AND DEATHS.

Year.	Cases.	Deaths.
1913	15,656	81
1914	18,096	119 +
1915	18,175	223 ⁵

+ 27 of these deaths occurred in Government institutions.

The above record does not include cases that have occurred among the Military units; but refers to observed cases that have come under the observation of the civil staff, and in civil Government institutions only.

There can be no question that many cases of malaria contracted in out districts are included in the returns from the chief towns in the Protectorate - Nairobi, Mombasa, Kisumu and Lamu, where conditions especially

favorable

favourable for the propagation of the disease exist; and an active and well sustained effort is necessary to improve the conditions along all well recognised routes, equally with an energetic anti malarial propaganda in townships, if any lasting benefit to the community is to accrue.

As far as possible attention has been directed to anti malarial measures in the 3 principal townships. Under the Mosquito Rules some 2,070 Sanitary Notices were served, and successful prosecutions in 53 cases were recorded.

BLACKWATER FEVER.

A considerable increase in the number of observed cases is recorded - 13 cases with ⁵ deaths.

A full return for the year from both Military and Civil would show a greatly increased annual incidence.

MILBURN FISH.

Owing to a regrettable accident, nearly all the imported fish were temporarily depriving the Government of the opportunity for introducing them from a source in a area where their presence was expected to produce satisfactory results.

These instances are recorded where quinine prophylaxis has produced gratifying results during the period under review, but speaking generally, very little opportunity for its prosecution has been offered, and the statistics are not of a very convincing nature.

TRYPANOSOMIASIS.

The number of cases coming under observation in year was.-

Nairobi	3	
Mumias	1	Total 4.

FILARIASIS.

The Medical Officer in charge Lamu records his opinion that "roughly some 30-40% of the population of Lamu and the neighbouring islands are infected with Filaria Nocturna. There are also localized centres on the Tana River. General sanitary and anti mosquito work is the only way to diminish this infection."

GENERAL.

Fortunately the occurrence of epidemic diseases in the Protectorate has been limited, both in variety and distribution, to a few centres.

Observed cases of Plague have occurred in Nairobi, Kisumu and in North Kavirondo towards the Uganda border. Small-pox was also reported from 5 districts there; but towards the close of the year evidence was gradually accumulated that an epidemic was threatening in the Nyanza Province, in some districts near Nairobi, and in the Kenia Native Reserve. Measles - a practically new disease - was identified in a few places; and it is interesting to note that the case incidence followed the admission of the disease into Mombasa by sea borne agency, and successively occurred in that town, Nairobi and district, Kisumu and Kitui, and generally traceable from contacts. A considerable outbreak was notified from Bunyore and Sagaa districts in the Nyanza Province during the months of October and November. Chicken-pox was prevalent among the inmates of the Nairobi Jail, and appeared sporadically in other places. No deaths were recorded.

Cerebro Spinal Meningitis has also been in evidence principally in the towns of Nairobi, Kisumu and Mombasa; and sporadically in the Kavirondo and Kenia provinces; while a few cases have come under observation in Jubaland.

Efforts were made by segregation in concentration camps, inoculation and vaccination, to protect the many thousands of natives enrolled for the Carrier Corps from the Nyanza Province, where endemic disease has long been

known

known to exist; and from where plague and small-pox were reported during the year.

Concentration camps were established at the Yala, Kendu Bay, and Kibos outside and in Kisumu, where these persons were received, and treated by the personnel of the Division, the work accomplished being

Number of porters inspected during the year	27,993
" " " inoculated " " "	21,088
" " " vaccinated " " "	27,993

Two cases of infectious disease occurred in the camps, one being of small-pox, and the other plague.

The working of these camps was a matter of some difficulty owing to the limitations of staff. Sanitary Inspectors were detailed from the town and to this purpose, and placed in control. The retention of 500-2000 military porters within the endemic centre of Kisumu has caused considerable anxiety, and nothing but the urgent military situation could have justified such an action.

The facilities afforded for the treatment of actual cases is and has been very limited. At present the reception of new cases is not ready for the reception of inmates at the proper disinfection of vessels, and patients are still received at English Point where the available accommodation is most meagre, and as, as usually is the case, must be sent to the Sanitary Station at Zanzibar. The relinquishing of the grant hitherto contributed by the Protectorate to the Zanzibar Government, is an additional reason for the establishment of a quarantine station at Mombasa.

No infectious diseases hospital for the reception of

European patients suffering from these diseases has as yet been established in the country.

At Nairobi, the segregation camp and buildings have been transferred to another site on the S. of the Nairobi River, in order to accommodate the new Native location on the original site.

At Kiama, the quarantine station is represented by some condemned buildings situated in the centre of the town (the Plague Hospital) and a few grass huts on its perimeter.

The number of persons admitted to the segregation camps during the year was

Nairobi 22

Kiama 526

Total 548

At Nairobi, the segregation camp is located in the town.

PLAGUE.

With the exception of the Nyanza Province, with its chief centre Kiama, and one case in Nairobi, Plague has not been reported in any portion of the Protectorate.

The appended table shows the number of cases that have been identified:-

Locality.	Cases.	Deaths.	Percentage of Mortality.
Kiama	33	29	87.88%
Nairobi	1	1	100.00%
Total	34	30	

It was stated that towards the end of the year, Plague had appeared in the districts of Kericho,

Kenya

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Bunyoro, Sogam and Beme in the Nyanza Province, but no supervision could be exercised owing to the shortage of staff.

The types observed were bubonic, pneumonic and septicemic in the proportions shown.

Type.	Cases.	Deaths.	Mortality.
Bubonic	22	18	81.81%
Pneumonic	3	3	100.00%
Septicemic	9	9	100.00%
Total	34	30	

Mortality with reference to total number of cases and inoculations.-

a. Number of attacks among the inoculated	7
b. " " deaths " " "	5
c. " " cases " " uninoculated	27
d. " " deaths " " "	25

Races who contracted plague.

Race.	Cases.	Deaths.
Asiatics	5	3
Natives	29	27
Total	34	30

Kisumu and district as endemic plague centres constitute a standing menace to the whole Protectorate, as in 15 areas of the town the disease has claimed victims, and this as has been the case for the last 8 years in succession.

The importance of the town to the whole country needs no insistence; it is a terminus of the Railway, the port of the Uganda Marine, and to it thousands of tons of grain and other country produce are annually

brought

brought. This added to the fact that plague has been reported in the outlying corn producing districts of Maragoli, Bunyore, Sagaa and Bena emphasizes the necessity for adoption of speedy and thorough measures for the sanitation of the town and district, the erection of rat proof grain stores and houses with the installation of a disinfection plant capable of dealing with these materials.

The measures adopted in the townships to anticipate any serious outbreak have consisted of periodical visitations by the staff of voluntary or compulsory inoculation with Haffkin's prophylactic, and a rat destruction campaign. The work accomplished is shown in the following tables:-

Inoculation by Haffkin's Prophylactic.

Locality.	1913	1914	1915
Nairobi	40,448	9,167	2,304
Nairobi	978	8,138	2,304
Kisumu	8,170	14,700	2,304

Locality	1913	1914	1915	Total
Nairobi	40,448	9,167	2,304	51,919
Nairobi	978	8,138	2,304	11,420
Kisumu	8,170	14,700	2,304	25,174
Total	59,596	32,005	6,912	98,513

SMALL-POX.

This disease was not recognised in any district in the country until the end of the year, when it became evident that a number of cases were recurring in the

Munis

Mumias Township, North Kavirondo, and towards the Uganda border, where the disease was reported as being prevalent.

All cases coming under observation at Mombasa were ship-borne, or introduced from outside. No case occurred in the town. These in Mumias and the Uganda border appeared in October, and the disease successively invading Kisumu October-November; Nairobi, November-December. (At the time of writing, June 1916, an extensive epidemic has invaded the whole of the Nyanza Province, and is extending to the Kenya and Ukamba Provinces).

The following cases have been recorded during the year:-

Locality.	Cases.	Deaths.
Mombasa	6	2
Nairobi	7	3
Naivasha	1	-
Kisumu	4	-
Mumias	20	2
Total	38	7

VACCINATION.

24 out of a total of 29 stations have furnished vaccination returns for the year 1915. The chief centres of activity being Mombasa 3553, Nairobi 21122, Fort Hall 29352, Kisumu 34552 and Kitui 21033.

The following table shows the number of vaccinations performed in the country, with the number of small-pox cases in the last 5 years:-

	1912	1913	1914	1915
Cases of Small-pox	323	166	8	26
Vaccinations	79,262	131,757	123,245	162,122

The detailed vaccination return is added.

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STATEMENT SHOWING THE PLACES AND NUMBER OF
VACCINATIONS PERFORMED AT EACH DURING
THE YEAR 1915.

Stations.	Vaccinations.			
	Number.	Failed	Perfect	Unknown.
Makindu	2	-	1	1
Mombasa	3,583	126	342	2,915
Lamu	1,466	243	264	989
Kidaret	37	10	10	2
Nachukui	37	-	-	37
Nairobi Police Prison	1,448	108	1,108	232
Nairobi M.O.H.	21,122	-	-	21,122
Naivasha	119	22	82	15
Kyamba	13	-	-	13
N'darugu Prison Camp	184	7	172	5
Nandi	18	8	4	3
Kisii	194	16	29	151
Embu	3,677	815	3,884	980
Fort Hall	39,352	-	1,113	58,239
Nyeri	6,025	274	1,349	4,402
Mumias	5,968	616	3,486	1,866
Kisumu	34,859	2,547	20,080	12,232
Mera	427	18	111	301
Kericho	17	5	8	4
Gabwen	150	90	60	-
Kimaya	164	143	5	13
Serenii	148	49	59	40
Kitui	21,033	39	142	20,852
Alexandra	142	30	43	19
Total	162,184	5,217	32,864	124,403

A Note of explanation is necessary regarding the number of "unknown" results, viz.- 124,403 in a total of 162,184. During the year it has been possible to send trained Native vaccinators into districts where small-pox had been previously reported, or was threatening. These persons worked under the supervision of the Administrative and Medical staff, and during their itinerary they are unable to estimate the number of successes. Another equation of error has been produced by the exigencies of the service, as thousands of porters had been requisitioned by the Military, when after vaccination and medical inspection they were hurriedly passed down

country

country.

It is a well recognised fact that the effects of vaccination are generally delayed, the average time being 8-17 days before a negative or positive result can, with any degree of certainty, be determined. A period much too lengthy to retain porters in one place, or for the vaccinator to wait for the results of his labours. The number of official vaccinators in the country is 15.

NOTABLE FEVER.

A considerable increase in the number of reported cases in comparison with last year is observed, viz. 216 cases with 35 deaths.

This return does not include admissions into the various Military Hospitals.

Table of Reported Cases.

Locality	British Forces.		Other Nationalities.	
	Cases	Deaths	Cases	Deaths
Aden	1	0	0	0
Al Hudaydah	1	0	0	0
Al Hudaydah	1	0	0	0
Al Hudaydah	1	0	0	0
Al Hudaydah	1	0	0	0
Al Hudaydah	1	0	0	0
Al Hudaydah	1	0	0	0
Al Hudaydah	1	0	0	0
Al Hudaydah	1	0	0	0
Al Hudaydah	1	0	0	0
Total	45	7	170	28

From available returns, statistics show that 161 cases occurred among those who had not been previously inoculated, of the remaining 55 cases no observations are made.

recorded during the year.

1918.		1919.	
Cases.	Deaths.	Cases.	Deaths.
228	103	170	105

Case incidence was most marked during the cold weather May-August, and a higher degree of fatal termination calls for comment.

CHICKEN-POX.

429 cases were notified; the chief centre of infection being Nairobi. No deaths were recorded.

MEASLES.

The introduction of this disease was traced to a sea-borne origin, 2 European children being landed at Mombasa. The family at once proceeded to Kisumu where a localised epidemic was seen in evidence, the Catholic Mission, Sailors Lines, and 2 N.M. Ships in the Uganda Marine becoming successively infected. Shortly after a considerable epidemic was observed in Bungoma and Sagaa in the Kisumu district; and later it appeared in the Kitui district. Only one death has been reported.

DYSENTERY.

This disease has increased to a large extent in all parts of the country - the type generally observed being bacillary. The case incidence among porters enrolled for military service has caused some anxiety. Active service conditions, inappropriate feeding, inattention to cooking, dust flies and contaminated water

have

have all played their part in disseminating the disease.

The total number of cases reported in the civil Hospitals and Dispensaries is here shown.

	1914.		1915.	
	Cases.	Deaths.	Cases.	Deaths.
Europeans	96	1	134	1
Other Nationalities	2,717	146	2,888	167
Total	2,813	147	3,022	168

In addition to these the Health Officers at Mombasa reports 150 deaths, Nairobi 80 deaths, and Kisumu 420 cases with 31 deaths.

During the year, the Principal Sanitation Officer, at the request of the military authorities, assisted on three occasions on the lines of Communication and at the front, in investigating outbreaks of dysentery and beri-beri.

Dr. Shirborne has been enabled to continue his investigations at the African Base Hospital on the ova of intestinal parasites; the following précis of results is of great interest.

"Table showing Results of Examination of Faeces for
"Ova of Intestinal parasites (March to December 1915).
"A total number of 1620 examinations were performed
"during the period mentioned. These figures include
"African and Indian (including Military) Inpatients and
"Outpatients.

"Positive results.....545

"Negative do.....1075

"54.36% of the total examinations were therefore
"positive.

"The following show the numbers of individual

infections.

"Infections."

" A. Duodenale	249
" T. Dispar	234
" A. Lumbricoides.....	1966
" Trachina (majority Saginata)	126
" H. Nana.....	1
" H. Dimorpha.....	1
" S. Haematodes.....	14
" S. Inquadratus.....	2
" S. Subtilis.....	1
" O. Vermicularis	

"There were many Mull: and F. Infections."

ed. J. Shiroore,

Medical Officer,

Native Hospital.

(Signed) Dent

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MUMPS.

This disease has been observed in Nairobi, the Prison and Vardens' lines being chiefly affected; 31 cases with one death was reported. On one case of Bubonic Plague being diagnosed as mumps, it was deemed desirable to include "mumps" as a notifiable disease.

ANTHRAX.

12 cases (with 4 deaths) came under observation. At Nairobi where 10 cases were treated in the Quarantine Camp, Anthrax serum was used which proved very successful.

TETANUS.

Kisumu reports 2 cases which terminated fatally.

QUARANTINE CAMPS.

At Mombasa, the chief Port in the Protectorate, the accommodation afforded is inadequate. The new Sanitary Station at Kipevu when completed will remove many of the disabilities now experienced in dealing with infectious disease.

The Camp at Nairobi was shifted to a new site near the Prison during the month of July 1915, in order that facilities may be given for the formation of a Native Location on the old site.

The Infectious Diseases Hospital at Kisumu is retained in the centre of the town, and is lacking in the essentials for the proper treatment and housing of the sick.

Here, as in other localities in the country where ⁴⁵⁰ epidemic disease has appeared, temporary grass huts have been erected for the accommodation of patients and contacts.

The attached table shows the number of patients treated in these camps.

Disease.	Nairobi.		Kisumu.		Mombasa.		Total.	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Cerebro Spinal Meningitis	33	24	27	21	44	32	104	77
Chicken-pox	155	-	-	-	6	-	161	-
Dysentery	3	-	-	-	-	-	3	-
Enteric	84	11	-	-	19	7	103	18
Leprosy	1	-	-	-	-	-	1	-
Measles	18	-	39	-	-	-	57	-
Pneumonia	1	-	-	-	-	-	1	-
Small-pox	7	3	4	-	6	2	17	5
Whooping Cough	1	-	-	-	-	-	1	-
ANTHRAX	10	3	2	2	-	-	12	4
Rumps	61	1	-	-	-	-	61	1
Lymphangitis	1	-	-	-	-	-	1	-
Herpes	1	-	-	-	-	-	1	-
Plague	-	-	12	14	-	-	12	14
Total							641	119

In addition to these 1,161 contacts were interned.

Nairobi 14; Kisumu 1,137; Mombasa Nil total 1,151.

Accommodation for Europeans had to be found in bungalows.

HELMINTHIC DISEASES.

ANKYLOSTOMIASIS.

An increase in the number of reported cases to those in previous years is observed, viz.- 116 as against 92 in 1914. The condition has been observed chiefly in the Coast Belt; but it is of interest to record that 3 Europeans were reported to be infested in the Highlands.

LMPROSY.

The question of the Segregation of Lepers was a subject that could not be seriously discussed owing to the general dislocation of civil work and the financial restrictions due to war conditions.

The materialization of the scheme for the establishment of a station on the coast... of the station... with the... order to... supervisor... temporary... to whom... several... the other... the existing... whole question... all its aspects later.

(111.) ~~GREEN~~ SHANTON.

CONTAINER DISPOSAL.

Works for the treatment of sewage have not been constructed in any part of the Protectorate; the disposal of night soil has continued, as heretofore, by dumping into the sea, trenching, by means of cess pools, or distribution

on the ground.

It is only necessary to allude to the unsatisfactory methods of disposal. The nuisance caused by the floating of matter up Mombasa harbour on the incoming tide, the increase of the mass in evidence due to the concentration of thousands of persons on the Island necessitated by the war, has resulted in an increase in the observed cases of enteric and dysentery. Flies have at times abounded, though every effort has been made to check them, not only here but in other places. It is interesting to note that the fly larvae or maggots were observed to penetrate to a depth of 12 inches from the surface in the black cotton soil, in places where removal of excreta or refuse had been ineffectually performed, and in scratching the surface of the superficial earth covering pits some months old, generally a fly hatching could be discovered. Though every effort has been made in townships to destroy by incineration human and animal excreta; the accumulation resulting from these camps by force of circumstances retained within inhabited areas has produced a result inimical to the public health.

Towards the end of 1915, after lengthy negotiations, instructions from Government were received that a septic tank should be constructed beneath the main thoroughfare of Nairobi; this proposal neither has or had received the approval of the Health Authorities.

The drainage scheme in its present state is not intended for the carriage of sewage, no outfall works have been initiated; and the bucket system of removal is in vogue; this should be replaced as soon as possible by a water borne sewage scheme, with appropriate outfall works where the effluent can be treated prior to discharge into the Nairobi River.

It was possible during the year to lay on water

obtained

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obtained from the Nairobi River, and to utilize it for the purpose of continuous flushing in some of the open drains in the town. Many complaints had been received, prior to this, of the smell arising from the manholes in the main thoroughfares; the experiment has proved successful, and the nuisance has now been obviated.

11 new public latrines were erected in Nairobi, 4 at Kisumu, and 14 at Mombasa.

At Kisumu, latrines for ships' officers, ratings, Indian and African complements, were erected at the pier during the year, thus permitting of ships' latrines being generally closed when the vessels are alongside the wharves.

SCAVENGING.

Street and house refuse is either burned, buried, or dumped in suitable places. The Horsefeld incinerator at Mombasa has been out of action during the period under review. With the exception of Kisumu, where for some months the work was undertaken by the Health Office, the removal of the material, and general scavenging is in the hands of the Municipality or Conservancy Departments, and the executive control of the Division is practically nil. An advance has been achieved in Mombasa, Nairobi and Kisumu by the installation of dust bins of an approved pattern, and in Nairobi by the promulgation of Rules relating to dust bins and nuisances arising from rubbish; the powers to enforce compliance are vested in the Town Clerk.

WATER SUPPLY.

At Mombasa the new water supply from the Shimba Hills was available at Kilindini ^{the} end of the island in March, but its distribution was restricted to that area; the town

generally

lying on

In the same month the new water supply at Nakuru was laid on to the existing mains in the township, but in an untreated state, as the erection of the sedimentation tanks in the present year was outside financial possibilities; also the funds for the new distributing mains were withdrawn on account of the expenditure in connection with the war. A series of bacteriological and analytical examinations were made, which confirmed the opinion previously expressed that a process of filtration and storage prior to distribution was essential.

[illegible]

At Kismayu, where the greatest difficulty has long been experienced in supplying the resident European population with potable water, ^{in the dry season} hitherto/entirely dependant on camel transport for a distance of some 10 miles from the origin of supply. A small distillation plant has been erected; and some of the more seriously infected wells have been

closed

closed. Others have been covered to prevent the breeding of mosquitoes.

The well water on which the native population entirely depends, is contaminated, and quite unsatisfactory.

On the Northern Frontier, where an outbreak of cholera was reported in the beginning of the year, investigations showed that this was in fact dysentery traceable to contaminated water. Attention was directed to the safeguarding of the water supplies, periodic cleansing of wells, and the erection of sand filters. Reports received in November state that no further spread of the disease had occurred.

DRAINAGE.

In Nairobi some advance has been made in the drainage scheme, 1,141 yards of new masonry drains being constructed. A new scheme mentioned last year for the drainage of those areas where such were deficient, has been prepared and sanction obtained; the question of connecting premises with the main drains now completed has aroused considerable local attention, as the utilization of this aid to sanitation appears to have evoked widely divergent views.

As areas become settled, and what were a few years ago grazing lands, are being rapidly converted into building estates; the need for a comprehensive drainage scheme, both for the removal of storm water, and the carriage of sewage, becomes more insistent.

The main drainage scheme for the whole town should be defined, and when the main channels are constructed, it will be then possible for private owners to properly adjust the details of similar undertakings on their own properties to the general plan.

In other townships in the Protectorate, the drainage

is represented by open channels, with the earth drain predominating, and in the maintenance and care of these the work of the sanitary gangs under the control of the Health Officers has been of the greatest utility. The work in Nairobi, Kisumu and Mombasa has been well organised and sustained. A detailed statement is contained in table IV. The gangs are daily employed in cleansing open drains, ciling stagnant water, keeping surface drains in a good state of repair, and levelling ground.

Drains have been kept cleansed and repaired to the following extent.-

Mombasa 20,917 yards, Nairobi 60,950 yards, Kisumu 98,527.

BUSH CLEARING.

This important duty is directly undertaken by the Health Office gangs in the three chief towns; and financial aid, where possible, for the prosecution of similar work, is given by the Division to other centres.

The acreage kept clear in the towns is as follows:-

Nairobi 617 acres, Kisumu 208 acres, Mombasa 1,736 acres.

HOUSING.

No amelioration in the conditions producing overcrowding call for notice during the year.

A Special Committee convened by Government to report on the Native Location at Nairobi has submitted its recommendations, which have been approved; but owing to the financial considerations involved, it has been found impossible to establish this greatly needed centre either in Nairobi, or elsewhere.

The overcrowding in certain areas in townships, and verandah trading and residences so inimical to public health

could

could not be satisfactorily dealt with, and the registration and inspection of "licensed trading premises" has been curtailed. This temporary withdrawal of supervision will be reinforced as soon as a normal condition of affairs is re-established.

Representations have been made to allow of the adoption in the future of the "one man one plot" system; this entails in the future alienation of land the provision of a variety of sized plots in order to give opportunities to persons for developing their holdings, and to trade legitimately according to the extent of their means, and so minimize the present necessity that exist for sub-letting and sub-letting their premises.

These are details of town planning, to which important measure must be considered, and has been a matter of during the year.

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(iv.) CONDITION OF TRADES AND FACTORIES.**PUBLIC MARKETS.**

There are at Mombasa 2, Nairobi 2 and Kisumu 1.

Considerable advance has been made in the erection of the public market at Mombasa; at Nairobi the greater portion of the Jeevanjee Market still remains unoccupied; and at Kisumu the control remains in private hands.

Small traders with their stores of heterogeneous collection of articles for sale should be definitely excluded from the precincts of markets where fresh commodities are sold; efforts to achieve this end have been made. In the smaller towns, markets are usually provided with a roof and open sides, and are generally well supervised and cleansed; but considerable improvement in this direction is needed in the larger centres, and where the almost universal absence of adequate drainage renders it practically impossible to maintain the buildings in a sanitary condition.

SLAUGHTER HOUSES.

Kisumu 2, Nairobi 2, Mombasa 2.

Water is laid on the abattoirs in Nairobi, but not in any other town; improvements have been effected in the drainage of these premises, which have been used by both the military and civil communities.

The Health Office Staff in the towns has been unable to undertake the complete inspection of meat.

AERATED WATER FACTORIES.

At Mombasa all aerated water factories have been installed with new germ proof filters of the Berkefield type, and in two cases the factories were closed for a period

period, and all prepared stock destroyed as the filters had been found to have been tampered with. 153 inspections were made at the 5 factories. The ice factory has also been provided with a large Berkefield germ proof filter.

22 inspections were made of two factories at Nairobi, where unfiltered water is used; 7 samples were taken and analysed during the year.

The chief soda water factory at Kisumu is under the control of the Railway administration; it is supplied with a sterilised water supply, and this distribution has been extended to bottle washing, thus obviating the use of untreated Lake water.

LAUNDERING.

Piped water from the town supply is used at Nairobi, but elsewhere no safeguard can be afforded that the water used is above suspicion. The establishment of approved dhobi quarters is under consideration in other towns.

DAIRIES AND MILK SUPPLY.

No improvement has been effected in the regulation of the supply of milk; this must rest with the Government until the necessary powers have been assumed by legislation.

The Government Analyst's report for 1915 is attached which speaks for itself.-

"Twenty-six samples of milk were submitted by the Police, Sanitary Inspector, and residents in the town. Of these 19 were adulterated with water, representing 73% of the total samples. The extent of the adulteration was very serious, 13 of the 19 adulterated samples consisting of between 1/3 and 1/2 added

"added water. I have been unable to find any record of
 "milk adulteration in any town, where facilities for
 "analysis exist, which can compare with that of Nairobi.
 "The record for the past 3 years is as follows:-

"Year.	Samples submitted.	Percentage adulterated.
" 1913	88	34%
" 1914	80	70%
" 1915	85	73%

"As fewer samples were submitted during the past year
 "it would appear that no importance was attached to the
 "condition of affairs revealed by the report of the year
 "1914."

Ed.- V.N. Kirkman.

26th January 1916.

The following is a list of the samples submitted for analysis during the year 1915. The results of the analysis are given in the table on page 461. It will be seen that the percentage of adulteration is high, and that the results are difficult to obtain.

There is no official standard of fat and milk solids. The watering of milk is practically universal, and though the butter supplied from certain farms is excellent, this commodity largely adulterated with water is often sold in the town.

8 successful prosecutions were conducted in Mombasa in respect of adulteration of milk.

FOOD INSPECTION.

Nairobi - 5½ tons of foodstuffs were seized and condemned, and 11 samples submitted for analysis.

At Mombasa a careful scrutiny has been maintained, the results are appended.

Examined.		Condemned.
Tins of provision	23,184	23,184
Bags of provision	11,828	1,046
Cases of provision	7	6
Meat	130 lbs.	130 lbs.
Aerated Water Bottles	152	152

SHIPPING.

Bills of Health issued.

Port.	1913.		1914.		1915.	
	Ships	Days	Ships	Days	Ships	Days
Mombasa	487	146	424	115	189	84
Lamu	22	-	17	57	13	-
Kisumu	69	47	58	48	38	31

These numbers do not include war vessels, transports and colliers.

No ships were sent to the Zanzibar quarantine Station. Four cases of small-pox were removed from ships, in one case a Hospital ship, all derived from India. Considerable delay in giving pratique and inconvenience has been caused by the

sudden

sudden alterations in the destination of ships from one harbour to another without warning, and the provision of a motor launch for the use of the Health Office is essential.

RECOMMENDATIONS.

The promulgation of a Public Health Act in the Protectorate is a measure that is greatly needed. A direct amelioration in the insanitary conditions due to overcrowding will be achieved if financial assistance can be obtained for the formation of Native and Asiatic Locations within Townships.

IV. METEOROLOGY.

There is no Bureau of Meteorology in the Protectorate, and the Department which makes itself responsible for collating such statistical information as is available is the Agricultural.

Only at the Laboratory, Nairobi, are hygrometrical observations taken; nowhere are solar temperatures of notes as to the force and direction of the wind recorded.

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**TABLES SHOWING MEAN ANNUAL RAINFALL AT VARIOUS
POINTS IN THE DIFFERENT AREAS FOR THE THREE YEARS.**

COAST AREA.

STATION.	1915.	1914.	1913.
Malindi.	46.16	35.40	46.74
Mombasa.	57.45	33.27	42.88
Masera.	67.30	x 31.14	43.36
Mackinnon Road.	32.05	26.38	24.72
Moi.	22.33	18.63	22.27
Mveta.	-	-	28.31

MOUNTAINOUS AREA.

Masengaleni.	18.79	19.26	20.11
Makindu.	18.90	18.03	17.72
Mu.	30.27	14.43	42.77
Mthi River.	18.07	31.68	30.01
Nairobi Laboratory.	24.01	38.07	30.71
Ngote Para Np. Nairobi.	37.21	45.27	34.24
Nivasha.	20.20	21.41	26.67
Nkuru.	35.61	38.16	38.03
Nolo.	48.95	56.76	52.96
Ndama Ravine.	43.49	51.75	40.12

INTERIOR & HILLS PROVINCES.

Mombasa.	43.10	49.01	52.10
Mhoroni.	97.24	x 73.20	x 39.20
Msumu.	46.87	45.84	43.18
Mwas.	76.26	79.89	61.53
Mzungu.	-	-	-
Mt. Kenia.	80.00	74.91	64.88
Mt. Kenia.	54.25	72.18	66.77
Mt. Hall	51.56	48.76	44.33
Mt. Kenia.	30.16	26.68	43.12
Mt. Kenia. 9 months.	33.06	40.93	48.91

DESERT AREA.

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STATION.	1915.	1914.	1913.
Kimsayu.	16.65	14.64	13.71
Cosha Alexandra.	17.97	21.24	29.47

Broken periods.

Temperature and rainfall tables for Mombasa, Nairobi, Kisumu and Fort Hall are inserted in Table V of the returns.

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V.- HOSPITALS, DISPENSARIES AND
INSTITUTIONS.

1.- EUROPEAN HOSPITALS AT NAIROBI AND
MOMBASA.

Only statistical figures can be submitted this year owing to the steady pressure of work in the hospitals. Last year's returns included those naval and military cases treated; excluding these so as only to show the civilian sick, the comparison table of admission and death rates is as follows:-

TABLE SHOWING ADMISSION AND DEATH RATES.

	1913.	1914.	1915.
Total number of beds ...	156	92	29
Total number of admissions	340	431	347
Total number of discharged	338	426	328
Total number of deaths	10	22	14

Of the 340 admissions 106 were officials, and 234 were general population.

The actual accommodation at the two hospitals both civil and military was:- Nairobi 50 beds and Mombasa 106; that is to say the total number of civil beds was 29 and military 127.

ADMINISTRATION. The staff at the Nairobi hospital consisted of the medical officer in charge with a military medical officer as an assistant for a few months of the year. The nursing staff was 1 matron, 3 nursing sisters and a war staff of 5 probationers.

At Mombasa the staff was one medical officer, 2 senior nursing sisters, 2 nursing sisters, later augmented to 4, and a war staff of 3 probationers.

At both hospitals the medical establishments were augmented to meet the military requirements.

MORTALITY.- Of the admissions to Mombasa hospital 64 were officials of whom two died, the causes of death being dysentery and blackwater fever; 42 admissions came from the general population. There were 2 deaths amongst the latter and all from enteric.

At Nairobi 187 officials were admitted fortunately with no deaths, and 47 from the general population with 4 deaths from malaria, pneumonia, syphilis, and carcinoma of the bowel.

The prevailing diseases were:-

MALARIA.- There were 55 admissions to the Nairobi hospital as against 101 last year with, this year one death.

Mombasa hospital showed 54 admissions as against 107 with one death in 1914.

BLACKWATER FEVER.- There were 4 admissions and one death compared with 5 and 3 respectively last year. Both hospitals received 2 admissions each.

ENTERIC FEVER.- Nairobi gave the same number of admissions this year as last viz:- 11; all recoveries as against 3 deaths in 1914. Mombasa had 9 admissions and 4 deaths while in 1914 there were 5 admissions with 2 deaths. Two of the admissions to Mombasa had been previously inoculated and both recovered.

INFECTIOUS DYSENTERY.- 19 cases came into Nairobi Hospital all of whom recovered, while in Mombasa hospital 8 cases were admitted of whom one died.

OPERATIONS.)
SANITATION.) No reports have been submitted by the officers in charge of either hospital.

2.- THE CIVIL HOSPITALS AND DISPENSARIES.

A summary only of the cases treated in the various hospitals can be submitted this year, as there has been no relaxation in the endless stream of military cases.

	1913.		1914.		1915	
	In.	Out.	In.	Out.	In.	Out.
Admissions.	11,202	85,987	14,287	120,056	11,012	95,778
Deaths.	621	-	712	-	764	-
Death rate per 1000	55.43	-	49.88	-	69.37	-

The death rate of course includes all those moribund cases which die in hospital during the first 24 hours after admission, which should properly be excluded in order to obtain a truer index.

No new stations were opened up during the year. On the other hand, medical assistance was withdrawn from the following:-

- Kenya - 1 assistant surgeon murdered by Somalis
- 1 medical officer and 1 sub-assistant surgeon for active service
- 1 sub-assistant surgeon for active service.

The African staffs at the various hospitals were augmented and consolidated coincident with their expansion for military reasons.

3.- LUNATIC ASYLUM.

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The following table gives the number of admissions and deaths during the past three years:-

	1915.		1914.		1913.	
	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.
Men ...	52	19	67	18	62	14
Women	5	1	11	-	6	2
Total	57	20	78	18	68	16

Dr. Thomson, the Medical Officer in charge submits the following report:-

STAFF. Assistant Surgeon Holmes and Mrs. Holmes relieved Mr. and Mrs. Henfrey who proceeded on leave in September. The work of all these officers has been done to my entire satisfaction.

The menial staff are also worthy of praise especially the head warder who is most excellent.

ADMISSIONS. On the 1st January 1914 there were thirty seven patients in the Asylum; there were thirty three on the 31st December.

The daily average during the year was 40. Fifty seven cases were admitted, forty two discharged, and 20 died.

Of the number admitted 10 were Europeans; 8 Asiatics, and 30 Africans. The admissions were 13 more than last year and 25 more than the year before. In fact the number of admissions are equivalent in England to an asylum population of about five hundred. Every year will add its residue of chronic cases, and the population of the asylum will get automatically larger. In this country there are two factors which

which counterbalance the increase. One is the extremely large number of discharges and the other I am sorry to say, the large death rate. Re-admissions; none during the year.

The mean age of the patients admitted appeared to me about 25 years, though it is very difficult to say. The mean age in the English asylum is about 42. With regard to the nature of the insanity one can only diagnose on broad lines. It is practically impossible to sub-divide into the finer classes. One must live among the patients and see them at any time, study each one in fact, before one is certain of the particular form. Here when I see them two or three times a week at most, I can only seize on the most prominent features, such as would be evident to any intelligent layman. The admissions were classified as follows:-

Idiocy 2; mania 17; melancholia 3; dementia 8; delusional insanity 1; dementia precox 2; manic depressive 2; acute mania 1; general paralysis of the insane 1; delirium tremens 1; observation 18. The general health of the admissions was distinctly unsatisfactory.

With regard to the causation of the attacks it is practically impossible to get any thing approaching a reason. I make a practice of questioning all the admissions. The most popular belief is that "Mungu" (i.e. the Almighty) caused them to go insane. Other favourite reasons are poison and witchcraft. Many trivial reasons are given; for example, "I let my father's goats stray and he beat me. This caused me to go insane".

I am inclined to think judging from the age, acute symptoms and rapid subsidence, that most of the cases are caused by an anaemia of the brain or some disturbance of the cortical cells due to an exhaustion of some sort. I

hold

held the opinion that undue sexual indulgence may play a part in these cases. As I pointed out last year the admissions as yet are only from the most populous parts of the country, and that the natives at least are sent in only when they come under the eye of the police, or of some European on his farm.

DISCHARGES. Cases discharged during year 42 which included 39 recovered and three improved. The recoveries were at the rate of 68.4 of the admissions. This includes observation cases, all of whom showed signs of mental trouble which cleared up quickly. The recovery rate is enormous. In Britain in 1913 the mean recovery rate according to the report of the Commissioners in Lunacy was 32.7. The average duration of recoveries in the asylum was 234.9 days.

DEATHS. The number of deaths was 20 being a percentage of 48.8 of the daily average number of inmates. The corresponding rate in England in 1913 was 9.4; of course many factors must be taken into consideration in this country. To take one, the ordinary death rate outside must be very much larger than it is in England. The causes of deaths called for little comment. They were mostly from exhaustion, the vital processes just going slower until they stopped altogether. One Indian died within 24 hours from acute mania. It is a pity that there are no facilities for pathological work at the asylum.

GENERAL HISTORY. The percentage of workers to inmates 72.23, which is excellent. This is far better than in England.

STRUCTURAL CHANGES. A partition was put up and several minor

minor improvements were made in the female block to accommodate a female European. Part of the corrugated iron fence was taken down behind the Superintendent's house, and re-erected behind the main buildings to form a walled-in exercise ground for unruly patients. The last was done by asylum labour. Drainage and sanitation remain the same. I am sorry to say that the dangerous scheme of lighting by ordinary kerosene lamp remains.

ESCAPES. There have been two escapes. Both were recovered one, a European, returning himself.

RESTRAINT. There were 42 cases restrained for a total number of 162 hours. I should like to see this reduced to a minimum but under present conditions it is hardly fair to expect it.

EXPENDITURE. The allowance for up-keep is well in hand, and is enough with the help of the shamba.

SPAREA. About 14 acres were under cultivation. The crop after the long rains was very good, but a failure after the short rains, and a visitation of locusts, completed the failure.

4. GOVERNMENT DENTAL SURGERY.

The record of work carried out during the period from September to December is recorded in Table IX.

Dr. van Bemerren was absent on leave from January to August.

5.- GAOLES.

The overcrowding of the gaols noted in last year's report, has not been improved by the country being under martial law and the addition to the prisons of numbers of military criminals. The unavoidable conditions produced by a state of war were not conducive to the maintenance of a satisfactory state of health. The epidemic of enteric in the Nairobi gaol has already been alluded to, and while small-pox and plague did not manifest their presence, the prison authorities have been considerably hampered by the occurrence of cerebro-spinal-meningitis, and epidemics of chicken pox and mumps. Nearly half the deaths which occurred in Nairobi were amongst prisoners from the M'daruga prison.

TABLE SHOWING SICK AND DEATH RATES AMONGST PRISONERS AT THE NAIROBI AND M'GARUGA GAOLS.

	Nairobi		M'Garuga	
	1913	1914	1913	1914
Total number of prisoners on 1st January.	242	241	400	300
Number admitted during year.	1036	748	6376	2880
Average daily number in gaol.	326	242	348	260
Total number placed on sick list.	355	434	582	341
Total number of days on sick list.	5318	4319	4497	1327
Average number daily sick.	14.57	11.84	12.32	9.11
Total number of deaths.	11	8	50	22
Percentage of deaths to average daily strength.	4.38	3.21	9.84	5

The causes of death were as follows:-

Cerebro-spinal-meningitis	...	2
Dysentery	...	4
Enteric fever	...	4
Malaria	...	5
Pneumonia	...	15
Syphilis	...	1
Tubercle	...	2
V.D. Heart	...	3
Aneurism	...	1
Bronchitis	...	2
Broncho - pneumonia	...	3
Diarrhoea	...	6
Asites	...	1
Bright's disease	...	1
Injuries	...	1
Other diseases	...	5
Total		<u>68</u>

The medical staff of the three prisons is as follows:-

Mombasa.- One resident Hospital Compounder with the Senior Medical Officer as visiting Medical Officer.

Nairobi.- One visiting Sub-Assistant Surgeon (also in charge of the Police Department and Uganda Railway, Luo Department Dispensary) and one visiting Medical Officer who is also the Medical Officer of the Native Hospital and Lunatic Asylum.

Nidharur Baza.- One resident Hospital Compounder placed under the Medical Officer of the Nairobi Prison.

Mombasa, Nairobi and Mombasa prisons are gazetted asylums for the reception of lunatics though, as soon as circumstances permit, such admissions are received into the Nairobi Lunatic Asylum. During the year Mombasa had to entertain two mentally afflicted.

As a routine measure all prisoners are vaccinated on admission.

The causes of death were as follows:-

Cerebro-spinal-meningitis	...	1
Dysentery	...	9
Enteric fever	...	8
Malaria	...	8
Pneumonia	...	13
Syphilis	...	1
Tubercle	...	2
V.D.Heart	...	3
Aneurism	...	1
Bronchitis	...	2
Broncho - pneumonia	...	3
Diarrhoea	...	6
Asites	...	1
Bright's disease	...	1
Injuries	...	1
Other diseases	...	5

Total

58

The medical staff of the three prisons is as follows:-

Nairobi.- One resident Hospital Compounder with the Senior Medical Officer as visiting Medical Officer.

Nairobi.- One visiting Sub-Assistant Surgeon (also in charge of the Police Department and Uganda Railway, Local Dispensary) and one visiting Medical Officer who is also the Medical Officer of the Native Hospital and Lunatic Asylum.

Nairobi.- One resident Hospital Compounder placed under the Medical Officer of the Nairobi Prison.

Nairobi, Nairobi and Nairobi prisons are gazetted asylums for the reception of lunatics though, as soon as circumstances permit, such admissions are received into the Nairobi Lunatic Asylum. During the year Nairobi had to entertain two mentally afflicted.

As a routine measure all prisoners are vaccinated on admission.

RETURNS.

TABLE I.

ADMINISTRATIVE DIVISION.

Dr. A.D. Milne ... Principal Medical Officer.
Dr. J.A. Maran, C.M.C. ... Deputy Principal Medical Officer.
Mr. R. Stanley ... Office Superintendent.
Mr. T. Preston ... Clerk.
Mr. F. Cribb ... Clerk.
Mr. J. B. Robertson ... Medical Storekeeper.

MEDICAL DIVISION.

Dr. L.D. Loweley ... Senior Medical Officer.
Dr. E. Owen-Pritchard ... Senior Medical Officer.
Dr. J.L. Chevallier ... Medical Officer.
Dr. F.L. Henderson ... Medical Officer.
Dr. J.C. Shiroore ... Medical Officer.
Dr. G.M.E. Chell ... Medical Officer.
Dr. T.W. Lusk ... Medical Officer.
Dr. J.L. Gills ... Medical Officer.
Dr. J. Pugh ... Medical Officer.
Dr. J. Wilson ... Medical Officer.
Dr. J.L. van Ameren ... Dental Surgeon.
Dr. W.P. Jewell ... Medical Officer.
Dr. A.D.J.B. Williams ... Temporary Medical Officer.
Dr. T.H. Marcey ... Temporary Medical Officer.
Dr. G. Dunderdale ... Temporary Medical Officer.
Dr. F.W. Munan ... Temporary Medical Officer.
Dr. J.H. Thomson ... Temporary Medical Officer.
Dr. W. Tudhope ... Temporary Medical Officer.
Dr. H.H.V. Welch ... Temporary Medical Officer.
Dr. H.W. Sprance ... Temporary Medical Officer.
Dr. H.H.A. Philp ... District Surgeon.

MEDICAL DIVISION (Continued).

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Mr. F. Knott ...	Dispenser.
Mr. H. Ogden ...	Dispenser.
Mr. C.A.J. Speller ...	Dispenser.
Miss E.R. Brown ..	Matron.
Miss H.M. Whitburn ...	Nursing Sister.
Miss L. Merryweather .	Nursing Sister.
Miss R. Paul ...	Nursing Sister.
Miss I.L. Majendie ...	Nursing Sister.
Miss I. Wilson .	Nursing Sister.
Miss S.J. Harrison ...	Nursing Sister.
Miss A.E. Hobson ...	Nursing Sister.
Miss A.E. Drewe ...	Nursing Sister.
Miss R.S. Blyth ...	Nursing Sister.
Mr. W. Henfrey ...	Superintendent Lunatic Asylum.
Mrs. L.A. Henfrey ...	Matron Lunatic Asylum.

SANITATION DIVISION.

Dr. W.J. Radford ...	Principal Sanitation Officer.
Dr. R. Small ...	Medical Officer of Health, Mombasa.
Dr. A. Menat ...	Medical Officer of Health, Kisumu.
Dr. B.W. Cherratt ...	Medical Officer of Health, Nairobi.
Mr. A.F. Bennett ...	Sanitary Inspector.
Mr. B.E.P. Wetkin ...	Sanitary Inspector.
Mr. W.H. Wood... ..	Sanitary Inspector.
Mr. E.E. Williams ...	Sanitary Inspector.
Mr. P. Strawbridge ...	Sanitary Inspector.
Mr. P. Cairns ..	Sanitary Inspector.
Mr. J.P. Cook ..	Sanitary Inspector.
Miss M.A. Thomlinson .	Nurse attached to Health Office, Mombasa.

FINANCIAL.

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The sanctioned Medical Budget for the year 1915-16 was a total of 251,797, as compared with 256,826 for the preceding year.

Of the 1915-16 grand total, 240,270 were expended, leaving an unexpended sum of 11,518 as savings.

The Laboratories Division was separated from the Medical Department from the 1st April 1915, under the Director of Laboratories.

EXPENDITURE.

The headings under which the vote was arranged were as follows:-

SCHEDULE XIV.- MEDICAL DEPARTMENTS.

	Estimate.	Actual Expenditure.
ADMINISTRATIVE DIVISION.-	£	£
Personal emoluments.	3,275	3,103

(Under this heading are included the salaries, and any duty allowances granted, of the Principal Medical Officer, Deputy Principal Medical Officer, Office Superintendent, Medical Storekeeper, Clerical establishment, Messengers and packers.)

Other Charges.	603	376
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(Under this heading are included Conservancy rates, Contingencies, Transport:- Passages, Local Travelling, Travelling allowances & Carriage of Goods; Typewriters and Uniforms.)

MEDICAL DIVISION.-

Personal emoluments.	22,210	19,623
----------------------	--------	--------

(Under this heading are included the salaries, and any duty allowances granted, of the Senior Medical Officers, Medical Officers, Dispensers, Nurses, Superintendent and Matron, Lunatic Asylum, Female Lunatic Asylum Attendants, Assistant Surgeons, Sub-Assistant Surgeons, Hospital Compounders, Native Hospital Attendants, Lunatic Asylum Attendants, Leprosy Lazaretto Attendants, and Uniform Allowances.)

MEDICAL DIVISION.-continued.

Other charges.

Estimate.	Actual Expenditure.
£	£
9,003	7,927

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(Under this heading are included Contingencies; Upkeep of European and Native Hospitals, Lunatic Asylum & Leprosy Establishments; Medical and Surgical Stores, including books; Transport; Passages, Local Travelling, Travelling Allowances & Carriage of Goods; Ration Allowances to Medical Subordinates in Northern Frontier District & Sorelli; Uniforms for Medical Staff; Furniture and equipment for Hospitals; Typewriters; Conservancy Rates; and Fees and expenses of Medical officers attending courses of instruction in England.)

SANITATION DIVISION.-

Personal emoluments.

9,608	8,607
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(Under this heading are included the salaries, and any duty allowances granted, of the Principal Sanitation Officer, Medical Officers of Health, Sanitary Inspectors, Nurses, Assistant and Sub-Assistant Surgeons, Hospital Assistants, Vaccinators, Native Attendants for Infectious Diseases Hospitals, Clinical Establishments, Engineers & Slayton disinfectors, Office, Store and Wash Boys.)

Other charges.

7,004

(Under this heading are included Epidemics; Sanitary Station; Transport; Passages, Local Travelling; Travelling Allowances and Carriage Goods; Typewriters; Maintenance of Infectious Diseases Hospitals; Disinfectants; Such disinfecting, fumigating and sleeping sickness preventive measures; Contingencies; Furniture and equipment for Infectious Diseases Hospitals and Quarantine Stations; Ambulance Services; Upkeep of disinfectors; and Uniforms.)

REVENUE.

The total amount of revenues collected as Hospital fees, Sales of medicines and Surgical Stores, Bills of Health, and Registration fees, was as follows:-

Hospital fees & Sales of medicine	£
Bills of Health.	1,045
Registration fees.	158
Total	£ 1,203

TABLE II.- continued.

Last year the total revenue collected amounted to \$2,085.

The decreases in revenue for 1915-16 are chiefly due to hospital accommodation being used for military purposes, less shipping entering ports, and also to the item "Laboratory Fees" being dropped from the Medical Budget and included in the Laboratories Department.

TABLE III.

RETURN OF STATISTICS OF POPULATION FOR THE YEAR 1915.

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East Africa.	Europeans and Whites.	Africans.	Asiatics.
Number of Inhabitants in 1915.	7739 x	3,000,000 x	20,896 x
Number of Births during 1915.	142	ø	ø
Number of Deaths during 1915.	82	ø	ø
Number of Immigrants during 1915.	2054	-	4,577
Number of Emigrants during 1915.	1377	-	4,681
Number of Inhabitants in 1914.	7032 x	3,000,000 x	21,000 x
INCREASE.	737	-	-
DECREASE.	-	-	104

x Approximately.

ø Not registered.

TABLE IV.

1.—SUMMARY OF ROUTINE SANITARY WORK DONE DURING THE YEAR
IN THE TOWN OF NAIROBI.

For the year ending 31st December 1916. Date 191

	Approximate area.	Number of proclaimed open spaces.
1913	7 square miles	1 Public Park
1914	7 " "	1 " "
1915	7 " "	(1 " " (1 Municipal Forest.

2.—POPULATION.

	Number of Natives.		Number of Europeans.		Total Approx.
	Males.	Females.	Males.	Females.	
1913	23, 000		1, 000	24, 600	
1914	18, 600		2, 000	20, 000	
1915	No estimate possible.		No estimate possible.		No estimate possible.

Number of Houses		
1913	377	519
1914	401	551
1915	418	565

Number of Huts:—

1913	1,583
1914	1,556
1915	1,598

* This included tin shanties, native servants quarters, mud huts, etc.

4.—MOSQUITO PROTECTION OF HOUSES.

	1913	1914	1915
Number of European houses wholly mosquito-Protected ...	Nil	Nil	Nil
Number of European houses with mosquito room	"	"	"
Number rendered during the year wholly mosquito-protected...	"	"	"
Number rendered during the year partially mosquito-protected	"	"	"

5.—ERECTION OF NEW BUILDINGS DURING THE YEAR.

	1913	1914	1915
Number of Public buildings erected with sanction as to site, construction, and relation to other buildings.	2	2	1
Number of houses erected with sanction as to site, construction, and relation to other buildings...	116	56	31
Number of huts erected with sanction as to site, construction and relation to other buildings ...	75	62	81
Number of houses built without sanction	13	2	2
Number of huts built without sanction	...	12	...

ACTION TAKEN.

	Number of prosecutions.		Number demolished	
	Huts.	Buildings	Huts.	Houses
1913	...	61	41	2
1914	1	8	73	1
1915	8	6	39	4

6.—MARKETS.

	Total Number.	Number paved and drained.	Number unpaved
1913	2	1	1
1914	2	1	1
1915	2	1	1

7.—SLAUGHTER-HOUSES.

	Total number.	Number paved and drained.	Number unpaved.
1913	1	1	Nil
1914	1	1	"
1915	1	1	"

8.—LATRINES.

	For Males:		For Females.	
	Number	Number of seats.	Number.	Number of seats.
Number of public Latrines. —				
1913	10	62		
1914	12	80		
1915	23	202	(European) 1	2
Number of new public Latrines erected during the year: —				
1913	3	24		
1914	2	16		
1915	11	104		
Number of public latrines repaired during the year: —				
1913	2	16		
1914	2	16		
1915	1	8		
Number of public latrines demolished during the year: —				
1913	3	...		
1914	...	...		
1915	1	4		

Public latrines provided for Asiatics and Africans and are used in common by males and females.

4
LATRINES.—Contd.

	1913	1914	1915
Number of private latrines :—	1,433	1,529	2,283
Average number of pails of nightsoil daily removed ...	1,433	1529	2,283
Average number of soiled pails removed and clean pails substituted ...	N11	N11	N11
Number of nightsoil men employed to clean latrines and to remove excrete ...	60	75	92
Number of cesspools ...	101	86	55
Number of cesspools cleaned ...	101	86	55
Number of new cesspools constructed during the year ...	7	1	...
Number of old cesspools abolished ...	13	16	31
Number of cesspools oiled regularly by Department ...	...	...	...

5.—REMOVAL OF REFUSE.

	1913	1914	1915
Number of dustbins...	550	602	1,307
Number of carts at work daily to remove refuse from streets ...	4	4	10 (includes 6 carts)
Amount of refuse removed daily ...	4 cartloads	8 cartloads	2 (includes 12 sludge)
Number of carts at work daily to remove refuse from yards and premises ...	16	16	19
Amount of refuse removed daily from yards and premises ...	33 cartloads	32 cartloads	36 cartloads
Number of men employed for removing refuse ...	88	88	83

10.—MODE OF DISPOSAL OF EXCRETA, REFUSE AND OFFAL.

	Daily average number of pails of excreta.			Daily average number of cartloads of refuse.			Daily average number of cartloads of slaughter house and market offal.		
	1913	1914	1915	1913	1914	1915	1913	1914	1915
Buried or trenched ...	1433	1529	2487	20	...	...	3	4	3
Burnt ...	...	...	...	17	40	44	...	...	1
Thrown into sea ...	...	...	...	...	...	...	...	...	...
Otherwise dealt with ...	...	...	...	...	...	...	...	...	...

11.—AVERAGE DAILY NUMBER OF CARTLOADS OF CANS, BOTTLES, BROKEN CROCKERY AND OTHER INCOMBUSTIBLE MATERIAL REMOVED FROM HOUSES HUTS AND COMPOUNDS.

	1913	1914	1915
	20	20	20

12.—WATER SUPPLY.

Nature of water supply.	1913	1914	1915
Pipe-borne water :—	River & Spring.	River & Spring.	River & Spring.
Source (river, lake or spring).			
Number of linear yards ...	481,930	495,234	503,118
Number of stand-pipes along roads ...	57	53	53
Number of stand-pipes in compounds and houses ...	610	799	889
Wells :—			
Public.			
Number ...	N11	N11	N11
Number with pumps protected against surface water and mosquito-protected ...	"	"	"
Private :—			
Number ...	2	2	1
Number with pumps protected against surface water and mosquito-protected ...	...	...	...

WATER SUPPLY.—Contd.

	1913	1914	1915
Tanks:—			
Public:			
Number underground ...	N11	N11	344
Number mosquito-protected and served by pumps ...	"	"	"
Number above ground ...	"	"	"
Number mosquito-protected ...	"	"	"
Number of 400 gallons capacity or less ...	"	"	"
Number above 400 gallons ...	"	"	"
Private:—			
Number underground ...	N11	N11	N11
Number mosquito-protected ...	"	"	"
Number above ground ...	270	252	163
Number mosquito-protected ...	270	252	163
Number of 400 gallons capacity or less ...	102	92	43
Number above 400 gallons ...	168	160	120
Nature of tanks:—			
Wood ...	N11	N11	N11
Iron ...	270	252	163
Concrete ...	N11	N11	N11
Barrels:—			
Number ...	170	170	150
Number mosquito-protected ...	...	70	140

13.—DRAINAGE.

	Public	Private
Masonry drains:—		
Linear yards of masonry drains:—		
1913 ...	9,493	...
1914 ...	24,712	...
1915 ...	2,113	...
Linear yards reconstructed during the year:—		
1913 ...	1	...
1914 ...	"	...
1915 ...	"	...
Linear yards repaired during the year:—		
1913 ...	N11	...
1914 ...	2,200	...
1915 ...	400	...
Linear yards of new drains constructed during the year:—		
1913 ...	3,689	...
1914 ...	15,219	...
1915 ...	1,141	...
Ditch drains or ditches:—		
Number of linear yards of ditches cleared:		
1913 ...	No information	...
1914 ...	do	...
1915 ...	60,176	...
Number of linear yards of ditches dug and graded:—		
1913 ...	4,400	...
1914 ...	12,893	...
1915 ...	9,520	...
Average frequency of clearing ditches of grass:—		
1913 ...	When necessary	...
1914 ...	"	...
1915 ...	"	...

14.—CLEARANCE OF UNDERGROWTH LONG GRASS, AND JUNGLE.

	1913	1914	1915
Number of square yards of weeds, grass and vegetation cut and removed ...	5,481,340	6,016,120	5,575,680
Average frequency of clearance of rank vegetation on same area ...	When necessary.	When necessary.	When necessary.

15.—EXCAVATIONS OF LOW-LYING LAND.

	1913	1914	1915
Number of pools and excavations ...	138	43	20
Number of excavations filled up ...	108	65	34
Amount of low-lying and marsh land raised and drained ...	5 acres	approx. 3 acres	approx. 5 acres
Number of pools, marshes, etc., fish-stocked	Nil	Nil	Nil
Number of cubic yards of material used for filling up pools and excavations ...	No information	No information	No information
Number of persons fined for making new excavations ...	Nil	Nil	1
Average number of men daily employed in filling up pools, etc., ...	90	10	2

16.—OILING.

	1913	1914	1915
Number of drains oiled ...	...	All mosquito breeding places are either removed or disinfected	
Number of pools and excavations oiled ...	79		
Number of tanks and barrels oiled ...	...		
Average number of men daily employed for oiling drains, pools, and water-tanks or barrels ...	7	2	4

17.—INSPECTIONS AND PROSECUTIONS.

	1913	1914	1915
Number of inspectors employed ...	1	2	2
Number of houses inspected ...	898	1,552	8,196
Number of houses where larvæ were found ...	54	42	122
Number of notices served to remove conditions causing the breeding of larvæ ...	...	286	376
Number of persons fined for having mosquito larvæ on premises ...	...	1	...
Number of notices served to remove insanitary conditions on premises ...	906	1,080	891
Number of persons fined for not removing insanitary conditions after notice ...	44	94	36
Number of soda and aerated water factories inspected ...	3	2	2

TABLE IV.

1.—SUMMARY OF ROUTINE SANITARY WORK DONE DURING THE YEAR
IN THE TOWN OF...**MONRASA**.....

For the ^{year} ending...**31st. December**...191**5**. Date.....**191**.....

	Approximate area.	Number of proclaimed open spaces.
1913	(Native Town 270 acres. (Island 3.360 "	1 Public Garden Area 1.8 acres.
1914	(European Town 194 " (Native " 275 " (Railway " 314 " (Island 3.360 "	1 " " " " "
1915	do.	1 " " " " "

2.—POPULATION.

	Number of Natives.		Number of Europeans.		Total Approx.
	Males.	Females.	Males.	Females.	
1913	26,	724	231	42	26,997
1914	9,500	14,300	200	45	24,545
1915	7,914	12,510	200	45	20,669

3.—HOUSING.

	Number occupied by Europeans.	Number occupied by Native and Asiatics.
Number of Houses:—		
1913	100	930
1914	105	890
1915	108	900

Number of Huts:—

1913	3,369
1914	3,423
1915	3,200

2
4.—MOSQUITO PROTECTION OF HOUSES.

	1913	1914	1915
Number of European houses wholly mosquito-protected ...	N11	N11	N11
Number of European houses with mosquito room ...	"	"	"
Number rendered during the year wholly mosquito-protected...	"	"	"
Number rendered during the year partially mosquito-protected ...	"	"	"

5.—ERECTION OF NEW BUILDINGS DURING THE YEAR.

	1913	1914	1915
Number of Public buildings erected with sanction as to site, construction, and relation to other buildings...	...	10	...
Number of houses erected with sanction as to site, construction, and relation to other buildings...	14	34	2
Number of houses erected with sanction as to site, construction and relation to other buildings	25	78	139
Number of houses built without sanction	...	1	...
Number of houses built with sanction	...	...	...

ACTION TAKEN.

	Number of prosecutions		Number demolished	
	Public	Houses	Plots	Houses
1913	...	2	...	1
1914	...	...	135	...
1915	...	10	145	12

6.—MARKETS.

	Total Number.	Number paved and drained.	Number unpaved.
1913	3	2	1
1914	3	2	1
1915	3	2	1

3
7.—SLAUGHTER-HOUSES.

	Total number.	Number paved and drained.	Number unpaved.
1913	2	2	...
1914	2	2	...
1915	2	2	...

8.—LATRINES.

	For Males.		For Females.	
	Number	Number of seats.	Number	Number of seats.
Number of public Latrines:—				
1913	4	5	...	3
1914	7	16	...	...
1915	23	89	4	12
Number of new public Latrines erected during the year:—				
1913	...	...	...	...
1914	...	...	...	...
1915	5	26	...	...
Number of public latrines repaired during the year:—				
1913	...	...	...	...
1914	2	...	...	...
1915	...	...	...	...
Number of public latrines demolished during the year:—				
1913	...	...	...	...
1914	2	10	...	...
1915	3	6	...	...

2
4.—MOSQUITO PROTECTION OF HOUSES.

	1913	1914	1915
Number of European houses wholly mosquito-protected ...	N11	N11	N11
Number of European houses with mosquito room ...	"	"	"
Number rendered during the year wholly mosquito-protected...	"	"	"
Number rendered during the year partially mosquito-protected ...	"	"	"

5.—ERECTION OF NEW BUILDINGS DURING THE YEAR.

	1913	1914	1915
Number of Public buildings erected with sanction as to site, construction, and relation to other buildings...	...	10	...
Number of houses erected with sanction as to site, construction, and relation to other buildings...	14	34	2
Number of houses erected with sanction as to site, construction and relation to other buildings ...	225	78	139
Number of houses erected without sanction ...	...	1	...
Number of houses erected without sanction ...	...	...	...

ACTION TAKEN.

	Number of prosecutions		Number demolished.	
	Builds.	Houses.	Builds.	Houses.
1913	...	2	...	1
1914	4	2	135	...
1915	...	10	145	12

6.—MARKETS.

	Total Number.	Number paved and drained.	Number unpaved.
1913	3	2	1
1914	3	2	1
1915	3	2	1

3
7.—SLAUGHTER-HOUSES.

	Total number.	Number paved and drained.	Number unpaved.
1913	2	2	...
1914	2	2	...
1915	2	2	...

8.—LATRINES.

	For Males.		For Females.	
	Number	Number of seats.	Number	Number of seats.
Number of public Latrines:—				
1913	4	5	...	3
1914	7	16	...	...
1915	23	89	4	12
Number of new public Latrines erected during the year:—				
1913	...	...	...	...
1914	...	...	...	...
1915	5	26	...	...
Number of public latrines repaired during the year:—				
1913	...	...	...	...
1914	2	...	...	...
1915	...	...	...	...
Number of public latrines demolished during the year:—				
1913	...	...	...	...
1914	2	10	...	...
1915	3	6	...	...

4
LATRINES.—Contd.

	1913	1914	1915
Number of private latrines :—	70	194	194
Average number of pails of nightsoil daily removed :—	173	180	180
Average number of soiled pails removed and clean pails substituted	...	...	...
Number of nightsoil men employed to clean latrines and to remove excreta	15	15	39
Number of cesspools	about 2,000	Unknown	Unknown
Number of cesspools cleaned	102	63	72
Number of new cesspools constructed during the year	about 167	82	63
Number of old cesspools abolished	about 6	18	29
Number of cesspools oiled regularly by Department	...	...	...

9.—REMOVAL OF REFUSE.

	1913	1914	1915
Number of dustbins	112	220	347
Number of carts at work daily to remove refuse from streets	20	17	17
Amount of refuse removed daily	tons 20	tons 20	tons 25
Number of carts at work daily to remove refuse from yards and premises	1	1	1
Amount of refuse removed daily from yards and premises	ton 1	ton 1	ton 1
Number of men employed for removing refuse	200	152	173

5
10.—MODE OF DISPOSAL OF EXCRETA, REFUSE AND OFFAL.

	Daily average number of pails of excreta.			Daily average number of cartloads of refuse.			Daily average number of cartloads of slaughter house and market offal.		
	1913	1914	1915	1913	1914	1915	1913	1914	1915
Buried or trenched	...	...	...	...	...	...	...	...	...
Burnt	...	...	175	34	...	...	...	...	...
Thrown into sea	173	180	180	3	...	...	lbs. 10	Discharged direct into sea unmeasured.	...
Otherwise dealt with	...	...	...	...	42	54	...	...	...

11.—AVERAGE DAILY NUMBER OF CARTLOADS OF CANS, BOTTLES, BROKEN CROCKERY AND OTHER INCOMBUSTIBLE MATERIAL REMOVED FROM HOUSES HUTS AND COMPOUNDS.

	1913	1914	1915
	2	3	4

12.—WATER SUPPLY.

Nature of water supply.	1913	1914	1915
Pipe-borne water :—			Pipe-borne water Kilindini only. River.
Source (river, lake or spring).	Well	Well	
Number of linear yards	...	7,352	10,278
Number of stand-pipes along roads	...	12	12
Number of stand-pipes in compounds and houses	...	10	12
Wells :—			
Public.			
Number	28	28	28
Number with pumps protected against surface water and mosquito-protected	...	...	...
Private :—			
Number	96	96	96
Number with pumps protected against surface water and mosquito-protected	...	...	...

6
WATER SUPPLY.—Contd.

	1913	1914	1915
Tanks:—			
Public.			
Number underground ...	...	...	...
Number mosquito-protected and served by pumps ...	...	...	...
Number above ground ...	2	...	...
Number mosquito-protected ...	...	...	...
Number of 400 gallons capacity or less ...	2	...	...
Number above 400 gallons ...	...	...	...
Private:—			
Number underground ...	66	72	77
Number mosquito-protected ...	Unknown	72	77
Number above ground ...	20	36	155
Number mosquito-protected ...	Unknown	56	155
Number of 400 gallons capacity or less ...	...	...	111
Number above 400 gallons ...	66	108	121
Nature of tanks:—			
Wood ...	...	...	...
Iron ...	8	36	155
Concrete ...	66	72	77
Barrels:—			
Number ...	160	Many hundreds. Impossible to estimate the	...
Number mosquito-protected ...	...	50%	50%

7
13.—DRAINAGE.

490

	Public.	Private.
Masonry drains:—		
Linear yards of masonry drains:—		
1913 ...	2,600	...
1914 ...	3,032	1,493
1915 ...	4,937	1,493
Linear yards reconstructed during the year:—		
1913 ...	250	...
1914 ...	50	32
1915 ...	50	Unknown
Linear yards repaired during the year:—		
1913 ...	30	...
1914 ...	...	47
1915 ...	101	Unknown
Linear yards of new drains constructed during the year:—		
1913 ...	250	...
1914 ...	432	493
1915 ...	286	Unknown
Earth drains or ditches cleansed:—		
Number of linear yards of ditches cleansed:—		
1913 ...	...	...
1914 ...	1,100	...
1915 ...	15,690	...
Number of linear yards of ditches dug and graded:—		
1913 ...	30	...
1914 ...	1,359	...
1915 ...	4,364	Unknown
Average frequency of clearing ditches of grass:—		
1913 ...	Twice yearly	...
1914 ...	Twice in the dry season and fortnightly in the rain.	...
1915 ...	do.	do.

14.—CLEARANCE OF UNDERGROWTH LONG GRASS, AND JUNGLE.

	1913	1914	1915
Number of square yards of weeds, grass and vegetation cut and removed ...	approx. 150 acres	111 acres	1,744 acres
Average frequency of clearance of rank vegetation on same area ...	6 months	Maintained clear at least twice a year.	

15.—EXCAVATIONS OF LOW-LYING LAND.

	1913	1914	1915
Number of pools and excavations ...	2	27	27
Number of excavations filled up ...	2	43	30
Amount of low-lying and marsh land raised and drained ...	2	393659 ft. raised & levelled.	3,479
Number of pools, marshes, etc., fish-stocked ...	...	...	...
Number of cubic yards of material used for filling up pools and excavations ...	10	800	1,319
Number of persons fined for making new excavations ...	...	...	...
Average number of men daily employed in filling up pools, etc., ...	Casual labourers.	Casual labourers	Casual labourers

16.—OILING.

	1913	1914	1915
Number of drains oiled ...	A few hundreds	1	1
Number of pools and excavations oiled ...	do.	2	2
Number of tanks and barrels oiled ...	Many barrels	130	180
Average number of men daily employed for oiling drains, pools, and water-tanks or barrels ...	8	Casual labour only.	

17.—INSPECTIONS AND PROSECUTIONS.

	1913	1914	1915
Number of inspectors employed ...	2	2	2
Number of houses inspected ...	1,186	4,097	7,359
Number of houses where larvæ were found ...	10	523	1,153
Number of notices served to remove conditions causing the breeding of larvæ ...	55	132	402
Number of persons fined for having mosquito larvæ on premises ...	...	4	26
Number of notices served to remove unsanitary conditions on premises ...	1,049	649	634
Number of persons fined for not removing unsanitary conditions after notice ...	38	42	95
Number of soda and aerated water factories inspected ...	3		5

14.—CLEARANCE OF UNDERGROWTH LONG GRASS, AND JUNGLE.

	1913	1914	1915
Number of square yards of weeds, grass and vegetation cut and removed ...	approx. 150 acres	111 1/2 acres	1,744 1/2 acres
Average frequency of clearance of rank vegetation on same area ...	6 months	Maintained clear at least twice a year.	

15.—EXCAVATIONS OF LOW-LYING LAND.

	1913	1914	1915
Number of pools and excavations ...	2	27	27
Number of excavations filled up ...	2	43	30
Amount of low-lying and marsh land raised and drained ...	2	393,659 ft. raised & levelled.	3,479
Number of pools, marshes, etc., fish-stocked ...	...	...	...
Number of cubic yards of material used for filling up pools and excavations ...	10	800	1,319
Number of persons fined for making new excavations ...	...	...	...
Average number of men daily employed in filling up pools, etc., ...	Casual labourers.	Casual labourers	Casual labourers

16.—OMBO.

	1913	1914	1915
Number of drains oiled ...	A few hundreds	1	1
Number of pools and excavations oiled ...	do.	2	2
Number of tanks and barrels oiled ...	Many barrels	130	180
Average number of men daily employed for oiling drains, pools, and water-tanks or barrels ...	5	Casual labour only.	

17.—INSPECTIONS AND PROSECUTIONS.

	1913	1914	1915
Number of inspectors employed ...	2	2	2
Number of houses inspected ...	1,186	4,097	7,359
Number of houses where larvæ were found...	10	523	1,153
Number of notices served to remove conditions causing the breeding of larvæ ...	55	132	402
Number of persons fined for having mosquito larvæ on premises ...	...	4	26
Number of notices served to remove unsanitary conditions on premises ...	1,049	649	634
Number of persons fined for not removing unsanitary conditions after notice ...	38	42	95
Number of soda and aerated water factories inspected ...	3		5

TABLE IV.

1.—SUMMARY OF ROUTINE SANITARY WORK DONE DURING THE YEAR
IN THE TOWN OF.....KISUMU.....

For the ^{calendar} year ending...31st. December...1915. Date.....191.....

	Approximate area.	Number of proclaimed open spaces.
1913	2½ mile radius	1
1914	2½ " "	1
1915	2½ " "	1

2.—POPULATION.

	Number of Natives.		Number of Europeans.		Total Approx.
	Males.	Females.	Males.	Females.	
1913	6,310	182	66	24	6,582
1914	4,778	219	75	25	5,097
1915	4,000	1,000	85	26	5,111

3.—HOUSING.

	Number occupied by Europeans	Number occupied by Native and Asiatics
Number of Houses :—		
1913	43	...
1914	51	1
1915	55	...

Number of Hats :—

1913	768
1914	1,083
1915	1,161

4.—MOSQUITO PROTECTION OF HOUSES.

	1913	1914	1915
Number of European houses wholly mosquito-Protected ...	4	6	11
Number of European houses with mosquito room ...	1	1	1
Number rendered during the year wholly mosquito-protected...	...	2	5
Number rendered during the year partially mosquito-protected ...	5	5	1

5.—ERECTION OF NEW BUILDINGS DURING THE YEAR.

	1913	1914	1915
Number of Public buildings erected with sanction as to site, construction, and relation to other buildings...	1	1	...
Number of houses erected with sanction as to site, construction, and relation to other buildings...	6	12	10
Number of huts erected with sanction as to site, construction and relation to other buildings ...	173	515	53
Number of houses built without sanction ...	...	...	...
Number of huts built without sanction ...	15	...	25

ACTION TAKEN.

	Number of prosecutions.		Number demolished	
	Huts.	Houses.	Huts.	Houses.
1913	...	...	20	...
1914	...	...	67	...
1915	...	...	80	...

6.—MARTENS.

	Total Number.	Number paved and drained.	Number unpaved.
1913	1	1 drained and unpaved.	...
1914	1	1 do.	...
1915	1	1 do.	...

7.—SLAUGHTER-HOUSES.

	Total number.	Number paved and drained.	Number unpaved.
1913	2	2	...
1914	2	2	...
1915	2	2	...

8.—LATRINES.

	For Males.		For Females.	
	Number.	Number of seats.	Number	Number of seats.
Number of public Latrines:—				
1913	11	97		
1914	14	110		
1915	15	130		
Number of new public Latrines erected during the year:—				
1913	2	14		
1914	3	18		
1915	4	45		
Number of public latrines repaired during the year:—				
1913	6	not recorded		
1914	7	7		
1915	...	...		
Number of public latrines demolished during the year:—				
1913	...	...		
1914	...	...		
1915	2	12		

Public latrines are only provided for Males and Females, and are used in common by males and females.

4
LATRINES.—Contd.

	1913	1914	1915
Number of private latrines :—	232	240	295
Average number of pails of nightsoil daily removed ...	520	589	700
Average number of soiled pails removed and clean pails substituted ...	...	...	...
Number of nightsoil men employed to clean latrines and to remove excreta ...	33	41	42
Number of cesspools ...	113	119	119
Number of cesspools cleaned ...	113	119	119
Number of new cesspools constructed during the year ...	7	6	...
Number of old cesspools abolished ...	8	7	...
Number of cesspools oiled regularly by Department ...	10	10	...

5.—REMOVAL OF REFUSE.

	1913	1914	1915
Number of dustbins ...	169	612	840
Number of carts at work daily to remove refuse from streets ...	6	7	6
Amount of refuse removed daily (carts) ...	12	40	36
Number of carts at work daily to remove refuse from yards and premises (...	6	7	6
Amount of refuse removed daily from yards and premises (carts) ...	12	20	18
Number of men employed for removing refuse ...	31	29	36

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10.—MODE OF DISPOSAL OF EXCRETA, REFUSE AND OFFAL.

	Daily average number of pails of excreta.			Daily average number of cartloads of refuse.			Daily average number of cartloads of slaughter house and market offal.		
	1913	1914	1915	1913	1914	1915	1913	1914	1915
Buried or trenched ...	520	589	700	...	25	...	...	1	1
Burnt ...	...	...	...	...	15	...	...	...	...
Thrown into sea ...	...	...	...	...	...	...	...	...	...
Otherwise dealt with ...	...	...	...	12	...	...	1	1	1

11.—AVERAGE DAILY NUMBER OF CARTLOADS OF CANS, BOTTLES, BROKEN CROCKERY AND OTHER INCOMBUSTIBLE MATERIAL REMOVED FROM HOUSES HUTS AND COMPOUNDS.

	1913	1914	1915
	Unrecorded	2	2

12.—WATER SUPPLY.

Nature of water supply	1913	1914	1915
Pipe-borne water :—			
Source (river, lake or spring).	Lake	Lake	Lake
Number of linear yards ...	10,162	10,636	11,506
Number of stand-pipes along roads ...	8	11	11
Number of stand-pipes in compounds and houses ...	62	65	67
Wells :—			
Public.			
Number ...	...	...	...
Number with pumps protected against surface water and mosquito-protected ...	...	...	...
Private :—			
Number ...	...	...	...
Number with pumps protected against surface water and mosquito-protected ...	...	...	...

6
WATER SUPPLY.—Contd.

	1913	1914	1915
Tanks:—			
Public.			
Number underground ...	...	...	...
Number mosquito-protected and served by pumps ...	...	...	...
Number above ground ...	...	...	...
Number mosquito-protected ...	...	...	...
Number of 400 gallons capacity or less...	...	...	...
Number above 400 gallons ...	...	...	...
Private:—			
Number underground ...	2	...	...
Number mosquito-protected ...	...	...	...
Number above ground ...	127	184	192
Number mosquito-protected ...	129	130	130
Number of 400 gallons capacity or less ...	...	60	62
Number above 400 gallons ...	129	124	130
Nature of tanks:—			
Wood...	...	...	...
Iron ...	95	124	78
Concrete ...	34	60	114
Barrels:—			
Number ...	...	...	...
Number mosquito-protected ...	...	...	...

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13.—DRAINAGE.

	Public.	Private.
Masonry drains:—		
Linear yards of masonry drains:—		
1913 ...	930	...
1914 ...	930	60
1915 ...	930	60
Linear yards reconstructed during the year:—		
1913 ...	...	...
1914 ...	...	...
1915 ...	...	...
Linear yards repaired during the year:—		
1913 ...	...	...
1914 ...	...	...
1915 ...	...	...
Linear yards of new drains constructed during the year:—		
1913 ...	...	...
1914 ...	...	60
1915 ...	...	...
Earth drains or ditches cleansed:—		
Number of linear yards of ditches cleansed:—		
1913 ...	daily 700 yds	...
1914 ...	...	...
1915 ...	274,950 "	...
Number of linear yards of ditches dug and graded:—		
1913 ...	400	...
1914 ...	108,365	...
1915 ...	98,567	...
Average frequency of clearing ditches of grass:—		
1913 ...	Daily	...
1914 ...	Monthly	...
1915 ...	Fortnightly	...

14.—CLEARANCE OF UNDERGROWTH LONG GRASS, AND JUNGLE.

	1913	1914	1915
Number of square yards of weeds, grass and vegetation cut and removed ...	2 sq. miles	2 sq. miles	988,663
Average frequency of clearance of rank vegetation on same area ...	Twice a year	Twice a year	Thrice year

15.—EXCAVATIONS OF LOW-LYING LAND.

	1913	1914	1915
Number of pools and excavations ...	...	...	...
Number of excavations filled up ...	20	25	...
Amount of low-lying and marsh land raised and drained ...	...	...	...
Number of pools, marshes, etc., fish-stocked ...	...	...	...
Number of cubic yards of material used for filling up pools and excavations ...	No record	No record	No record
Number of persons fined for making new excavations ...	...	...	...
Average number of men daily employed in filling up pools, etc., ...	No record	No record	...

16.—OILING.

	1913	1914	1915
Number of drains oiled ...	66	228	30
Number of pools and excavations oiled ...	130	319	20
Number of tanks and barrels oiled ...	24	12	...
Average number of men daily employed for oiling drains, pools, and water-tanks or barrels ...	1	occasionally 6	5

17.—INSPECTIONS AND PROSECTIONS.

	1913	1915	1916
Number of inspectors employed ...	2	2	1
Number of houses inspected ...	daily 5	daily 5	1,074
Number of houses where larvæ were found ...	6	4	...
Number of notices served to remove conditions causing the breeding of larvæ ...	3	4	...
Number of persons fined for having mosquito larvæ on premises ...	...	2	...
Number of notices served to remove insanitary conditions on premises ...	236	264	103
Number of persons fined for not removing insanitary conditions after notice ...	...	2	4
Number of soda and aerated water factories inspected ...	1	1	1

TABLE V.
METEOROLOGICAL RETURN FOR THE YEAR 1915.
GOVERNMENT LABORATORY - NAIROBI.

Month.	TEMPERATURE.					RAINFALL.			WINDS.	REMARKS.
	Solar Maximum	Minimum on grass	Shade Maximum	Shade Minimum	Mean Range	Mean	Amount in inches.	Degree of humidity.		
								9 a.m.	4 p.m.	
January.	-	-	77.8	52.68	25.12	65.24	0.01	70.08	56.15	-
February.	-	-	81.4	53.91	27.49	67.66	0.44	69.54	49.87	-
March.	-	-	82.21	51.66	20.55	71.9	2.43	76.7	52.26	-
April.	-	-	76.3	62.16	14.14	69.23	9.41	63.39	70.37	-
May.	-	-	76.18	60.01	16.17	68.09	3.20	61.5	70.00	-
June.	-	-	74.4	58.95	15.46	66.67	1.50	64.3	72.339	-
July.	-	-	74.52	64.79	20.13	64.86	0.01	62.45	66.32	-
August.	-	-	73.39	66.38	17.81	64.48	0.05	63.39	66.39	-
September.	-	-	76.68	66.0	18.66	67.34	1.11	60.605	59.95	-
October.	-	-	78.58	68.5	20.08	68.54	0.61	76.81	56.44	-
November.	-	-	72.52	67.88	14.64	65.2	4.74	84.926	71.505	-
December.	-	-	73.9	66.82	17.08	65.36	0.50	80.69	73.05	-
Year Average.	-	-	76.523	67.076	18.945	67.049	23.01	79.446	63.887	-

TABLE V.
METEOROLOGICAL RECORD FOR THE YEAR 1915.
KAREJE PANE, MALIBODI.

Month	TEMPERATURE.						Rainfall		Winds.	
	Solar Maximum	Minimum on grass	Shade Maximum	Shade Minimum	Range	Max. and Min. Mean combined.	Amount in inches	Degree of humidity.	General Direction.	Average Force.
January	-	-	82.0	44.0	-	64.6	0.05	-	-	-
February	-	-	85.5	46.0	-	66.2	2.23	-	-	-
March	-	-	85.0	47.0	-	67.9	3.54	-	-	-
April	-	-	80.0	55.0	-	65.9	3.35	-	-	-
May	-	-	76.0	46.0	-	61.7	6.46	-	-	-
June	-	-	75.0	47.0	-	61.7	5.28	-	-	-
July	-	-	77.0	39.5	-	60.8	0.14	-	-	-
August	-	-	80.0	40.0	-	60.0	0.04	-	-	-
September	-	-	82.0	43.0	-	63.0	2.03	-	-	-
October	-	-	84.0	44.0	-	65.5	0.31	-	-	-
November	-	-	77.0	45.0	-	62.4	7.90	-	-	-
December	-	-	77.5	46.5	-	61.8	0.38	-	-	-
Yearly Average	-	-	85.5	39.5	-	63.4	37.21	-	-	-

TABLE V.
METEOROLOGICAL RETURN FOR THE YEAR 1915.
HONOLULU.

Month.	TEMPERATURE.						RAINFALL.		WINDS.	
	Solar Maximum.	Minimum on grass.	Shade Maximum.	Shade Minimum.	Range.	Max. and Min. Mean combined.	Amount in inches.	Degree of humidity.	General Direction.	Average Force.
January	-	-	87.4	72.4	-	80.3	0.02	-	-	-
February	-	-	87.0	72.4	-	80.4	-	-	-	-
March	-	-	86.2	73.2	-	81.9	3.51	-	-	-
April	-	-	88.2	69.9	-	80.4	6.56	-	-	-
May	-	-	96.0	70.5	-	77.5	18.57	-	-	-
June	-	-	85.0	77.0	-	76.2	15.30	-	-	-
July	-	-	81.6	66.9	-	75.4	3.71	-	-	-
August	-	-	83.4	67.7	-	75.1	1.14	-	-	-
September	-	-	82.4	66.9	-	76.1	3.89	-	-	-
October	-	-	85.9	64.0	-	77.7	2.69	-	-	-
November	-	-	86.0	71.0	-	79.4	1.41	-	-	-
December	-	-	86.9	71.6	-	80.2	0.65	-	-	-
Year Average	-	-	83.9	64.0	-	78.4	Total 57.45	-	-	-

Remarks.

TABLE N V.
METEOROLOGICAL RETURN FOR THE YEAR 1915.
KINROSS.

Month	TEMPERATURE					Rainfall.	Winds.		Remarks.		
	Solar Maximum	Minimum on grass.	Shade Maximum.	Shade Minimum	Range.		Max. and Min. Mean combined.	Amount in inches.		Degree of humidity.	General Direction
January	-	-	97.0	64.0	-	78.7	2.46	-	-	-	-
February	-	-	92.0	63.0	-	77.7	0.68	-	-	-	-
March	-	-	96.0	63.0	-	77.1	6.79	-	-	-	-
April	-	-	88.0	63.0	-	78.6	7.28	-	-	-	-
May	-	-	93.0	68.0	-	75.4	6.47	-	-	-	-
June	-	-	85.0	64.0	-	72.7	8.14	-	-	-	-
July	-	-	91.0	63.0	-	73.7	0.18	-	-	-	-
August	-	-	89.0	63.0	-	74.5	1.94	-	-	-	-
September	-	-	91.0	61.0	-	78.9	3.13	-	-	-	-
October	-	-	91.0	64.0	-	76.9	3.34	-	-	-	-
November	-	-	95.0	63.0	-	76.7	3.07	-	-	-	-
December	-	-	91.0	64.0	-	76.3	3.39	-	-	-	-
Year Average	-	-	97.0	61.0	-	75.9	46.87	-	-	-	-

TABLE V.
METEOROLOGICAL RETURN FOR THE YEAR 1915.
MONT HALL.

Year Average	TEMPERATURE					RAINFALL		WINDS.	Remarks.	
	Solar Maximum.	Minimum on grass.	Shade Maximum	Shade Minimum	Range.	Max. and Min. Mean combined.	Amount in inches.			Degree of humidity.
1	90.0		88.0	68.0		73.6	0.07			
2	90.0		89.0	69.0		73.6	8.88			
3	85.0		80.0	60.0		71.1	11.35			
4	80.0		75.0	55.0		69.9	9.77			
5	75.0		70.0	50.0		66.5	1.32			
6	75.0		70.0	50.0		67.6	0.72			
7	80.0		75.0	55.0		65.9	0.00			
8	85.0		80.0	60.0		70.1	1.53			
9	89.0		84.0	64.0		71.9	6.71			
10	84.0		79.0	59.0		68.5	8.70			
11	82.0		77.0	57.0		68.4	2.33			
12	82.0		77.0	57.0		69.6	51.56			

TABLE VI.
EUROPEAN OFFICIALS.

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RETURN OF DISEASES AND DEATHS (IN-PATIENTS) FOR THE YEAR 1915.

Diseases.	Remained in hospital at end of 1915.	Yearly total		Total cases treated.	Remaining in hospital at end of 1915.	Remarks
		Admission	Deaths.			
ACTIVE DISEASES:-						
Tri-Beri	.	.	.	.	.	
Cerebro-spinal fever	.	.	.	.	.	
Chicken-pox	.	1	.	1	.	
Dysentery	.	.	.	.	.	
Erysipelas	.	.	.	.	.	
Gonorrhoea	.	.	.	.	.	
Scarlet fever	.	.	.	.	.	
Typhoid	.	.	.	.	.	
Measles	4	31	1	35	2	
Pericarditis-infective	.	.	.	.	.	
Rheumatism	.	11	.	11	.	
Scurvy	.	.	.	.	.	
Typhoid	2	4	.	6	.	
Whooping cough	.	8	.	8	.	
Smallpox	.	.	.	.	.	
Scabies (a) Nodular	.	.	.	.	.	
(b) Anaesthetic	.	.	.	.	.	
Malaria (a) Tertian	1	90	.	91	4	
(b) Quartan	.	2	.	2	.	
(c) Acute-antimalarial	2	152	.	154	3	
(d) Chronic malaria	.	.	.	.	.	
(e) Black-water	.	3	1	3	.	
Leishmaniasis	.	.	.	.	.	
Malaria fever	.	.	.	.	.	
Gonorrhoea	.	.	.	.	.	
Pneumonia	.	1	.	1	.	
Diarrhoea	.	.	.	.	.	
Relapsing fever	.	.	.	.	.	
Carried Forward:-	9	303	2	312	9	

RETURN OF DISEASES AND DEATHS (IN-PATIENTS) FOR THE YEAR 1915.

Diseases.	Remaining in hospital at end of 1914.	Yearly total.		Total cases treated.	Remaining in hospital at end of 1915.	Remarks.
		Admissions.	Deaths.			
Brought Forward:-	9	303	2	312	9	
INFECTIVE DISEASES - Contd:						
Pneumatic fever	.	2	.	2	.	
Septicæmia	.	.	.	.	.	
Trypanosomiasis (Sleeping Sickness)	.	.	.	.	.	
Small-pox	.	.	.	.	.	
Syphilis (a) Primary	.	.	.	.	.	
(b) Secondary	.	.	.	.	.	
(c) Inherited	.	.	.	.	.	
Tuberculosis	.	1	.	1	.	
Whooping cough	.	.	.	.	.	
Measles	.	.	.	.	.	
Yellow fever	.	.	.	.	.	
Rumps	.	1	.	1	.	
Other infectious diseases	.	4	.	4	.	
POISONINGS:-						
Alcoholism	.	.	.	.	.	
Opiumism	.	.	.	.	.	
Others	.	.	.	.	.	
GENERAL DISEASES:-						
Anæmia	.	5	.	5	.	
Anæmia - Pernicious	.	.	.	.	.	
Diabetes	.	.	.	.	.	
Exophthalmic goitre	.	.	.	.	.	
Scout	.	.	.	.	.	
Carried Forward:-	9	316	2	325	9	

RETURN OF DISEASES AND DEATHS (IN-PATIENTS) FOR THE YEAR 1915.

Diseases.	Remaining in hospital at end of 1914.	Yearly total.		Total cases treated.	Remaining in hospital at end of 1915.	Remarks.
		Admissions.	Deaths.			
Brought Forward:-	9	316	2	325	9	503
ACUTE DISEASES:-						
Leucocythaemia	.	.	.	.	.	
Wiskin's disease	.	.	.	.	.	
Edema	.	.	.	.	.	
Purpura	.	.	.	.	.	
Erysipelas	.	.	.	.	.	
Scarlet fever	.	.	.	.	.	
Other general diseases	1	20	.	21	.	
CHRONIC DISEASES:-						
Diseases of the Nervous System:-						
Section 1.						
Encephalitis	1	6	.	7	.	
Myelitis	.	.	.	.	.	
Politis	.	.	.	.	.	
Hydrocephalus	.	.	.	.	.	
Cephalitis	.	.	.	.	.	
Tumour of brain	.	.	.	.	.	
Degeneration of brain	.	.	.	.	.	
Section 2.						
Epilepsy	.	.	.	.	.	
Paralysis	.	.	.	.	.	
Stroke	.	.	.	.	.	
Alcoholism	.	.	.	.	.	
Neuralgia	.	5	.	5	.	
Neuritis	.	.	.	.	.	
Other nervous diseases	1	4	.	5	.	
Carried Forward:-	12	361	2	363	9	

TABLE VI.

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RETURN OF DISEASES AND DEATHS (IN-PATIENTS) FOR THE YEAR 1915.

Diseases.	Remaining in hospital at end of 1914.	Yearly total.		Total cases treated.	Remaining in hospital at end of 1915.	Remarks.
		Admissions.	Deaths.			
<u>Brought Forward:-</u>	12	351	2	363	9	
Sub-Section 3.						
I. DISEASES:-						
Alcohol	.	.	.	.	.	
Mania	.	.	.	.	.	
Delirium	.	.	.	.	.	
Chorea	.	.	.	.	.	
Paralytic	.	.	.	.	.	
Delusional Insanity	.	.	.	.	.	
Other mental diseases	.	.	.	.	.	
II. DISEASES OF THE EYE:-						
Conjunctivitis	.	1	.	1	.	
Keratitis	.	.	.	.	.	
Ulceration of Cornea	.	.	.	.	.	
Iritis	.	2	.	2	.	
Optic Neuritis	.	.	.	.	.	
Cataract	.	.	.	.	.	
Other diseases	.	1	.	1	.	
III. DISEASES OF THE EAR:-						
Inflammation	.	1	.	1	.	
Other diseases	.	.	.	.	.	
IV. DISEASES OF THE NOSE	.	6	.	6	.	
V. DISEASES OF THE CIRCULATORY SYSTEM:-						
Pericarditis	.	.	.	.	.	
Endocarditis	.	.	.	.	.	
Valvular Mitral	.	.	.	.	.	
Aortic	.	.	.	.	.	
Tricuspid	.	.	.	.	.	
Pulmonary	.	.	.	.	.	
<u>Carried Forward:-</u>	12	362	2	374	9	

504

TABLE VI.

RETURN OF DISEASES AND DEATHS (IN-PATIENTS) FOR THE YEAR 1915.

505

Diseases.	Remained in hospital at end of 1915.	Yearly total		Total cases treated	Remained in hospital at end of 1915.	Remarks
		Admissions	Deaths			
<u>Brought Forward:-</u>	12	362	2	374	9	
<u>DISEASES OF THE CIRCULATORY SYSTEM:- Contd:</u>						
Arterial Sclerosis	.	.	.	.	.	
Arteriosclerosis	.	.	.	.	.	
Heart diseases	.	.	.	.	.	
<u>DISEASES OF THE RESPIRATORY SYSTEM</u>						
Angitis	.	1	.	1	.	
Chittis	.	14	.	14	.	
Co-pneumonia	.	1	.	1	.	
Loss of lung	.	.	.	.	.	
Rate of lung	.	.	.	.	.	
Pyemia	.	.	.	.	.	
Tris	.	6	.	6	1	
Am	.	.	.	.	.	
Heart diseases	1	9	.	10	1	
<u>DISEASES OF THE DIGESTIVE SYSTEM:-</u>						
Atitis	.	.	.	.	.	
Loss of teeth	1	2	.	4	.	
Atitis	.	.	.	.	.	
Throat	.	6	.	6	.	
Inflammation of tonsils	1	22	.	24	.	
Atitis	.	9	.	9	.	
Inflammation of stomach	.	.	.	.	.	
Atenesis	.	1	.	1	.	
Inflammation of stomach	.	.	.	.	.	
Structure of stomach	.	.	.	.	.	
Polis	.	4	.	4	.	
Atitis	.	4	.	4	.	
<u>Carried Forward:-</u>	15	443	2	459	11	

RETURN OF DISEASES AND DEATHS (IN-PATIENTS) FOR THE YEAR 1915.

Diseases.	Remaining in hospital at end of 1914.	Yearly total.		Total cases treated.	Remaining in hospital at end of 1915.	Remarks.
		Admissions.	Deaths.			
Brought Forward:-	15	445	2	458	11	506
DISEASES OF THE DIGESTIVE SYSTEM:-						
Appendicitis	.	1	.	1	.	
Colitis	.	1	.	1	.	
Obstruction of intestines	.	.	.	.	.	
Enteritis	.	.	.	.	.	
Gastritis	.	2	.	2	.	
Diarrhoea	.	7	.	7	.	
Constipation	.	1	.	1	.	
Hemorrhoids	.	3	.	3	.	
Hemorrhoids	.	3	.	3	.	
Pancreatitis	.	.	.	.	.	
Hepatitis (Acute)	.	2	.	2	.	
Cholecystitis	.	1	.	1	.	
Enteritis	.	.	.	.	.	
Enteritis	.	.	.	.	.	
Other diseases	.	2	.	2	.	
DISEASES OF THE LYMPHATIC SYSTEM:-						
Adenitis	.	.	.	.	.	
Inflammation of Lymphatic gland.	.	5	.	5	1	
Suppuration of Lymphatic gland	.	2	.	2	.	
Pharyngitis	.	1	.	1	.	
Pharyngitis	.	.	.	.	.	
Other diseases	.	.	.	.	.	
Total Carried Forward:-	15	480	2	495	12	

RETURN OF DISEASES AND DEATHS (IN-PATIENTS) FOR THE YEAR 1915.

507

Diseases.	Remaining in hospital at end of 1914.	Yearly total.		Total cases treated.	Remaining in hospital at end of 1915.	Remarks.
		Admissions.	Deaths.			
<u>Brought Forward:-</u>	15	480	2	495	12	
<u>DISEASES OF THE URINARY SYSTEM:-</u>						
Acute Nephritis	.	.	.	.	.	
Bright's Disease	.	.	.	.	.	
Cystitis	.	.	.	.	.	
Calculus	.	.	.	.	.	
Anal Colic	.	.	.	.	.	
Prostatitis	.	.	.	.	.	
Prostatic Calculus	.	.	.	.	.	
Prostrophy	.	.	.	.	.	
Haematuria	.	.	.	.	.	
Glycuria	.	.	.	.	.	
Other diseases	.	1	.	1	.	
<u>DISEASES OF THE GENERATIVE SYSTEM:-</u>						
Male Organs:-						
Orchitis	.	.	.	.	.	
Erect	.	.	.	.	.	
Fracture	.	.	.	.	.	
Prostatitis	.	.	.	.	.	
Urethral chancre	.	.	.	.	.	
Polypoma	.	.	.	.	.	
Inflammation of Scrotum	.	.	.	.	.	
Prostate	.	.	.	.	.	
Orchitis	.	3	.	3	.	
Epididymitis	.	.	.	.	.	
Swelling of testicle	.	.	.	.	.	
Other diseases	.	.	.	.	.	
<u>Total Carried Forward:-</u>	15	484	2	496	12	

RETURN OF DISEASES AND DEATHS (IN-PATIENTS) FOR THE YEAR 1915.

508

Diseases.	Remaining in hospital at end of 1914.	Admissions.	Deaths.	Total cases treated.	Remaining in hospital at end of 1915.	Remarks.
Brought Forward:-	15	484	2	499	12	
DISEASES OF THE GENITRATIVE SYSTEM:- Contd.						
Female Organs:-						
Vaginitis	.	.	.	.	.	
Vaginal Cyst.	.	.	.	.	.	
Metritis	.	.	.	.	.	
Displacement of Uterus	.	.	.	.	.	
Endometritis	.	.	.	.	.	
Leucorrhoea	.	.	.	.	.	
Menorrhoea	.	.	.	.	.	
Menorrhagia	.	.	.	.	.	
Menorrhoea	.	.	.	.	.	
Menstruation	.	.	.	.	.	
Difficult labour	.	.	.	.	.	
Parturient Haemorrhage	.	.	.	.	.	
Retained placenta	.	.	.	.	.	
Asphyxiated birth	.	.	.	.	.	
Periparturient Septicaemia	.	.	.	.	.	
Septicemia	.	.	.	.	.	
Discharges of breast	.	.	.	.	.	
Other diseases	.	.	.	.	.	
DISEASES OF ORGANS OF LOCOMOTION.						
Arthritis	.	.	.	.	.	
Gonorrhea	.	.	.	.	.	
Gonorrhea	.	.	.	.	.	
Gonorrhea	.	.	.	.	.	
Other diseases	.	.	.	.	.	
Total Carried Forward:-	15	489	2	505	12	

PUBLIC RECORD OFFICE

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TOTAL EXPOSURES →

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