

## **Annual report on the work of the Ministry of Public Health / Egypt.**

### **Contributors**

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MINISTRY OF THE INTERIOR, EGYPT.

DEPARTMENT OF PUBLIC HEALTH.

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# ANNUAL REPORT

FOR

1916.



CAIRO.  
GOVERNMENT PRESS.

To be obtained, either directly or through any Bookseller, from the GOVERNMENT PUBLICATIONS OFFICE,  
Sharia Qasr el 'Aini, Cairo.

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PRICE P.T. 20.

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# ANNUAL REPORT.

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## INTRODUCTORY NOTE.

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In presenting this Report it is necessary to explain that it is merely a summary of the work carried out in the various Sections of the Department during the year 1916.

It is compiled for the calendar year, with the exception of the Accounts, Stores, and Engineering Sections, which are for the Budget year, *i.e.* April 1, 1916, to March 31, 1917. Separate reports are issued for the Ophthalmic Section, the Cairo City Health Inspectorate and for special work carried out at the Public Health Laboratories of the Department.

Since the commencement of the war, the Department has been obliged to carry on with a greatly diminished staff, and many of its permanent officials are still serving in various military capacities. This necessarily threw a good deal of work on the remaining staff.

On this account, and for various other reasons connected with war conditions, it was not possible to open out the work of the Department in directions which could have been done had the conditions been otherwise, nor was it reasonable to expect much in the way of hospital extension.

Notwithstanding these drawbacks, a considerable amount of new work was undertaken and two new blocks of buildings were added on to the Infectious Diseases Hospital at Abbasiya, Cairo; and a new ophthalmic hospital was opened at Faiyûm in June, 1916. Other new buildings connected with hospital extension had to be postponed for the time being.

The number of sick and wounded military patients treated in the Department's general and ophthalmic hospitals during the year was 13,033. These figures, when added to those of the previous two years, make a total of 34,294 military patients treated in the Public Health Department hospitals from the outbreak of the war until December 31, 1916. When it is taken into account that these hospitals, in addition to taking in and treating military patients, carried on their ordinary work as usual, it is very evident that the Hospital Section (both general and ophthalmic) had a good deal of extra work to contend with.

D. SEMPLE,  
*Director-General.*

# I.—REPORT ON SECTION I.

## 1. BIRKAS.

The details of *birkas* belonging to the Government and filled in by private individuals in accordance with the arrangements made with the Government Lands Department are given in Table I:—

TABLE I.—LIST OF GOVERNMENT *Birkas* FILLED IN DURING 1916.

MUDIRIYA.	Number of <i>Birkas</i> filled in.	TOTAL AREA.			
		Feddāns.	Qirāts.	Sahms.	Sq. Metres.
Beheira ... ..	2	—	—	22	160·5
Gharbiya ... ..	3	—	14	2	2,464·5
Minūfiya ... ..	1	—	8	12	1,487·5
Daqahliya ... ..	10	13	11	23	56,692·70
Sharqiya ... ..	34	5	20	10	24,572·91
Qalyūbiya ... ..	1	1	2	1	4,557·29
Faiyūm ... ..	3	3	7	20	13,970·83
Beni Suef ... ..	3	—	19	—	3,325
Minya ... ..	3	3	19	20	16,070·83
Asyūt ... ..	3	1	5	20	5,220·83
TOTAL ... ..	63				

## 2. MOSQUES.

The following is a statement of the work which has been carried out in connexion with the improvement of the ablutionary systems of mosques throughout the country:—

TABLE II.—MOSQUES DEALT WITH IN 1916.

DESCRIPTION.	Cairo.	Provinces.	Total.
Ablutionary systems of private mosques newly constructed and opened for use ... ..	1	2	3
Ablutionary systems of Waqfs mosques repaired and opened for use ... ..	—	1	1
Ablutionary systems of old private mosques requiring repairs:—			
Number opened for use after repair... ..	—	159	159
„ closed for want of repairs ... ..	—	40	40
„ under repair, the delay not having yet expired.	—	526	526



### 3. CEMETERIES AND PRIVATE TOMBS.

#### (a) CEMETERIES.

Very little work has been done on cemeteries owing to the absence of personnel on account of the war.

The work actually carried out is as follows :—

TABLE III.—WORK DONE IN CONNEXION WITH CEMETERIES DURING 1916.

PROVINCE OR GOVERNORATE.	CEMETERIES.			OLD CEMETERIES.		
	Established.	Enlarged.	Roads for Cemeteries.	Authorized.	Portion condemned.	Condemned.
Cairo Governorate ... ..	—	—	—	—	—	—
Gharbiya Province ... ..	—	—	—	2	—	—
Minûfiya " ... ..	—	—	—	1	—	1
Daqahliya " ... ..	—	—	—	—	—	—
Sharqiya " ... ..	1	—	—	—	—	—
Beni Suef " ... ..	—	—	—	—	—	—
Giza " ... ..	1	—	1	—	—	—
Minya " ... ..	—	—	—	—	—	—
Asyût " ... ..	—	1	—	—	—	—
Damietta Governorate ... ..	—	—	—	—	—	—
TOTAL ... ..	2	1	1	3	—	1

Encroachment on cemetery ground is of very common occurrence. Whenever brought to the notice of the Department, legal action is taken against the offender. The following table gives the results of the legal actions :—

TABLE IV.—LEGAL ACTIONS BROUGHT BY THE CONTENTIEUX AGAINST ENCROACHERS ON CEMETERY LANDS DURING 1916.

PROVINCE.	Judgment in Government's Favour.	Judgment against Government.	Cases filed.
Sharqiya ... ..	8	—	2
Beheira ... ..	3	1	1
Minûfiya ... ..	1	—	1
Daqahliya ... ..	2	—	—
Qalyûbiya ... ..	1	—	—
Faiyûm ... ..	9	—	—
Girga ... ..	1	—	—
TOTAL ... ..	25	1	4

#### (b) PRIVATE TOMBS.

The following is a list of the special authorizations which have been given in 1916 for burials in private tombs not situated within cemeteries :—

Cairo Governorate ... ..	1
Gharbiya Province ... ..	1
Daqahliya " ... ..	1
Beni Suef " ... ..	2
Minya " ... ..	3
Damietta Governorate ... ..	1
TOTAL ... ..	9



#### 4. ETABLISSEMENTS INCOMMUNES, INSALUBRES ET DANGEREUX.

The following table gives details of the applications for licences for establishments falling under Class I of the Law of August 1904. Public and Cattle Markets (Class II) are also included:—

TABLE V.

NATURE OF ESTABLISHMENT.	Approved.	Refused.	Applications given up.	Under Consideration.	TOTAL.
Aerated water factories ... ..	11	6	3	9	29
Sweetmeat factories ... ..	2	—	1	4	7
Sugar-cane crushing mills ... ..	8	—	—	3	11
Artificial butter factories ... ..	1	2	1	1	5
Milk and butter factories ... ..	3	—	2	4	9
Oil-seed mills ... ..	3	—	1	2	6
Ice factories and cold storage establishments.	—	—	—	2	2
Macaroni factories ... ..	1	—	—	1	2
Rice-husking mills ... ..	8	4	1	9	22
Fish <i>halagas</i> ... ..	—	—	—	2	2
Soap factories ... ..	6	—	—	4	10
Hospital ... ..	1	—	—	—	1
Cotton-ginning factories ... ..	5	—	1	6	12
Public and swimming baths ... ..	—	—	—	4	4
Tanneries ... ..	6	1	—	4	11
Plaster and <i>homra</i> mills ... ..	1	—	—	1	2
Mineral acid depots ... ..	—	1	—	1	2
Manure depot ... ..	—	1	—	—	1
Chemical manure depots ... ..	—	—	—	2	2
Beer-bottling establishments ... ..	7	—	—	4	11
Alcohol factory ... ..	—	—	—	1	1
Distillery of perfumes ... ..	—	—	—	1	1
Public and food markets ... ..	1	2	—	3	6
Public and cattle markets ... ..	20	13	—	12	45
TOTAL ... ..	84	30	10	80	204

*Ministerial "Arrêtés."*—The draft *Arrêtés* laying down additional conditions for establishments possessing permits under the Law of August 28, 1904 (*Etablissements Incommodés, Insalubres et Dangereux*) were dealt with in 1916 as follows:—

TABLE VI.

NATURE OF ESTABLISHMENT.	Approved.	Not approved.	Under Consideration	TOTAL.
<i>Alexandria :—</i>				
Public stables ... ..	2	—	4	6
Cattle sheds ... ..	1	—	1	2
Grocers' shops ... ..	2	—	2	4
Public bakeries ... ..	9	—	4	13
Public cookshops ... ..	5	—	2	7
Frying and roasting establishments ... ..	1	—	1	2
Mineral acids store ... ..	—	1	—	1
Sweetmeat factory ... ..	2	—	—	2
Tinsmith's shop ... ..	—	1	—	1
Blacksmith's shop ... ..	—	1	—	1
Fresh fish shop ... ..	1	—	—	1
Pastry cooks ... ..	1	—	2	3
Butcher's shop ... ..	1	—	—	1
Oil mills ... ..	—	—	3	3
Tow-beating establishment ... ..	—	—	1	1
TOTAL ... ..	25	3	20	48
<i>Gharbiya Province :—</i>				
Fish <i>halaga</i> ... ..	1	—	—	1
Public stable ... ..	1	—	—	1
Bakeries ... ..	2	—	—	2
Pickles manufactory ... ..	—	—	1	1
<i>Asyût Province :—</i>				
Lime-kiln ... ..	—	—	1	1
<i>Aswân Province :—</i>				
Potteries ... ..	—	6	—	6
<i>Damietta :—</i>				
Oil-seed mill ... ..	—	—	1	1
<i>Suez :—</i>				
Bakery ... ..	—	1	—	1
TOTAL ... ..	4	7	3	14

## 5. SLAUGHTER-HOUSES AND SLAUGHTERING SITES.

No new slaughter-houses were established in the country during 1916.

*Slaughtering Sites.*—Sites for the slaughter of animals for food, in villages where no slaughter-houses exist, were approved in the following three villages:—

Shintina el Hagar ...	Shibin el Kôm District ...	Minûfiya Province.
Mit Bira ... ..	Quweisna District ... ..	" "
Fidimin ... ..	Sinnûris District ... ..	Faiyûm Province.



## 6. DEPOTOIRS.

Hitherto the method adopted for appointing a *dépotoir* has been the following :—

When the site selected has been approved by this Department, the Mudiriya or Governorate in the circumscription of which the site exists, prepares an *arrêté*, which, after having been approved by the Ministry of the Interior, is published in the *Journal Officiel*.

As, however, by Article 5 of the Regulations on the “vidange des fosses d'aisance,” issued by *arrêté* of November 8, 1886, and modified and completed by *arrêtés* of July 31, 1887, and June 2, 1910, this Department is the authority charged with the appointment of these *dépotoirs*, the following procedure will be adopted in future, the Ministry of the Interior and the Contentieux having respectively agreed as to its advisability and legality :—

When the usual preliminaries have been completed for the selection of a *dépotoir* and the site approved by this Department, the latter will itself issue an official notice appointing the site and will cause this notice to be published in the *Journal Officiel*.

The Mudiriya or Governorate will, at the request of the Department, make two copies of the notice in the *Journal Officiel* and will cause one to be posted on the door of the Omda's house, and the other to be fixed to some convenient structure as near as possible to the site selected.

The only site appointed in 1916 for the deposition of sewage and refuse is that of Faiyûm Bandar.

## 7. MEDICO-LEGAL EXAMINATIONS AND REPORTS, 1916.

TABLE VII.

LOCALITY.	SLIGHT.		SERIOUS.		FATAL.		TOTAL.	
	Accident.	Criminal.	Accident.	Criminal.	Accident.	Criminal.	Accident.	Criminal.
<i>Governorates :—</i>								
Cairo ... ..	581	11,793	270	91	215	38	1,066	11,922
Alexandria ... ..	326	3,681	263	46	339	42	928	3,769
Canal { Port Said ...	136	470	8	3	10	—	154	473
{ Ismailia ...	26	117	18	5	54	—	98	122
Suez (including Quseir)	63	39	5	—	26	6	94	45
Damietta ... ..	43	184	28	5	24	2	95	191
*El 'Arish ... ..	—	—	—	—	—	—	—	—
LOWER EGYPT.								
<i>Provinces :—</i>								
†Beheira ... ..	196	2,115	144	175	321	75	661	2,365
Gharbiya ... ..	502	3,414	285	177	545	104	1,332	3,695
Minûfiya ... ..	412	1,815	317	122	275	75	1,004	2,012
Daqahliya ... ..	347	2,020	121	72	305	41	773	2,133
Sharqiya ... ..	222	1,198	187	103	280	38	689	1,339
Qalyûbiya ... ..	319	888	281	135	302	39	902	1,062
UPPER EGYPT.								
<i>Provinces :—</i>								
Giza... ..	165	1,359	138	128	229	48	532	1,535
Faiyûm ... ..	107	1,061	87	86	128	55	322	1,202
Beni Suef ... ..	94	1,589	61	75	135	40	290	1,704
‡Minya ... ..	174	1,982	145	163	227	89	546	2,234
Asyût ... ..	509	2,217	240	220	355	108	1,104	2,545
Girga ... ..	211	1,458	127	117	302	48	640	1,623
Qena ... ..	105	1,203	124	111	325	45	554	1,359
Aswân ... ..	63	393	52	34	100	3	215	430
TOTAL ... ..	4,601	38,996	2,901	1,868	4,497	896	11,999	41,760

\* No figures furnished, the Medical Officer having been temporarily withdrawn.

† Not including Siwa Oasis.

‡ Not including Bahariya Oasis, the Medical Officer having been temporarily withdrawn.

## 8. PROTECTION OF DRINKING WATER.

No *arrêtés* of this kind were issued during 1916.

## 9. VITAL STATISTICS. ✓

As was pointed out in the footnote to page 10 of the 1915 report, the European death-rates given in Tables X and XIII are unduly high owing to the presence of British and French troops and wounded in hospitals in various parts of the country. Such troops were not, of course, included in the population figures, whereas, on the other hand, deaths occurring amongst them were entered in the registers of the locality where they took place. Though in the case of soldiers on active service the effect of this arrangement on the death-rate would generally be practically negligible, the men being strong and healthy, the same cannot be said for the death-rates of those localities where sick and wounded are under treatment in the various hospitals, for here, as might be expected, the number of deaths is sufficient to exercise a considerable influence on the European death-rates, as the following figures will indicate.

In 1914, when there was practically no abnormal military population, and no wounded under treatment, the mean European death-rate was :—

For the twenty principal towns ... ..	13·0 per thousand.
For the whole country ... ..	12·4 per thousand.

In 1915, the military population was increased and a large number of sick and wounded soldiers were afforded treatment. In that year the corresponding rates were :—

For the twenty principal towns ... ..	29·7 per thousand.
For the whole country ... ..	28·3 per thousand.

The introduction of an abnormal factor of such importance into the statistical returns would, if not corrected, give an entirely erroneous idea of the condition of affairs in this country and would further render impossible the comparison of the European death-rates from year to year or for a series of years.

It was therefore decided, in order to preserve the sequence of normal European death-rates, to eliminate the military mortality and recalculate the figures. This has been done, with the result that the figures for 1915 have been reduced to 13·0 per thousand (instead of 29·7 per thousand) for the twenty principal towns, and 12·5 per thousand (instead of 28·3 per thousand) for the whole country.

The European death-rates for 1916, given below, have been calculated on the same lines, that is, with the military mortality figures eliminated.



TABLE VIII.—EGYPTIAN AND FOREIGN POPULATION OF THE TWENTY PRINCIPAL TOWNS OF EGYPT.

TOWN.	ESTIMATED UP TO JULY 1.					
	1915			1916		
	Egyptians.	Foreigners.	Total.	Egyptians	Foreigners.	Total.
	1	2	3	4	5	6
Cairo ... ..	657,451	72,952	730,403	665,000	75,000	740,000
Alexandria... ..	322,426	77,569	399,995	326,574	79,308	405,882
Damietta ... ..	35,894	267	36,161	36,374	269	36,643
Tanta ... ..	56,885	1,516	58,401	57,434	1,523	58,957
Mansûra ... ..	43,173	1,638	44,811	43,656	1,638	45,294
Damanhûr ... ..	45,516	372	45,888	46,183	372	46,555
Zagazig ... ..	36,950	1,685	38,635	37,310	1,691	39,001
Shibin el Kôm... ..	25,706	182	25,888	26,165	182	26,347
Giza ... ..	17,939	112	18,051	18,174	114	18,288
Benha... ..	19,189	219	19,408	19,611	221	19,832
Port Said ... ..	49,454	10,738	60,192	50,642	10,738	61,380
Suez ... ..	17,867	2,551	20,418	18,267	2,551	20,818
Ismailia ... ..	11,788	2,307	14,095	12,194	2,326	14,520
Faiyûm ... ..	41,043	178	41,221	41,428	178	41,606
Beni Suef ... ..	29,800	413	30,213	30,399	428	30,827
Minya... ..	29,491	426	29,917	29,813	433	30,246
Asyût ... ..	43,070	277	43,347	43,451	280	43,731
Sohâg ... ..	19,875	67	19,942	20,156	67	20,223
Qena ... ..	21,217	72	21,289	21,437	72	21,509
Aswân... ..	12,452	671	13,123	12,528	704	13,232
TOTAL ... ..	1,537,186	174,212	1,711,398	1,556,796	178,095	1,734,891

TABLE IX.—BIRTHS, DEATHS, AND INFANT MORTALITY IN THE PRINCIPAL TOWNS.

Egyptians, 1916. ✓

TOWNS.	TOTAL.				INFANT MORTALITY.		PROPORTION PER CENT OF INFANT MORTALITY.		
	Births.	Per Thousand.	Deaths.	Per Thousand.	Under 1 Year.	From 1 to 10 Years.	Deaths under 1 Year.		From 1 to 10 Years.
							To Births.	To Deaths.	
	1	2	3	4	5	6	7	8	9
Cairo ... ..	30,714	46·2	28,407	42·7	9,273	7,985	30·2	32·6	28·1
Alexandria... ..	16,442	50·3	13,168	40·3	4,640	3,489	28·2	35·2	26·5
Damietta ... ..	1,091	30·0	940	25·8	243	293	22·3	25·9	31·2
Port Said ... ..	2,439	48·2	2,439	48·2	700	999	28·7	28·7	41·0
Suez ... ..	972	53·2	941	51·5	325	166	33·4	34·5	17·6
Ismailia ... ..	1,003	82·3	1,263	103·6	255	307	25·4	20·2	24·3
Benha... ..	647	33·0	542	27·6	194	168	30·0	35·8	31·0
Zagazig ... ..	1,634	43·8	1,322	35·4	380	414	23·3	28·7	31·4
Tanta ... ..	2,970	51·7	2,807	48·9	920	902	31·0	32·8	32·1
Mansûra ... ..	1,814	41·6	1,790	41·0	433	528	23·9	24·2	29·5
Shibîn el Kôm ... ..	1,127	43·1	708	27·1	216	145	19·2	30·5	20·5
Damanhûr ... ..	1,980	42·9	1,602	34·7	478	432	24·1	29·8	27·0
Giza ... ..	1,002	55·1	796	43·8	346	208	34·5	43·5	26·1
Faiyûm ... ..	2,174	52·5	1,748	42·2	737	486	33·9	42·2	27·8
Beni Suef ... ..	1,242	40·9	951	31·3	309	256	24·9	32·5	26·9
Minya... ..	1,580	53·0	1,599	63·6	591	510	37·4	37·0	31·9
Asyût ... ..	2,189	50·4	2,169	49·9	716	694	32·7	33·0	32·0
Sohâg ... ..	867	43·0	928	46·0	311	277	35·9	33·5	29·9
Qena ... ..	1,080	50·4	1,169	54·5	399	325	36·9	34·1	27·8
Aswân... ..	464	37·0	575	45·9	189	181	40·7	32·9	31·4
TOTAL ... ..	73,431	47·2	65,864	42·3	21,655	18,765	29·5	32·9	28·5



TABLES X AND XI.—BIRTHS, DEATHS, AND INFANT MORTALITY IN THE PRINCIPAL TOWNS.

TOWN.	TOTAL.				INFANT MORTALITY.		PROPORTION PER CENT OF INFANT MORTALITY.		
	Births.	Per Thousand.	Deaths.	Per Thousand.	Under 1 Year.	From 1 to 10 Years.	Deaths under 1 Year.		From 1 to 10 Years.
							To Births.	To Deaths.	To Deaths.
	1	2	3	4	5	6	7	8	9

Foreigners, 1915.

Cairo ... ..	451	6.2	790	10.8	99	91	22.0	12.5	11.5
Alexandria ... ..	1,522	19.6	1,159	14.9	205	154	13.5	17.7	13.3
Damietta ... ..	1	3.7	2	7.5	1	—	100.0	50.0	—
Port Said ... ..	166	15.5	147	13.7	27	21	16.3	18.4	14.3
Suez ... ..	55	21.6	48	18.8	7	3	12.7	14.6	6.2
Ismailia ... ..	94	40.7	37	16.0	12	9	12.8	32.4	24.3
Benha ... ..	8	36.5	1	4.6	—	1	—	—	100.0
Zagazig ... ..	24	14.2	12	7.1	1	1	4.2	8.3	8.3
Tanta ... ..	25	16.5	18	11.9	2	8	8.0	11.1	4.4
Mansûra ... ..	42	25.6	31	18.9	7	3	16.7	22.6	9.7
Shibin el Kôm ... ..	1	5.5	—	—	—	—	—	—	—
Damanhûr ... ..	6	16.1	3	8.1	2	—	33.3	66.7	—
Giza ... ..	—	—	2	17.9	2	—	—	100.0	—
Faiyûm ... ..	3	16.9	2	11.2	1	—	33.3	50.0	—
Beni Suef ... ..	8	19.4	4	9.7	1	—	12.5	25.0	—
Minya ... ..	—	—	3	7.0	1	—	—	33.3	—
Asyût ... ..	8	28.9	3	10.8	2	—	25.0	66.7	—
Sohâg ... ..	2	29.9	1	14.9	—	—	—	—	—
Qena ... ..	—	—	—	—	—	—	—	—	—
Aswân ... ..	3	4.5	2	3.0	—	—	—	—	—
TOTAL ... ..	2,419	13.9	2,265	13.0	370	291	15.3	16.3	12.8

Foreigners, 1916.

Cairo ... ..	456	6.1	753	10.0	95	96	20.8	12.6	12.7
Alexandria ... ..	1,457	18.4	982	12.4	164	136	11.3	16.7	13.8
Damietta ... ..	—	—	2	7.4	—	—	—	—	—
Port Said ... ..	179	16.7	153	14.2	31	25	17.3	20.3	16.3
Suez ... ..	45	17.6	58	22.7	7	2	15.6	12.1	3.4
Ismailia ... ..	71	30.5	52	22.4	18	12	25.4	34.6	23.1
Benha ... ..	5	22.6	2	9.0	—	—	—	—	—
Zagazig ... ..	24	14.2	15	8.9	3	3	12.5	20.0	20.0
Tanta ... ..	10	6.6	10	6.6	1	4	10.0	10.0	40.0
Mansûra ... ..	31	18.9	29	17.7	6	7	19.4	20.7	24.1
Shibin el Kôm ... ..	—	—	2	11.0	—	—	—	—	—
Damanhûr ... ..	2	5.4	4	10.8	—	—	—	—	—
Giza ... ..	—	—	1	8.8	1	—	—	100.0	—
Faiyûm ... ..	11	61.8	9	5.1	2	—	18.2	22.2	—
Beni Suef ... ..	8	18.7	3	7.0	1	1	12.5	33.3	33.3
Minya ... ..	6	13.9	6	13.9	1	—	16.7	16.6	—
Asyût ... ..	8	28.6	7	25.0	1	—	12.5	14.3	—
Sohâg ... ..	1	14.9	1	14.9	—	—	—	—	—
Qena ... ..	—	—	—	—	—	—	—	—	—
Aswân ... ..	—	—	3	4.3	—	—	—	—	—
TOTAL ... ..	2,314	13.0	2,092	11.7	331	286	14.3	15.8	13.7



TABLE XII.—ANNUAL GENERAL RETURN OF BIRTHS AND DEATHS REGISTERED, VACCINATIONS AND REVACCINATIONS IN 1915.

GOVERNORATE OR PROVINCE.	POPULATION.		BIRTHS.				DEATHS.				VACCINATIONS.		REVACCINATIONS.		REMARKS.
	Calculated on Census of July 1, 1907.		Egyptians.	Per Thousand.	Foreigners.	Per Thousand.	Egyptians.	Per Thousand.	Foreigners.	Per Thousand.	Successful.	Unsuccessful.	Successful.	Unsuccessful.	
	Egyptians.	Foreigners.													
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
<i>Governorates.</i>															
Cairo ... ..	657,451	72,952	29,484	44.8	451	—	32,328	49.2	790	10.8	27,301	389	379	61	(1) Environs included.
Alexandria... ..	322,426	77,569	15,921	49.4	1,522	—	10,538	32.7	1,159	14.9	15,344	1,176	350	33	(2) <i>Governorates</i> : Bedouins included.
Damietta ... ..	35,894	267	1,341	37.4	1	—	653	18.2	2	7.5	1,222	51	126	17	<i>Provinces</i> : Bedouins ex-
Port Said ... ..	49,454	10,738	2,445	49.4	166	—	1,168	23.6	147	13.7	2,497	250	176	70	cluded.
Suez* ... ..	17,867	2,551	1,079	60.4	55	—	600	33.6	48	18.8	1,029	11	5	6	The number of Bedouins is,
Ismaïlia ... ..	11,788	2,307	926	78.6	94	—	477	40.5	37	16.0	865	20	3	1	according to census of 1897,
El 'Arish ... ..	7,498	4	—	—	—	—	—	—	—	—	—	—	—	—	as follows:—
Quseir ... ..	1,733	16	80	46.2	—	—	46	26.5	—	—	44	8	6	2	Cairo ... .. 3,911
Sinai ... ..	1,439	71	16	11.1	—	—	17	11.8	—	—	6	—	2	2	Alexandria... .. 5,246
<i>Provinces.</i>															Damietta ... .. 7
Qalyūbiya ... ..	455,958	952	21,766	47.7	10	—	15,127	33.2	3	3.2	20,378	724	401	163	Port Said ... .. 488
Sharqīya ... ..	897,231	3,018	32,709	36.5	30	—	22,616	25.2	16	5.3	31,782	606	448	83	Suez ... .. 307
Daqāhiya ... ..	980,517	2,303	40,587	41.4	56	—	27,465	28.0	41	17.8	39,772	740	343	263	Ismaïlia ... .. —
Gharbiya ... ..	1,619,728	3,557	67,391	41.6	53	—	47,726	29.5	31	8.7	63,313	715	450	120	El 'Arish ... .. 42
Beheira ... ..	763,153	1,871	33,669	44.1	10	—	21,165	27.7	6	3.2	33,023	533	267	70	Sinai ... .. 414
Minūfiya ... ..	1,044,134	867	45,625	43.7	1	—	29,743	28.5	4	4.6	43,326	1,041	337	192	Qalyūbiya ... .. 32,491
Giza ... ..	477,742	821	25,104	52.5	2	—	15,275	32.0	9	11.0	23,973	398	69	20	Sharqīya ... .. 89,026
Beni Suef ... ..	388,903	790	19,627	50.5	10	—	10,125	26.0	4	5.1	18,995	183	65	48	Daqāhiya ... .. 12,840
Faiyūm ... ..	438,371	414	24,163	55.1	4	—	14,810	33.8	2	4.8	21,688	879	467	401	Gharbiya ... .. 39,689
Minya ... ..	720,585	1,018	32,581	45.2	—	—	19,050	26.4	3	2.9	29,824	1,325	765	369	Minūfiya ... .. 15,283
Asyūt ... ..	983,299	551	46,650	47.4	10	—	30,010	30.5	2	3.6	42,831	740	465	148	Beheira ... .. 114,872
Girga ... ..	874,246	177	36,004	41.2	2	—	20,171	23.1	1	5.6	34,324	58	44	5	Giza ... .. 31,977
Qena ... ..	816,583	960	31,924	39.1	3	—	22,232	27.2	2	2.1	30,312	313	238	24	Beni Suef ... .. 31,338
Aswān... ..	232,958	606	8,461	36.3	3	—	5,993	25.7	2	3.3	7,680	165	140	25	Minya ... .. 60,753
TOTAL ... ..	11,798,948	184,380	517,553	43.9	2,483	—	347,335	29.4	2,309	12.5	489,529	10,325	5,546	2,123	Asyūt ... .. 25,630
Preceding Year...	11,646,284	180,346	519,940	44.6	2,527	—	330,888	28.4	2,245	12.4	471,807	5,511	4,075	1,111	A girga ... .. 7,575
															Qena ... .. 16,126
															Aswān ... .. 26,955
															TOTAL ... .. 536,994
															(3) Births of foreigners in-
															cluded as far as notified.
															(4) Deaths among passen-
															gers are included.

\* Safage included. Births : 3. Deaths : 4. Vaccination, successful : 1.

(3) Births of foreigners included as far as notified.  
(4) Deaths among passengers are included.



TABLE XIII.—ANNUAL GENERAL RETURN OF BIRTHS AND DEATHS REGISTERED, AND VACCINATIONS AND REVACCINATIONS IN EGYPT DURING THE YEAR 1916.

GOVERNORATE OR PROVINCE.	POPULATION.		BIRTHS.				DEATHS.				VACCINATIONS.		REVACCINATIONS.		REMARKS.
	Calculated on Census of July 1, 1907.		Per Thousand.		Per Thousand.		Per Thousand.		Per Thousand.		Successful.	Unsuccessful.	Successful.	Unsuccessful.	
	Egyptians.	Foreigners.	Egyptians.	Foreigners.	Egyptians.	Foreigners.	Egyptians.	Foreigners.							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<i>Governorates.</i>															
Cairo ...	665,000	75,000	30,714	46.2	456	—	28,407	42.7	753	10.0	27,082	751	443	99	(1) Environs included.
Alexandria...	326,574	79,308	16,442	50.3	1,457	—	13,168	40.3	982	12.4	15,408	309	245	62	(2) Governorates: Bedouins included.
Damietta ...	36,374	263	1,091	30.0	—	—	940	25.8	2	7.4	887	95	35	59	Provinces: Bedouins excluded.
Port Said ...	50,642	10,738	2,439	48.2	179	—	2,439	48.2	153	14.2	2,217	201	213	36	The number of Bedouins is, according to census of 1897, as follows:—
Suez ...	18,267	2,551	985	53.9	45	—	962	52.7	58	22.7	965	8	7	1	Cairo ... 3,911
Ismailia ...	12,194	2,326	1,003	82.3	71	—	1,263	103.6	52	22.4	840	63	49	14	Alexandria ... 5,246
El 'Arish ...	7,498	4	—	—	—	—	—	—	—	—	—	—	—	—	Damietta ... 7
Quseir ...	1,774	16	104	58.6	—	—	61	34.4	—	—	—	—	—	—	Port Said ... 488
Sinai ...	1,439	71	11	7.6	—	—	35	24.3	—	—	—	—	—	—	Suez ... 307
<i>Provinces.</i>															Ismailia ... 307
Qalyūbiya ...	462,652	972	20,666	44.7	6	—	15,573	33.7	2	2.1	19,160	559	530	171	El 'Arish ... 42
Sharqiya ...	910,624	3,049	33,187	36.4	33	—	25,481	28.0	15	4.9	31,290	476	381	104	Sinai ... 414
Daqahliya ...	994,303	2,303	38,609	38.8	41	—	33,508	33.7	40	17.4	35,635	641	552	259	Qalyūbiya ... 32,491
Gharbiya ...	1,640,436	3,563	63,460	38.7	52	—	52,556	32.0	25	7.0	60,063	943	610	158	Sharqiya ... 89,026
Beheira ...	776,054	1,905	31,951	41.2	7	—	21,639	27.9	8	4.2	30,142	484	364	94	Daqahliya ... 12,840
Minūfiya ...	1,055,118	867	44,849	42.5	1	—	32,605	30.9	2	2.3	42,423	875	485	362	Gharbiya ... 30,689
Giza ...	483,899	843	25,054	51.8	3	—	15,776	32.6	2	2.4	23,536	315	208	106	Minūfiya ... 15,283
Beni Suef ...	394,829	818	19,956	50.5	9	—	10,885	27.6	3	3.7	18,777	165	120	42	Beheira ... 114,872
Faiyūm ...	445,462	420	23,409	52.5	11	—	15,115	33.9	9	2.1	21,091	684	401	279	Giza ... 31,977
Minya ...	732,148	1,037	32,823	44.8	6	—	20,945	28.6	5	4.8	28,176	1,015	507	507	Beni Suef ... 31,338
Asyūt ...	996,046	557	44,424	44.6	15	—	31,727	31.9	8	14.4	41,175	841	565	165	Faiyūm ... 69,753
Girga ...	885,136	177	33,971	38.4	2	—	21,145	23.9	1	5.6	33,406	93	71	7	Minya ... 32,930
Qena ...	824,251	980	30,636	37.2	—	—	23,351	28.3	3	3.1	29,366	499	375	60	Asyūt ... 23,630
Aswān...	235,101	616	8,169	34.7	3	—	6,648	28.3	6	9.7	7,990	37	45	1	Qena ... 16,126
															Aswān... 26,958
TOTAL ...	11,955,821	188,390	503,953	42.2	2,397	—	374,229	31.3	2,129	11.3	469,696	9,063	6,214	2,587	TOTAL ... 536,994
Preceding Year...	11,798,948	184,380	517,553	43.9	2,483	—	347,335	29.4	2,309	12.5	489,529	10,325	5,546	2,123	(3) Births of foreigners included as far as notified.
															(4) Deaths among passengers are included.

\* Safage and Gensa included. Births: 13. Deaths: 21. Vaccinations: successful 6, unsuccessful 2. Revaccinations: successful, 2.

# 10. PROSTITUTES.

In Egypt, control over prostitutes is exercised in virtue of the Regulations issued by the Minister of the Interior on November 16, 1905, which are applicable by special *arrêté* of the Governor or Mudir to such places as may be considered necessary. By this enactment, houses in which two or more females live for the purpose of prostituting themselves are considered as *maisons de tolérance* and are required to be so registered by the local administrative authorities. Each prostitute inhabiting such a house is bound to register herself as a prostitute and is provided with a card bearing her photograph, description, address, etc. She is required to present herself once a week for medical examination, the card being stamped when no disease is found. Native prostitutes found diseased as the result of examination are to be sent to the nearest Government hospital and detained there till cured.

This law is applicable to foreign subjects with two modifications: the consent of the consul must be obtained before a house can be registered as a *maison de tolérance*, and compulsory detention is not provided for.

The registration of *maisons de tolérance* and of prostitutes is carried out by the Police, and the medical examination and hospitalization by the Department of Public Health.

The following table indicates the places to which the Regulations were applied during 1916, and also certain information regarding the prostitutes examined during the year:—

TABLE XIV.—PROSTITUTES IN 1916.

PLACE.	Number of Prostitutes.	Number of Examinations.	SICK OF		
			Syphilis.	Gonorrhœa.	Other Diseases.
Cairo ... ..	1,379	45,100	795	408	—
Alexandria ... ..	1,583	48,904	132	570	394
Port Said ... ..	208	10,070	5	29	43
Ismailia ... ..	22	52	25	46	2
Suez ... ..	73	2,600	76	94	—
Damietta ... ..	4	267	1	2	—
<i>Beheira :—</i>					
Damanhûr ... ..	60	2,590	77	14	—
Shubra Khit ... ..	6	350	—	—	1
<i>Gharbiya :—</i>					
Tanta ... ..	336	8,747	127	49	4
Kafr el Sheikh ... ..	45	1,122	28	7	2
Disûq ... ..	8	47	1	5	—
Mahalla el Kubra ... ..	49	1,121	2	13	1
Kafr el Zaiyât ... ..	58	52	17	4	1
<i>Minûfiya :—</i>					
Shibin el Kôm ... ..	32	621	7	1	6
Minûf ... ..	17	16	3	8	—
<i>Sharqîya :—</i>					
Zagazig ... ..	110	3,423	30	19	5
Bilbeis ... ..	42	881	4	12	3



TABLE XIV.—PROSTITUTES IN 1916 (*continued*).

PLACE.	Number of Prostitutes.	Number of Examinations.	SICK OF		
			Syphilis.	Gonorrhœa.	Other Diseases.
<i>Daqahliya</i> :—					
Mansûra ... ..	174	2,802	19	18	2
Mit Ghamr ... ..	73	1,354	4	4	3
Simbillâwein ... ..	28	455	5	1	—
<i>Qalyûbiya</i> :—					
Benha.*					
<i>Giza</i> :—					
Giza ... ..	34	819	1	—	—
Imbâba ... ..	30	37	8	2	1
<i>Faiyûm</i> :—					
Faiyûm ... ..	51	2,386	12	3	—
<i>Beni Suef</i> :—					
Beni Suef ... ..	58	1,435	32	56	—
<i>Minya</i> :—					
Minya ... ..	136	3,412	138	70	—
Beni Mazâr ... ..	27	1,242	10	4	—
<i>Asyût</i> :—					
Asyût ... ..	71	1,626	87	65	—
Mallawi ... ..	17	765	4	1	—
Rôda ... ..	23	1,035	1	—	—
Manfalût ... ..	7	300	1	—	—
Abu Tig ... ..	41	2,091	2	—	1
<i>Girga</i> :—					
Tahta ... ..	12	278	2	5	3
Sohâg ... ..	48	2,738	45	53	—
Akhmim ... ..	15	703	5	2	—
Girga ... ..	44	1,251	4	12	2
Balyana ... ..	29	271	—	—	7
<i>Qena</i> :—					
Isna ... ..	50	1,427	28	32	—
Luxor ... ..	47	1,408	3	7	5
Qûs ... ..	13	284	3	3	1
Dishna ... ..	8	447	1	5	—
Nag' Hammâdi ... ..	34	773	3	15	1
Farshût ... ..	30	544	6	20	—
Qena ... ..	55	1,317	6	17	10
<i>Aswân</i> :—					
Aswân ... ..	12	612	11	14	3

\* The register having been lost, figures are unobtainable.

It is to be noted that prostitution itself is only indirectly dealt with. According to the strict letter of the law, any number of prostitutes practising their profession in separate houses could not be controlled, nor is soliciting an offence under the law unless it can be dealt with indirectly as loitering or obstructing traffic.

The number of prostitutes treated in the various Government hospitals is shown in the table below:—

TABLE XV.—NUMBER OF PROSTITUTES TREATED IN GOVERNMENT HOSPITALS DURING 1916.

HOSPITAL.	Number of Prostitutes.	DISEASES.		
		Syphilis.	Gonorrhœa.	Other Diseases.
Alexandria (Lock Hospital) ... ..	577	193	97	287
Suez ... ..	170	76	94	—
Port Said ... ..	78	29	28	21
Damietta ... ..	4	1	2	1
Tanta ... ..	297	175	110	12
Damanhûr ... ..	91	77	14	—
Mansûra... ..	81	20	59	2
Zagazig ... ..	190	89	91	10
Shibîn el Kôm ... ..	14	7	1	6
Benha ... ..	66	25	36	5
Qalyûb ... ..	—	—	—	—
Qasr el Aini (Hod el Marsûd Lock Hospital) ... ..	1,685	643	801	241
Fever Hospital ... ..	41	—	—	41
Beni Suef ... ..	88	32	56	—
Faiyûm ... ..	19	15	1	3
Minya ... ..	208	138	70	—
Asyût ... ..	152	87	65	—
Sohâg ... ..	102	45	57	—
Qena ... ..	123	4	85	34
Isna... ..	60	28	32	—
Aswân ... ..	28	11	14	3
Matruh... ..	5	3	2	—
TOTAL ... ..	4,079	1,698	1,715	666

The regulation of prostitution, though checking to a certain extent the amount of infection from prostitutes, has comparatively little influence on the general spread of venereal diseases. The Department is of opinion that this can only be efficiently dealt with by the establishment of out-patient clinics for diagnosis and treatment of venereal diseases in all the large towns on the lines laid down in the Report of the Royal Commission on

Venereal Disease. Such a clinic has already been established in Cairo and is conducted on the following lines :—

- (1) The treatment is entirely confidential and the names of patients are not taken.
- (2) Bacteriological diagnosis is carried out free of charge.
- (3) Treatment of all cases of venereal diseases in women is free.
- (4) The treatment of male cases is fixed at prices not greater than the cost of the drugs used.

It is not expected that patients in large numbers will present themselves at first, but it is hoped that in time this clinic will reach a class of sufferers from venereal diseases to whom anything but quack treatment had formerly been unknown.

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## II.—REPORT ON SECTION II.

### I.—GENERAL HOSPITALS.

#### HOSPITALIZATION OF MILITARY PATIENTS.

During the year 1916 the general hospitals continued to admit military patients.

Early in the year, in addition to the hospitals in Lower Egypt and the Faiyûm which were already all admitting military cases, except those at Damietta and Qalyûb, the general hospitals at Asyût, Minya, Beni Suef and Sohâg were turned into hospitals for military cases and a certain number of beds were reserved for military cases in the hospitals at Qena, Esna and Aswân. In each case arrangements were made for the hospitalization of the Egyptian cases either by converting infectious hospitals or outpatient buildings into general hospitals or by erecting temporary matting huts.

Matrons and nursing sisters were sent to all the hospitals which were not already so staffed.

The accommodation reserved for military cases in the Government general hospitals varied at different periods of the year from 2,300 beds to 750 beds.

During the year, 12,897 military cases, including prisoners of war, were treated in the Government general hospitals.

The number of patient-days for military cases was 212,238.

Out of the 12,897 military cases admitted, 7,142 were discharged as fit for immediate duty, 2,155 were discharged to convalescent homes or camps, 199 were invalided to England, 2,977 were transferred to other hospitals, and 170 died.

The average death-rate for military cases during 1916 was 1·318 per cent of cases admitted, as compared with 1·427 per cent in 1915.

The total number of military cases admitted to the Government general hospitals since the commencement of the war to the end of 1916 was 28,284. Of these 28,284 cases, 12,039 were discharged as fit for immediate duty, 9,924 were discharged to convalescent homes or camps, 1,471 were invalided to England, 3,867 were transferred to other hospitals, and 396 died.

The total number of patient-days for military cases from the commencement of the war to the end of 1916 was 526,885 and the average death-rate for the same period was 1·4 per cent of cases admitted.

#### GENERAL STATISTICS.

Again, as in 1915, owing to the altered conditions, due to the admission of military cases, any comparisons between the statistical figures for 1916 and those for previous years lose considerably in value.

The number of hospitals remained the same as in 1915, *i.e.* 22.

The number of beds, however, increased from 3,320 in 1915 to 3,825 in 1916, an increase of 505 beds.

This increase was due partly to an increase in the number of beds at the Hôd el Marsûd hospital for prostitutes and partly to the expansion of hospitals in order to accommodate the military cases.

The Hôd el Marsûd hospital was enlarged by nearly 300 beds. This hospital is an annex to Qasr el Aini hospital and accommodates the native prostitutes of Cairo suffering from venereal diseases.

The number of in-patients treated in general hospitals in 1916 was 55,489 as compared with 50,483 in 1915, an increase of 5,006.



The number of voluntary in-patients treated in 1916 was 23,332, as compared with 14,807 in 1915, an increase of 8,525. Military cases were not, of course, classed as voluntary patients. This increase is very satisfactory, as it shows that year by year the hospitals are getting more popular and more patients are coming into them of their own free will. This is the first year in which the voluntary cases have actually outnumbered the police cases, the figures being 23,332 voluntary cases as compared with 17,437 police cases.

The number of days of treatment was 946,557 as compared with 858,878 in 1915, an increase of 87,679. As compared with 1914 the increase is 264,877.

This figure gives some idea of the way in which the work in the general hospitals is increasing. Unfortunately, the staff is not increasing in the same ratio.

The average death-rate for all in-patients (both civilian and military) during 1916 was 5·268 per cent as compared with 5·076 per cent in 1915 and 6·225 per cent in 1914.

The number of new out-patients during 1916 was 178,788 as compared with 152,329 in 1915, an increase of 26,459.

The number of out-patient attendances during 1916 was 392,961 as compared with 340,774 in 1915, an increase of 52,187.

The number of major operations performed in the hospitals during 1916 was 8,576 as compared with 5,421 in 1915, an increase of 3,155.

Table No. XVI "Comparative Annual Statistics," shows some very interesting figures. In 1908 the number of beds in the general hospitals was 2,263. In 1916 it was 3,825, an increase of 1,562 beds. In 1908 the number of in-patients treated was 31,802. In 1916 it was 55,489, an increase of 23,687.

In 1908 the number of days of treatment were 556,543. In 1916 it was 946,557, an increase of 390,014.

In a period of eight years the number of beds in the general hospitals has increased by 69 per cent, the number of in-patients treated has increased by 74 per cent, and the number of days of treatment has increased by 70 per cent.

#### COST OF MAINTENANCE.

The cost of upkeep of the General Hospitals during 1916 was L.E. 123,379·860 milliemes.

This figure, as in former years, does not include the expenses of the Central Administration nor does it include repairs and renewals of buildings.

The average cost per bed per annum was L.E. 32·256 milliemes and the average cost per patient-day was 130 milliemes. During 1915 the cost of upkeep was L.E. 114,843·117 milliemes, the average cost per bed per annum was L.E. 34·591 milliemes and the average cost per patient-day was 134 milliemes.

The increased expenditure during 1916 amounted to L.E. 8,536·743 milliemes. This increased expenditure was due to three causes: (a) the cost of equipping 505 extra beds and of converting hospitals equipped for natives into hospitals for Europeans; (b) the cost of treating and feeding 5,006 additional in-patients and of treating 26,459 additional out-patients; (c) the increased cost of all equipment, drugs, dressings, food, etc., owing to the war.

It is very satisfactory to note that in spite of this increased expenditure the average cost per bed per annum has decreased from L.E. 34·591 milliemes in 1915 to L.E. 32·256 milliemes in 1916 and the cost per patient-day from 134 milliemes in 1915 to 130 milliemes in 1916.

In 1916 the total cost of upkeep of the general hospitals was L.E. 123,379·860 milliemes and the total receipts L.E. 49,226·635 milliemes, therefore the actual cost to the Government of these institutions was L.E. 74,153·225 milliemes.

In 1915 the total cost of upkeep was L.E. 114,843·117 milliemes and the total receipts L.E. 53,786·241 milliemes, therefore the actual cost to the Government was L.E. 61,056·876 milliemes.



Hence, in 1916, the general hospitals cost the Government L.E. 13,096·349 milliemes more to maintain than in 1915.

The reasons for this were the increased cost of equipment, drugs, food, etc., and the reduction in the number of military cases treated in 1916 as compared with 1915.

However, when these figures are compared with the last normal year, *i.e.* 1914, it will be seen that the general hospitals are really costing the Government considerably less to maintain than they did before the war.

In 1914 the total cost of upkeep was L.E. 92,189·050 milliemes and the total receipts were L.E. 7,230·291 milliemes, therefore the actual cost to the Government was L.E. 84,958·759 milliemes.

In 1916 the actual cost to the Government was L.E. 74,153·225 milliemes. Hence, in 1916, there was a clear economy to the Government of L.E. 10,805·534 milliemes as compared with 1914.

Of course, the large increases in the receipts of the hospitals during 1915 and 1916 were due to the fees received for the military patients.

#### GENERAL NOTES.

During 1916 no new *x*-ray installations were installed.

A milk sterilization plant was installed at Suez hospital and has proved very useful.

During 1916 hospital stewards (*Moawenîn*) were appointed to Suez and Damanhûr hospitals.

There are now hospital stewards at the following hospitals : Qasr el Aini, Alexandria, Port Said, Suez, Tanta, Asyût, Mansûra, Zagazig and Damanhûr. It is hoped year by year to appoint more of these officials until there is one in every hospital. They combine the duties of hospital storekeeper with the supervision of the deliveries of rations from the hospital contractors, supervision of the laundries and kitchens, etc., etc.

They relieve the Medical Officers of a considerable amount of routine work and allow them to devote more time to the actual treatment of the patients.

In 1914 arrangements were made for the examination of all pathological specimens from the provincial hospitals at the Pathological Department of the Qasr el Aini School of Medicine under the supervision of the Professor of Pathology.

The following is an extract from the annual report of the Pathological Department of the School of Medicine for that year :—

“ In the course of time the results obtained will furnish most valuable information from the statistical point of view. The fact also that Medical Officers of hospitals throughout the country now have the means of obtaining a histological report on any tissues which they may send to the central laboratory for this purpose cannot fail to be a stimulus to more accurate work. From the steady increase in such demands which have been made, more particularly during the four concluding months of the year, it is evident that this is being realized and appreciated.”

Unfortunately, during 1916 the Director of the School of Medicine informed the Department that this work could not be continued through lack of staff owing to the war.

This is greatly to be regretted, as now the Medical Officers of the provincial hospitals have to rely entirely on clinical observation in deciding whether a new growth is malignant or not. The result of this cannot be otherwise than detrimental to the interests of the patients.

Also valuable statistical information as to the prevalence of malignant diseases in the country, etc., etc., is lost.

It is sincerely hoped that immediately the war is over arrangements may again be made for the examination of these tissues.



## NEW BUILDINGS AND REPAIRS.

The two new blocks at Abbâsiya infectious hospital which were commenced in 1915 were completed and handed over. These are the first steps in a general scheme to enlarge this hospital. It is at present far too small to meet the requirements of a large city such as Cairo.

The new laboratory at Suez hospital was completed and handed over.

Qasr el Aini hospital and Abbâsiya infectious hospital were connected up with the Cairo main drainage system. The general and infectious hospitals at Port Said were connected up with the Port Said main drainage system.

The bucket latrine systems at Qasr el Aini hospital and Port Said general hospital were converted to the water-carriage system.

At Qasr el Aini hospital new sewing rooms were erected on the roof of the wash-house, the existing sewing rooms being converted into coal stores. A new oil engine for electric lighting was also installed.

A new oil store was built at Port Said general hospital and the existing coal store enlarged.

The total amount spent on hospital repairs and renewals during 1916 was L.E. 6,494.

Extensive repairs were carried out at Qasr el Aini hospital at a cost of L.E. 2,830.

The sum of L.E. 1,404 was spent on repairing and repainting at Alexandria hospital. L.E. 1,283 was spent on repairing and repainting Port Said general hospital.

Small repairs were undertaken at the following hospitals: Asyût, Suez, Zagazig, Benha, Beni Suef, Damanhûr, Minya, Shibîn el Kôm, Tanta, Hôd el Marsûd, and Abbâsiya infectious hospital.

## NEW STATISTICAL TABLES.

The only new statistical table inserted in this section of the report is Table No. XXV "Number of Military Cases admitted to each Hospital from the Commencement of the War to the End of 1916." Suez hospital heads the list with 5,752 cases. Qasr el Aini is next with 5,346 cases, and Alexandria hospital third with 2,967 cases. Two hospitals have dealt with over five thousand cases, four hospitals with over two thousand cases, and eleven hospitals with over one thousand cases.

In table No. XXVI "Comparative Annual Statistics," a further column has been added showing year by year the average cost per patient-day. It is greatly to be regretted that these figures cannot be carried farther back than 1912, as previous to that year no record was kept of the expenditure on the hospitals as apart from the general expenditure of the Department.

TABLE XVI.—COMPARATIVE GENERAL STATISTICS.

	1915.	1916.	Increase or Decrease.
Number of hospitals	22	22	—
" beds	3,320	3,825	+ 505
" in-patients treated	50,483	55,489	+ 5,006
Of which voluntary patients...	14,807	23,332	+ 8,525
Death-rate for in-patients	5.076%	5.268%	+ 0.192%
Number of days of treatment	858,878	946,557	+ 87,679
" new out-patients	152,329	178,788	+ 26,459
" out-patients' visits	340,774	392,961	+ 52,187
Major operations	5,421	8,576	+ 3,155
Cost of upkeep	L.E. 114,843 M. 117	L.E. 123,379 M. 860	+ 8,536 743
Receipts	53,786 241	49,226 635	— 4,559 606



TABLE XVII.—PATIENTS AND COST.

HOSPITAL.	Number of Beds.	Number of In-Patients.	Number of Days of Treatment.	Number of New Out-Patients.	Number of Out-Patients' Visits.	Number of Operations.	Cost of Upkeep for 1916.		Cost per Bed per Annum.		Cost per Patient-day.
							L.E.	M.	L.E.	M.	
Alexandria ...	422	9,989	146,173	20,388	56,792	1,587	19,580	994	46	400	134
Suez ...	420	5,483	76,769	5,917	10,763	401	11,674	411	27	796	152
Port Said ...	150	2,887	35,264	26,580	39,676	256	7,009	832	46	732	199
Port Said (Inf.)	—	82	—	—	—	—	—	—	—	—	—
Damietta ...	44	831	11,670	12,045	21,987	196	1,102	000	25	045	094
Tanta ...	128	1,944	29,430	5,261	15,975	218	3,662	461	28	613	124
Damanhûr ...	63	1,438	25,894	2,955	4,333	178	2,690	180	42	701	104
Mansûra ...	110	1,947	37,925	6,285	12,199	248	3,117	415	28	340	082
Zagazig ...	160	2,367	43,271	3,648	6,577	216	4,407	192	27	545	102
Shibîn el Kôm ...	74	1,111	19,542	3,936	16,792	256	2,220	961	30	013	114
Benha ...	86	1,593	24,937	3,055	5,732	171	3,431	475	39	901	137
Qalyûb ...	34	933	9,660	6,092	12,457	266	949	437	27	925	098
Mersa Matrûh ...	14	114	1,687	250	350	7	398	661	28	476	236
Qasr el 'Aini ...	834	10,361	248,791	54,679	131,476	3,094	29,736	774	35	656	119
Fever Hospital	570	3,467	70,145	—	—	—	9,115	499	15	992	130
Beni Suef ...	60	1,091	18,507	5,130	5,653	240	3,222	702	53	712	174
Faiyûm ...	75	1,568	21,486	3,598	6,775	155	3,744	750	49	930	174
Minya ...	119	1,848	24,785	3,945	16,483	127	4,079	533	34	282	165
Asyût ...	272	3,478	52,257	4,351	6,576	500	6,391	698	23	499	122
Sohâg ...	56	1,223	19,188	2,074	6,811	170	2,313	555	41	313	120
Qena ...	59	763	12,714	2,740	4,494	118	1,676	020	28	407	132
Isna ...	32	466	7,137	1,631	5,581	89	1,335	775	41	743	187
Aswân ...	43	505	9,325	4,228	5,479	83	1,518	535	35	315	163
<b>TOTAL ...</b>	<b>3,825</b>	<b>55,489</b>	<b>946,557</b>	<b>178,788</b>	<b>392,961</b>	<b>8,576</b>	<b>123,379</b>	<b>860</b>	<b>32</b>	<b>256</b>	<b>130</b>

TABLE XVIII.—IN-PATIENTS (VOLUNTARY, MILITARY, AND POLICE).

HOSPITAL.	Voluntary Cases.	Police Cases.	Military Cases.	Total Number of Cases.	Total Number of Days of Treatment.
Alexandria...	6,397	1,970	1,232	9,599	146,173
Suez ...	1,671	286	3,386	5,343	76,769
Port Said ...	1,225	816	750	2,791	35,264
Port Said (Infectious) ...	—	—	82	82	—
Damietta ...	606	195	—	801	11,670
Tanta ...	375	1,203	303	1,881	29,430
Damanhûr ...	576	467	330	1,373	25,894
Mansûra ...	985	762	139	1,886	37,925
Zagazig ...	348	933	1,017	2,298	43,271
Shibîn el Kôm ...	242	776	57	1,075	19,542
Benha ...	243	713	582	1,538	24,937
Qalyûb ...	667	247	—	914	9,660
Mersa Matrûh ...	39	12	60	111	1,687
Qasr el 'Aini ...	4,796	4,927	210	9,933	248,791
Fever Hospital ...	3,058	255	106	3,419	70,145
Beni Suef ...	303	359	395	1,057	18,507
Faiyûm ...	40	405	1,081	1,526	21,486
Minya ...	85	599	1,125	1,809	24,785
Asyût ...	841	1,150	1,404	3,395	52,257
Sohâg ...	283	447	442	1,172	19,188
Qena ...	178	480	81	739	12,714
Isna ...	196	159	89	444	7,137
Aswân ...	178	276	26	480	9,325
<b>TOTAL ...</b>	<b>23,332</b>	<b>17,437</b>	<b>12,897</b>	<b>53,666</b>	<b>946,557</b>



TABLE XIX.—ADMISSIONS AND DISCHARGES.

HOSPITAL.	ADMITTED.			DISCHARGED.			
	Existing.	Admitted.	Total.	Cured.	Died.	Improved.	Remaining.
Alexandria ... ..	390	9,599	9,989	4,923	662	4,058	346
Suez ... ..	140	5,343	5,483	4,558	114	658	153
Port Said ... ..	96	2,791	2,887	1,500	97	1,213	77
Port Said (Infectious) ... ..	—	82	82	79	—	3	—
Damietta ... ..	30	801	831	561	33	206	31
Tanta ... ..	63	1,881	1,944	1,625	110	113	96
Damanhûr ... ..	65	1,373 <sup>1</sup>	1,438	1,224	84	93	37
Mansûra ... ..	61	1,886	1,947	1,310	120	426	91
Zagazig ... ..	69	2,298	2,367	1,818	86	373	90
Shibîn el Kôm ... ..	36	1,075	1,111	880	44	140	47
Benha ... ..	55	1,538	1,593	1,246	32	249	66
Qalyûb... ..	19	914	933	129	35	739	30
Mersa Matrûh ... ..	3	111	114	90	7	16	1
Qasr el 'Aini ... ..	428	9,933	10,361	5,156	677	3,677	851
Fever Hospital ... ..	48	3,419	3,467	2,920	439	44	64
Beni Suef ... ..	34	1,057	1,091	800	057	203	31
Faiyûm ... ..	42	1,526	1,568	1,287	029	228	24
Minya ... ..	39	1,809	1,848	1,237	051	499	61
Asyût ... ..	83	3,395	3,478	2,567	144	608	159
Sohâg ... ..	51	1,172	1,223	849	50	261	63
Qena ... ..	24	739	763	450	26	251	36
Isna ... ..	22	444	466	406	11	26	23
Aswân ... ..	25	480	505	365	15	92	33
TOTAL ... ..	1,823	53,666	55,489	35,980	2,923	14,176	2,410

TABLE XX.—OUT-PATIENTS' DIVISION.

HOSPITAL.	Number of Patients.	Number of Attendances.	HOSPITAL.	Number of Patients.	Number of Attendances.
			<i>Brought forward</i> ...	96,162	203,283
Alexandria ... ..	20,388	56,792	Mersa Matrûh ... ..	250	350
Suez ... ..	5,917	10,763	Qasr el 'Aini... ..	54,679	131,476
Port Said... ..	26,580	39,676	Fever Hospital ... ..	—	—
Damietta ... ..	12,045	21,987	Beni Suef ... ..	5,130	5,653
Tanta ... ..	5,261	15,975	Faiyûm ... ..	3,598	6,775
Damanhûr ... ..	2,955	4,333	Minya ... ..	3,945	16,483
Mansûra ... ..	6,285	12,199	Asyût ... ..	4,351	6,576
Zagazig ... ..	3,648	6,577	Sohâg ... ..	2,074	6,811
Shibîn el Kôm ... ..	3,936	16,792	Qena ... ..	2,740	4,494
Benha ... ..	3,055	5,732	Isna... ..	1,631	5,581
Qalyûb ... ..	6,092	12,457	Aswân ... ..	4,228	5,479
<i>Carried forward</i> ...	96,162	203,283	TOTAL ...	178,788	392,961

TABLE XXI.—HOSPITALS RECEIPTS, 1916.

HOSPITAL.	RECEIPTS		HOSPITAL.	RECEIPTS.	
	L.E.	M.		L.E.	M.
Alexandria... ..	7,740	755	Mersa Matrûh ... ..	12	510
Suez ... ..	10,385	141	Qasr el 'Aini ... ..	1,260	988
Port Said ... ..	5,101	970	Fever Hospital ... ..	904	290
Damietta ... ..	69	755	Beni Suef ... ..	1,114	830
Tanta ... ..	1,608	339	Faiyûm ... ..	3,217	890
Damanhûr ... ..	1,754	271	Minya... ..	2,513	095
Mansûra ... ..	473	132	Asyût ... ..	4,350	380
Zagazig ... ..	3,707	376	Sohâg ... ..	1,278	945
Shibîn el Kôm ... ..	537	332	Qena ... ..	326	818
Benha ... ..	2,247	917	Isna ... ..	362	612
Qalyûb ... ..	55	008	Aswân ... ..	203	281
<i>Carried forward</i> ...	33,680	996	<i>Brought forward</i> ...	33,680	996
			<i>TOTAL</i> ...	49,226	635

TABLE XXII.—LUNATICS (SUSPECTED AND CERTIFIED).

HOSPITAL.	Number of Cases certified and sent to Asylum.			Number of Cases discharged as not Insane.			Number of Cases released as recovered.			Number of Cases released as still Insane but not requiring Asylum Treatment.			Total Cases admitted into Hospitals in 1916.			Total Cases admitted into Hospitals in 1915.
	Males.	Fem.	Total.	Males.	Fem.	Total.	Males.	Fem.	Total.	Males.	Fem.	Total.	Males.	Fem.	Total.	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Isna ... ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5
Sohâg ... ..	2	—	2	—	—	—	—	—	—	—	—	—	2	—	2	14
Damietta ... ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Asyût ... ..	4	1	5	—	—	—	1	—	1	16	1	17	21	2	23	24
Beni Suef ... ..	3	1	4	3	—	3	1	—	1	—	—	—	7	1	8	17
Qena ... ..	2	—	2	—	—	—	—	—	—	1	—	1	3	—	3	4
Mansûra ... ..	10	1	11	2	1	3	9	3	12	—	—	—	21	5	26	25
Damanhûr ... ..	4	2	6	1	—	1	—	—	—	1	—	1	6	2	8	3
Port Said ... ..	6	8	14	11	3	14	—	—	—	14	—	14	31	11	42	36
Minya... ..	—	—	—	4	—	4	—	—	—	—	—	—	4	—	4	6
Shibîn el Kôm ...	1	—	1	1	1	2	1	1	2	2	—	2	5	2	7	2
Suez ... ..	7	—	7	1	—	1	—	—	—	—	—	—	8	—	8	4
Faiyûm ... ..	2	1	3	—	2	2	—	—	—	12	3	15	14	6	20	17
Qasr el 'Aini (Cairo) ...	23	2	25	6	3	9	—	—	—	—	—	—	29	5	34	30
Fever Hospital (Cairo) ...	2	3	5	—	—	—	—	—	—	—	—	—	2	3	5	7
Tanta ... ..	10	3	13	1	—	1	—	—	—	—	—	—	11	3	14	14
Qalyûb ... ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Benha... ..	6	2	8	—	—	—	—	—	—	1	1	2	7	3	10	11
Alexandria... ..	59	30	89	5	—	5	—	—	—	29	6	35	93	36	129	70
Aswân... ..	2	—	2	9	1	10	—	—	—	—	—	—	11	1	12	10
Zagazig ... ..	4	2	6	3	2	5	—	—	—	5	3	8	12	7	19	7
Mersa Matrûh ...	1	—	1	—	—	—	—	—	—	—	—	—	1	—	1	—
<i>TOTAL</i> ...	148	56	204	47	13	60	12	4	16	81	14	95	288	87	375	306
<i>Compare in 1915</i>	116	39	155	34	7	41	14	4	16	78	16	94	242	64	306	—



TABLE XXIII.—RETURN OF SICK.

SECTION.	Alexandria.	Suez.	Port Said.	Damietta.	Tanta.	Damanhur.	Masara.	Zagazig.	Shibin el Kaim.	Benha.	Qalyub.	Mersa Matruh.	Qasr el Ain.	Infectious.	Beni Suef.	Faiyum.	Minya.	Asyut.	Sohag.	Qena.	Ism.	Assuan.	Port Said. (Infectious).	TOTAL.
<b>Medical:—</b>																								
Alimentary:—																								
Diseases of stomach	157	43	141	30	44	—	8	3	77	34	22	—	209	—	22	13	1	89	9	8	—	15	—	925
Tuber, peritonitis	6	2	2	2	1	—	1	2	—	1	—	—	—	—	—	—	1	2	4	2	—	—	—	27
Dysentery	191	259	98	38	37	42	37	78	8	57	12	7	345	—	32	—	109	153	49	16	13	20	—	1,650
Diarrhoea and enteritis	233	61	139	15	33	—	27	14	4	41	11	—	362	—	30	99	95	105	23	1	8	5	—	1,306
Liver	25	35	—	2	6	—	9	—	2	4	13	—	300	—	1	13	1	12	3	3	—	—	—	429
Other diseases	149	18	4	9	—	—	—	—	3	9	6	1	81	—	5	17	24	5	—	2	2	1	—	336
<b>Respiratory:—</b>																								
Pneumonia	148	89	32	—	6	—	3	4	7	7	—	1	370	29	7	8	14	15	10	2	—	1	—	753
Phthisis	125	52	30	2	3	—	11	6	2	3	11	—	368	—	2	4	1	12	4	3	5	—	—	644
Pleurisy	49	36	3	5	—	—	1	10	2	1	2	—	254	—	8	8	12	18	—	4	—	—	—	413
Other diseases	370	101	72	17	40	—	—	3	34	33	30	4	256	—	18	23	9	65	10	8	5	2	—	1,100
<b>Circulatory:—</b>																								
Heart	87	47	2	25	13	—	4	1	—	—	6	—	245	—	11	10	2	31	6	—	1	1	—	492
Other diseases	27	4	8	—	—	—	—	—	—	12	2	—	—	—	3	10	6	11	1	—	—	—	—	84
<b>Urinary:—</b>																								
Nephritis	85	11	39	5	24	4	18	10	13	4	12	—	158	—	6	7	1	7	2	5	16	5	—	432
Other diseases	81	27	11	2	4	—	5	16	5	12	—	1	—	—	36	2	9	20	5	1	2	1	—	240
<b>Blood:—</b>																								
Spleen	50	4	—	10	9	—	2	—	—	1	2	—	88	—	2	—	—	4	1	—	—	1	—	174
Other diseases	83	6	—	4	—	—	—	—	—	3	57	—	—	—	1	—	—	3	11	11	—	—	—	179
<b>Nervous:—</b>																								
Brain	38	—	5	5	3	—	4	—	—	—	1	—	—	—	6	3	—	8	—	4	—	1	—	78
Spinal cord	33	1	1	—	3	—	—	—	—	—	4	—	68	—	—	—	—	2	—	—	—	—	—	112
Other diseases	61	29	3	2	14	—	—	—	5	1	4	—	10	—	5	11	—	40	13	3	1	1	—	203
<b>Constitutional:—</b>																								
Rheumatism	179	105	58	12	35	17	21	23	13	18	12	3	261	—	11	38	21	29	8	8	2	3	—	877
Diabetes	18	2	12	1	1	—	1	2	—	1	1	—	281	—	4	—	—	5	2	—	3	—	—	334
Senility	52	2	15	10	7	—	3	2	—	3	—	—	212	—	—	—	1	4	—	—	—	—	—	311
Debility	137	80	47	15	22	—	7	34	3	25	9	—	241	—	9	14	7	93	4	3	1	—	—	751
<b>Parasitic:—</b>																								
Pellagra	74	6	—	12	18	1	36	10	6	20	35	—	93	—	—	—	1	7	3	—	3	—	—	325
Malaria	30	234	27	14	26	—	28	44	63	54	38	1	—	50	11	32	13	77	18	19	—	4	—	783



Ankylostomiasis	61	—	3	—	89	1	2	46	4	1	6	99	1	125	—	4	—	9	5	14	1	23	—	491
Filaria...	2	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1	—	7	
Poisoning :—																								
Alcohol	146	17	—	—	1	72	—	—	1	—	16	—	—	—	—	6	1	—	1	2	—	2	265	
Other poisons	52	10	3	—	2	13	4	—	5	17	7	3	—	133	—	16	3	12	19	8	5	5	321	
Lunatics	133	12	33	—	1	16	11	26	20	7	11	—	—	—	—	9	19	4	25	1	2	12	343	
Other medical diseases	1,689	2,469	804	42	265	747	601	858	166	348	9	58	615,338	—	112	464	645	824	172	96	81	35	8214,570	
Surgical :—																								
Fractures :—																								
Simple	222	49	76	23	61	31	45	57	35	27	19	1	469	—	36	33	63	108	57	45	10	28	1,495	
Compound	106	7	32	18	30	19	35	30	37	7	6	1	441	—	26	22	42	75	38	32	10	21	1,035	
Tumours :—																								
Malignant	37	2	10	10	3	—	3	1	—	1	8	—	211	—	3	1	1	—	2	5	2	1	301	
Non-malignant	39	1	2	25	2	—	—	5	7	8	6	—	65	—	40	3	—	18	11	6	—	3	241	
Traumatic injuries	954	308	75	36	349	198	191	291	—	260	131	—	401	—	23	138	187	421	270	151	48	134	4,566	
Burns	128	9	22	10	31	18	40	23	14	11	6	1	294	—	7	5	13	43	13	10	2	9	709	
Bilharziasis	174	14	24	59	36	18	68	23	1	24	26	1	267	—	11	2	9	40	6	2	5	1	811	
Fistula in ano	82	22	30	20	24	21	32	6	23	8	6	—	155	—	5	1	9	19	4	4	—	4	475	
Liver abscess	16	5	3	—	2	—	—	—	—	1	—	—	44	—	1	—	—	8	—	1	—	—	81	
Hernia	239	33	27	32	23	15	47	35	15	33	19	1	231	—	51	20	18	73	9	32	1	5	959	
Hæmorrhoids	192	37	25	16	33	22	29	13	16	16	8	1	189	—	15	22	4	56	8	6	9	5	722	
Appendicitis	12	48	—	3	—	—	2	8	—	2	2	—	9	—	5	15	14	18	3	3	—	—	144	
Vesical calculus	52	5	2	16	14	21	29	9	2	7	14	—	87	—	40	1	10	12	16	11	4	6	358	
Other surgical diseases	1,089	495	545	106	227	127	268	346	462	210	252	14	37	—	253	280	181	504	166	68	58	70	5,758	
Ophthalmic	299	72	122	6	—	6	3	28	3	88	14	1	229	—	40	60	62	67	61	31	41	33	1,266	
Skin Diseases	240	120	47	4	12	10	45	82	8	58	4	1	240	—	22	49	10	50	8	—	4	4	1,018	
Veneral :—																								
Syphilis	511	217	98	20	241	21	98	126	12	50	1	11	918	—	50	60	153	141	68	50	59	38	2,943	
Gonorrhœa...	350	246	63	2	122	78	83	116	1	37	—	2	880	—	65	4	72	82	61	88	38	22	2,412	
Midwifery	48	10	6	10	11	4	15	4	14	10	2	—	53	—	5	2	1	13	2	—	—	—	210	
Gynecological diseases	66	9	11	16	5	1	2	11	5	3	7	—	66	—	13	2	—	11	7	1	—	2	238	
Relatives accompanying patients	562	9	78	27	2	—	9	3	18	—	1	—	—	—	3	—	1	28	30	9	9	3	792	
TOTAL	9,989	5,483	2,887	831	1,944	1,438	1,947	2,367	1,111	1,593	933	114	10,361	3,467	1,091	1,568	1,848	3,478	1,223	763	466	505	82,55,489	
Operations under general anæsthetic	1,587	401	256	196	218	178	248	216	256	171	266	7	3,094	—	240	155	127	500	170	118	89	83	8,576	



TABLE XXIV.—ANALYSIS OF MILITARY CASES (1916).

NAME OF HOSPITAL.	Number of Military Patients admitted (including Prisoners of War).	Number of Military Cases discharged Fit for Duty (or, if Prisoners of War, to Prisoners of War Camp).	Number of Military Cases discharged to Convalescent Homes, or Camps.	Number of Military Cases discharged to England.	Number of Military Cases transferred to other Hospitals.	Number of Military Cases which died.	Number of Patient-days for Military Patients (including Prisoners of War).
Alexandria ... ..	1,232	643	370	84	43	63	27,300
Suez ... ..	3,386	1,226	1,026	40	948	22	45,475
Port Said ... ..	750	683	9	—	41	17	13,317
Port Said (Infect.)	82	79	—	—	3	—	1,447
Tanta ... ..	303	280	21	18	13	—	5,291
Damanhûr ... ..	330	225	31	5	69	—	7,542
Mansûra ... ..	139	112	24	6	9	—	3,455
Zagazig ... ..	1,017	816	28	16	131	12	20,633
Shibîn el Kôm ...	57	50	3	—	4	—	1,290
Benha ... ..	582	469	13	—	66	—	10,644
Mersa Matrûh ...	60	59	—	—	—	1	797
Qasr el 'Aini ...	210	166	63	30	33	1	3,544
Fever Hospital ...	106	55	—	—	28	23	2,649
Beni Suef ... ..	395	279	14	—	101	1	7,191
Faiyûm ... ..	1,081	582	118	—	360	6	15,500
Minya ... ..	1,125	326	415	—	344	11	13,253
Asyût ... ..	1,404	742	—	—	571	11	24,068
Sohâg ... ..	442	247	3	—	158	2	5,799
Qena ... ..	81	18	—	—	54	—	1,555
Isna ... ..	89	72	13	—	—	—	1,116
Aswân ... ..	26	13	4	—	1	—	372
Total for 1916 ...	12,897	7,142	2,155	199	2,977	170	212,238
Total for 1915 ...	14,851	4,459	7,769	1,262	816	212	306,540
Total for 1914 ... (Sept., Oct., Nov., Dec.)	536	438	—	10	74	14	8,107
Total from commencement of war to end of 1916 ... ..	28,284	12,039	9,924	1,471	3,867	396	526,885

TABLE XXV.—NUMBER OF MILITARY CASES ADMITTED TO EACH HOSPITAL FROM COMMENCEMENT OF WAR TO THE END OF 1916.

NAME OF HOSPITAL.	Number of Military Patients admitted (including Prisoners of War).	Number of Military Cases discharged Fit for Duty (or, if Prisoners of War, to Prisoners of War Camp).	Number of Military Cases discharged to Convalescent Homes, or Camps.	Number of Military Cases discharged to England.	Number of Military Cases transferred to other Hospitals.	Number of Military Cases which died.	Number of Patient-days for Military Patients (including Prisoners of War).
Alexandria ... ..	2,967	957	1,142	525	167	137	84,381
Suez ... ..	5,752	2,940	1,067	335	1,233	53	79,359
Port Said ... ..	2,837	1,313	1,062	115	181	61	56,715
Port Said (Infectious)	98	79	—	—	3	1	1,748
Tanta ... ..	1,251	765	262	128	81	1	28,661
Damanhûr ... ..	1,025	612	151	75	143	5	23,406
Mansûra ... ..	699	484	129	47	39	—	17,357
Zagazig ... ..	1,696	1,153	151	148	193	14	36,856
Shibîn el Kôm ...	423	254	105	30	18	—	11,186
Benha ... ..	1,081	755	141	38	73	3	19,289
Mersa Matrouh ...	60	59	—	—	—	1	797
Qasr el 'Aini ...	5,346	166	5,147	30	33	53	90,138
Fever Hospital ...	333	183	—	—	114	36	7,198
Beni Suef ... ..	395	279	14	—	101	1	7,191
Faiyûm ... ..	1,154	622	118	—	360	6	16,440
Minya ... ..	1,125	326	415	—	344	11	13,253
Asyût ... ..	1,404	742	—	—	571	11	24,068
Sohâg ... ..	442	247	3	—	158	2	5,799
Qena ... ..	81	18	—	—	54	—	1,555
Isna ... ..	89	72	13	—	—	—	1,116
Aswân ... ..	26	13	4	—	1	—	372
TOTAL ... ..	28,284	12,039	9,924	1,471	3,867	396	526,885



TABLE XXVI.—COMPARATIVE ANNUAL STATISTICS.

YEAR.	Number of Beds.	Number of In-Patients.	Number of Days of Treatment.	Number of New Out-Patients.	Number of Out-Patients' Visits.	Total Cost of Maintenance.		Cost per Bed per Annum.		Cost per Patient-day.
						L.E.	M.	L.E.	M.	
1908	2,263	31,802	556,543	—	—	—	—	—	—	—
1909	2,491	34,221	598,539	144,509	353,409	—	—	—	—	—
1910	2,385	35,065	579,796	152,733	312,152	—	—	—	—	—
1911	2,385	37,018	621,350	173,401	385,062	—	—	—	—	—
1912	2,346	38,887	614,921	192,227	424,707	77,992	867	33	245	127
1913	2,409	42,794	627,813	207,882	417,845	83,698	539	34	744	133
1914	2,485	44,914	681,680	179,338	346,673	92,189	050	37	098	135
1915	3,320	50,483	858,878	152,329	340,774	114,843	117	34	591	134
1916	3,825	55,489	946,557	178,788	392,961	123,379	860	32	256	130

## 2. GOVERNMENT DISPENSARIES.

The number of Government dispensaries managed by the Department of Public Health during 1916 was the same as in 1915, *i.e.* 44.

The dispensaries, however, at Siwa Oasis, Bahariya Oasis and Dakhla Oasis were closed on the occupation of these oases by the Sennussi forces.

The number of patients treated free of charge in these forty-four dispensaries was 38,579 as compared with 41,258 in 1915, a decrease of 2,679.

This decrease was due to the closing of the dispensaries at Siwa, Bahariya and Dakhla.

The total receipts for the year amounted to L.E. 589·555 milliemes as compared with L.E. 656·164 milliemes in 1915, a decrease of L.E. 66·609 milliemes.

This decrease in receipts was due to the same reason as the decrease in the number of patients treated gratuitously.

TABLE XXVII.—OUT-PATIENTS TREATED GRATUITOUSLY IN GOVERNMENT DISPENSARIES DURING 1916.

DISPENSARY.	Number of Patients.	DISPENSARY.	Number of Patients.
		<i>Brought forward</i> ... ..	23,387
Rosetta ... ..	852	Abu Qurqās... ..	1,797
El 'Atf ... ..	1,991	Wasta ... ..	1,846
Ityāi el Bārūd ... ..	2,308	Dairūt ... ..	943
El Dilingāt ... ..	1,096	Manfalūt ... ..	2,385
Shubra Khit ... ..	455	Abnūb ... ..	786
Baltim (Burullus) ... ..	392	Abu Tig ... ..	425
Barrage ... ..	131	El Badāri ... ..	1,425
Fariskūr ... ..	184	Tema ... ..	1,235
Tel el Kebir ... ..	171	Akhmim ... ..	1,033
Kafr el Sheikh ... ..	297	Girga ... ..	1,219
Fūa ... ..	567	Baliāna... ..	312
Abu Hummus ... ..	5,334	Bassiūn... ..	30
El Santa ... ..	435	Nag' Hammādi ... ..	437
Quweisna ... ..	304	Dishna ... ..	70
Shibin el Qanātir ... ..	999	Qūs ... ..	164
Mataria (Menzala) ... ..	78	Quseir ... ..	368
Kafr el Dauwār ... ..	75	Idfu ... ..	165
El Saff ... ..	108	El Dirr... ..	88
Biba ... ..	1,520	Siwa Oasis ... ..	—
Itsa ... ..	442	Bahariya Oasis ... ..	—
Beni Mazār ... ..	4,714	Dakhla Oasis ... ..	—
Samalūt ... ..	934	Kharga Oasis ... ..	464
<i>Carried forward</i> ... ..	23,387	TOTAL ... ..	38,579



TABLE XXVIII.—DISPENSARIES' RECEIPTS, 1916.

DISPENSARY.	RECEIPTS.		DISPENSARY.	RECEIPTS.	
	L.E.	M.		L.E.	M.
			<i>Brought forward</i> ...	346	274
Rosetta ... ..	13	896	Abu Qurqās ... ..	15	610
El 'Atf ... ..	25	325	Wasta ... ..	9	29
Ityāi el Barūd ... ..	13	677	Dairūt... ..	7	141
El Dilingāt ... ..	19	677	Manfalūt ... ..	26	140
Shubra Khit ... ..	12	465	Abnūb... ..	4	105
Baltim (Burullus) ... ..	5	497	Abu Tig ... ..	18	550
Barrage ... ..	5	575	El Badāri ... ..	15	220
Fariskūr ... ..	9	371	Tema ... ..	25	640
Tel el Kebīr ... ..	11	246	Akhmim ... ..	10	183
Kafr el Sheikh ... ..	7	615	Girga ... ..	17	870
Fūa ... ..	17	78	Baliāna ... ..	5	775
Abu Hummus ... ..	1	648	Bassiūn ... ..	11	890
El Santa ... ..	21	554	Nag' Hammādi... ..	15	62
Quweisna ... ..	3	670	Dishna ... ..	27	277
Shibin el Qanātir ... ..	22	24	Qūs ... ..	11	393
Mataria (Menzala) ... ..	22	370	Quseir... ..	7	849
Kafr el Dauwār ... ..	7	728	Idfu ... ..	8	195
El Saff ... ..	21	165	El Dirr ... ..	3	685
Biba ... ..	51	703	Siwa Oasis... ..	—	—
Itsa ... ..	5	896	Bahariya Oasis... ..	—	435
Beni Mazār ... ..	30	376	Dakhla Oasis ... ..	—	190
Samalūt ... ..	16	718	Kharga Oasis ... ..	2	42
<i>Carried forward</i> ... ..	346	274	<b>TOTAL</b> ... ..	589	555

### 3. SCHOOLS FOR *DAYAS*.

The six training schools for native midwives (*dayas*) continue to work well. As four of the matrons were absent on leave last summer and the schools were shut for this time, they only show the result of eight or nine months' work.

The question of the practicability of supplying *locums* during the holidays of the matrons another year is a question still undecided. The difficulties inherent to work of this sort make the choice of suitable substitutes for a short period most difficult.

#### BUILDINGS.

The school at Sohâg has been moved into a commodious house on the river front, as dangerous cracks appeared in the flats last occupied. There is sufficient accommodation in the building for a children's dispensary also, when the Provincial Council have sufficient funds to create a budget for this branch of work.

At Minya also serious cracks appeared during the high Nile and the re-opening of the school was somewhat delayed while temporary repairs were effected. It is expected that these will have to be properly attended to next summer, as the building is not considered dangerous and is, in other respects, suited for the work.

At Mansūra the school is now established in a house specially adapted for the *dayas*. It is in a central position in the town and most convenient.

At Zagazig extra accommodation is badly needed ; it is hoped shortly to have more room by renting the adjoining flat now used as a girls' school.



#### ATTENDANCES.

The number of cases applying for the attendance of the school pupils independently of the town *dayas* steadily increases.

The total number of cases attended by the schools was 2,197.

The proportion of abnormal to normal deliveries was about 1 in 10 (176 out of 1,870).

The total number of visits to patients in their homes by the matrons and pupil *dayas* was 28,119.

Although in many cases the opposition to new methods is still very strong, especially among the old *dayas*, there is evidence that confidence is growing among the patients themselves in favour of cleanliness and skill.

During last summer the prevalence of typhus in the provinces added largely to the work of the *dayas*' schools, as the matrons were frequently called to attend cases of premature labour brought on by the fever, for which no treatment had previously been sought.

The analysis of abnormal cases shows practically the same class of complication as obtains in Europe, though perhaps transverse presentations are somewhat more frequent.

In addition to attendance on childbirth, the matrons have a large number of women seeking advice for gynaecological troubles; as many as 300 old and 90 new have attended in a month at one maternity centre. Any cases needing more than simple medicines and douching are recommended to go to the Government hospital.

As accommodation for one or two in-patients has been supplied, difficult cases can now be admitted. The appliances available at the school make the treatment by the doctor easier than in the patients' own homes and the cases form valuable teaching material for the pupils. The number of in-patients during the year was 31.

#### PUPILS.

130 *dayas* have been trained and taken their certificates this year. The candidates for the schools are improving in type. Younger and brighter pupils are coming in as the work is becoming better known, and it is gratifying to note that among those trained were a Syrian, an Armenian, two Greeks, and two Jewesses, who could all read and write, as well as a young Egyptian girl who had had some previous education, so it is hoped that gradually a better type of *daya* will exist in the larger towns.

The schools, besides training the pupils in their special work of midwifery, are also an educational centre, and are valuable as reaching a class of girls who do not attend ordinary schools. Most of the women on admission, being unable to sew, are taught sewing as well as washing, ironing and general housework.

Besides this, the visits to the patients in their own homes, which this year have numbered over 28,000, are of great value in promoting cleanliness. Also, the matrons often detect early cases of illness among the children in the houses where they visit and can advise the mothers to take them to the dispensaries, the two institutions thus working hand in hand.

Encouraging accounts of the work of past pupils are reported by doctors in different Markazes.

In five Mudiriyas an improved selection of candidates has been rendered possible by the matrons personally visiting the larger towns of the province and making a preliminary list of women suitable for training, and a register of candidates is now being compiled in each province. At first the schools, being new institutions and their workings unknown, they were not understood by the *jellahin*. The pupils then were mostly old women and there was some difficulty in getting any pupils at all, but it is gratifying to find that now there is competition for admission and applications are made ahead by candidates for



training. As the number of women who can be admitted each year is limited, it is obviously desirable to get the best material possible, though the successful practice of the pupils after training seems to depend largely on the *daya* inheriting some relative's clientele.

#### GENERAL NOTES.

Much help has been given to the matrons by the doctors from Government hospitals and also by private practitioners in the towns; and in cases occurring outside the bandar by the Markaz doctors. The lectures still given by the hospital doctors are a great assistance to the matrons.

It is hoped that new schools will commence at Damanhûr and Faiyûm early next year, the preparations for opening being nearly complete.

It was intended to start a *dayas'* school in Beni Suef in 1917 in the building bought by the committee of the Dispensary Fund, but it is to be regretted that this scheme has been again postponed, the Provincial Council considering their financial position does not allow of the necessary expenditure.

The building at Asyût is being carried on and it is probable it will be finished by next winter, when it is hoped a *dayas'* school may be opened there.

The passing of a Midwives Act to control the work of *dayas* and midwives throughout Egypt is badly needed.

The *dayas* of the chief towns have been inspected and it is a testimony to the strong constitution of the Egyptian women that any of their patients survive their ministrations, though the number of patients applying for treatment for the after troubles caused by bad midwifery is sufficient evidence of their lack of skill.

In several cases where *dayas* were found blind or quite incapacitated their certificates were withdrawn.

Practically nothing, however, can be done to deal with the work of these women until there is some legislation for their control. Hence the urgent need for the passing of a Midwives Act.

It would be a great assistance if the Egyptian ladies would interest themselves in the dispensaries and maternity work in the provincial towns.

Much help could be given by the formation of a ladies' guild or club in each Mudiriya town. This guild could supply small garments and old linen, etc. for the many destitute cases that come for treatment, as the best results are often hindered by lack of proper clothing and nourishment, which naturally cannot be supplied from Provincial Councils' funds.

Therefore it is suggested that the chief ladies of the towns might organize themselves to form benevolent societies to work in conjunction with the matrons of the maternity homes and dispensaries.

In view of the proposed scheme of utilizing the Memorial Fund to the late Lord Kitchener in establishing a medical college for women, it is hoped that a hospital for women may be shortly started in Cairo.

From the experience of other training schools for medical women in the East it is strongly urged that this hospital should at once be started, so as to have it well established and the necessary clinical material at hand by the time that it is possible to start the college and that there are candidates ready to enter.

This hospital should of course include a maternity charity, and as it would be run on harem lines would naturally reach a huge population which the present accommodation at Qasr el 'Aini does not touch.

As building is at the moment out of the question, a women's hospital and maternity could well be started in a rented house till after the war and would supply a much needed want by training educated midwives, etc.



TABLE XXIX.—SCHOOLS FOR "DAYAS."

CASES.	Tanta.	Zagazig.	Mansûra	Shebin.	Minya.	Sohâg.
Abortions ... ..	8	30	41	24	4	1
Deliveries ... ..	331	552	303	339	221 <sup>†</sup>	124
B.B.A. ... ..	11	21	19	29	85	54
Primipara ... ..	47	97	64	54	37	27
Abnormal or complicated ... ..	31	46	29	43	22	5
Premature births ... ..	18	24	18	12	10	5
Still-born ... ..	17	27	17	12	9	10
Deaths { Mother ... ..	1	—	1	2	1	2
{ Child ... ..	—	8	3	5	7	2
In-patients ... ..	10	6	6	8	1	—
Total number of cases... ..	350	603	363	392	310	179
Total number of visits of matrons and <i>dayas</i> ... ..	4,143	6,945	6,477	3,862	2,913	3,779
Number of working days ... ..	250	318	335	259	208	230
Number of <i>dayas</i> trained ... ..	17	36	28	19	18	12

TABLE XXX.—NUMBER OF "DAYAS" WHO PASSED EXAMINATION AND THOSE WHO FAILED IN 1916.

	Passed.	Failed.	Total.
Tanta ... ..	17	† 2	19
Zagazig ... ..	36	—	36
Mansûra ... ..	* 28	† 1	29
Shibin el Kôm ... ..	19	2	21
Minya ... ..	18	1	19
Sohâg ... ..	12	—	12
TOTAL ... ..	130	6	136

\* 1 *Daya* not examined.

† 1 *Daya* selected from Damanhûr in order to be appointed as a Staff *Daya* in the new school to be opened shortly there.

Number of Egyptian midwives who attended midwifery course in the maternity homes ... ..	136
Number of those who passed the examination ... ..	130
"          " failed ... ..	6



TABLE XXXI.—ANALYSIS OF ABNORMAL CASES OCCURRING AMONG THE 2,197 ATTENDANCES OF THE "DAYAS" SCHOOLS, 1916.

<i>Multiple Births.</i>		<i>Premature Births.</i>	
Twins...	15	Viable ...	87
Triplets ...	1	Non-viable ...	108
<i>Abnormal Presentations.</i>		<i>Complications.</i>	
Difficult breech ...	12	Accidental hæmorrhage ...	4
Footling ...	3	Post partum " ...	12
Face ...	5	Adherent placenta ...	9
Brow ...	1	Contracted pelvis... ..	5
Cord ...	4	Hydramnios ... ..	1
Transverse ...	22	Hydrocephalus ... ..	2
Vertex and hand ...	2	Hydatiform mole ... ..	1
Placenta previa ...	9	Monster... ..	6
Forceps ...	11	Eclampsia ... ..	3
		Prolapse of uterus ... ..	1
		Ruptured perineum ... ..	2
<i>Illnesses complicating Puerperium.</i>		<i>Maternal Deaths.</i>	
Puerperal fever ...	8	Heart disease ... ..	1
Ovarian abscess ...	1	Puerperal fever ... ..	2
Uterine tumour ...	1	Typhus ... ..	2
Heart disease ...	1	Aneurism ... ..	1
" " and hemiplegia ...	1	Ovarian abscess ... ..	1
Aneurism ...	1		
Albuminuria ...	1		
Pneumonia ...	1		
Typhoid ...	2		
Typhus ...	10		
Plague ...	2		
Fever (relapsing, etc.) ...	6		

#### 4. CHILDREN'S DISPENSARIES.

All the dispensaries have been in full work this year, except two which were closed for a short period when structural repairs and painting were being done.

##### BUILDINGS.

At Beni Suef the committee of the Dispensary Fund took the occasion of a suitable offer to purchase a large house which is in a convenient position near the railway station and contains sufficient room for the school for *dayas* which it was intended to start in 1917. After a complete remodelling of the sanitary installation, the dispensary was transferred to the new building in May.

At Minya serious cracks in the building occurred, which necessitated extensive repairs, after which the whole dispensary was freshly painted.

At Asyût work has been recommenced on the new building after having been suspended since the summer of 1914. It is hoped that it may be finished and opened before the end of 1917, as the present hired house is in a bad state of repair. The new building is designed to accommodate a school for *dayas* also.

The plans for the new building at Faiyûm will shortly be put up for tender and it is hoped to get the work well under weigh this year on the site which adjoins the new Ophthalmic Hospital.

At Damanhûr it is hoped very shortly to open both a dispensary and a school in a new building which is being specially adapted for the purpose.

At Port Said and Tanta a small amount of painting was done.

All the other dispensaries are housed in hired buildings.



### ATTENDANCES.

The numbers attending daily are sufficient proof of the need of these establishments and that it was not merely the novelty of the work that attracted the patients at first. A slight falling-off in the number of patients from outlying villages in a few cases seems to be due to the present inconvenient train services, but in the totals for the year there is a steady increase. Many women who attended the dispensary when first opened are still coming with the more recent additions to their families. The total number of attendances at the dispensaries during the year was 388,810; of these, 72,223 were new, being an increase of 133,718 and 23,300 respectively on the figures for last year. There is much scope for further development in the formation of more branch dispensaries and it is hoped that these will be started in several of the provinces when increased funds and a more convenient railway time-table render it possible.

The seasonal curve of the different groups of illnesses (abdominal, chest, skin, etc.) seems to correspond for most of the provinces, but some districts seem more prone to certain diseases than others, *i.e.* bilharzia and rheumatism with heart complications are frequent in Beni Suef district, malaria in Faiyûm, favus and other skin diseases in Asyût.

### DOCTORS' VISITS.

In addition to the services of the Medical Officers of the Government hospitals and Markazes in seeing and treating serious cases, thanks are also due to many private practitioners who attend regularly or when required at the dispensaries and others who prescribe for patients who are too late for the hospital out-patients. The help of these doctors is of great assistance and encouragement to the matrons in their work.

The Medical Officers from the ophthalmic hospitals also visit several of the dispensaries where the distance makes it difficult for the patients to attend both hospital and dispensary on the same day.

### DRUGS.

The purchase of drugs still continues a difficulty, but arrangements are being made for next year, whereby they will be able to be bought in bulk through the Department of Public Health. This should ensure a great improvement in the quality, the present system of buying in the cheapest market being most unsatisfactory as regards the control of their purity.

TABLE XXXII.—CHILDREN'S DISPENSARIES.

DISPENSARY.	New Cases.	Old Cases.	Total Attendances.	Period.
Tanta ... ..	8,578	29,415	37,993	297 days
Zagazig ... ..	2,322	12,028	14,350	286 "
Mansûra ... ..	4,663	22,664	27,327	296 "
Shibîn el Kôm ... ..	4,930	31,082	36,012	297 "
Port Said ... ..	10,158	40,018	50,176	301 "
Giza ... ..	4,743	23,492	28,235	291 "
Beni Suef ... ..	5,533	25,934	31,467	283 "
Wasta ... ..	4,375	19,103	23,478	294 "
Biba ... ..	2,799	18,418	21,217	294 "
Minya ... ..	7,728	19,540	27,268	290 "
Asyût ... ..	9,088	60,688	69,776	286 "
Faiyûm ... ..	5,306	18,205	23,511	298 "
Total in 1916 ...	70,223	320,587	390,810	—
Total in 1914 ...	47,601	202,088	294,689	—
Total in 1915 ...	48,923	206,159	255,082	—
Increase over 1915 ...	21,300	114,428	135,728	—



TABLE XXXIII.—CHILDREN'S DISPENSARIES.

Cases.	Tanta.	Zagazig.	Mansûra.	Shibîn.	Port Said.	Giza.	Beni Suef.	Wasta.	Biba.	Minya.	Asyût.	Faiyûm.
Eyes ... ..	—	364	—	1,054	2,151	330	22	663	841	1,916	2,850	733
Skin ... ..	1,107	382	596	1,196	950	788	1,022	873	500	780	1,324	764
Chest ... ..	888	166	584	299	936	635	1,118	204	225	727	511	402
Abdomen ... ..	4,040	999	2,170	1,490	4,907	1,658	2,462	2,266	994	1,534	3,533	1,660
Surgical ... ..	538	138	167	125	470	316	265	47	96	73	588	80
General ... ..	1,875	230	1,119	705	379	777	503	310	130	2,676	244	1,592
Infectious ... ..	130	43	27	61	365	239	141	12	13	22	38	75
Total number of new cases...	8,578	2,322	4,663	4,930	10,158	4,743	5,533	4,375	2,799	7,728	9,088	5,306
Number of old cases ... ..	29,415	12,028	22,664	31,082	40,018	23,492	25,934	19,103	18,418	19,540	60,688	18,205
Total ... ..	37,993	14,350	27,327	36,012	50,176	28,235	31,467	23,478	21,217	27,268	69,776	23,511
Number of working days ... ..	297	286	296	297	301	291	283	294	294	290	286	298

### III.—REPORT ON SECTION III.

#### OPHTHALMIC HOSPITALS.

These hospitals forming the subject of a separate annual report, the outlines only of the work done by them will be given here.

*Hospitalization of Military Patients.*—The various travelling units which were concentrated at Glymenopoulo and latterly at Giza to provide hospital accommodation for 650 men were demobilized in February. The total number of patients admitted was 5,965, of whom about half were cases of wounds and about half were cases of sickness.

*Statistics.*—The number of out-patients treated at the various hospitals was 68,304; the total number of out-patient attendances was 849,366; the average number of visits of each patient was 13·4; the number of operations performed was 54,205; the number of in-patients was 2,454, to whom 57,282 diets were issued.

*Government Permanent Hospitals.*—The number of permanent hospitals is now ten. The Fayûm hospital was opened on June 5th. The provinces still unprovided with hospitals are Giza, Qaliubia, Qena, Aswân.

*Provincial Council Permanent Hospitals.*—Three permanent hospitals are maintained by the Provincial Council of Gharbia at Mahalla el Kubra, Kafr el Zayât and Santa.

*Government Travelling Hospitals.*—The two hospitals originally endowed by Sir E. Cassel carried on work at Giza, Kafr el Dauwâr and Qena.

*Provincial Council Travelling Hospitals.*—The Provincial Councils of Daqahliâ and Assiût each maintains a travelling hospital.

*School Inspection and Treatment.*—The school ophthalmic clinics at nine of the provincial primary schools have been carried on during the year satisfactorily.

TABLE XXXIV.—SOURCES OF PROVISION AND MAINTENANCE OF HOSPITALS.

	PROVIDED BY	MAINTAINED BY	DATE OPENED.
<i>Permanent :—</i>			
Tanta ... ..	Government grant ...	Government grant... ..	1908
Assiût ... ..	Public subscription and Government grant ...	" " ... ..	1911
Mansûra... ..	Gift by Badrawi Pasha ...	" " ... ..	1912
Beni Suef ... ..	Public subscription ...	" " ... ..	1912
Zagazig ... ..	Provincial Council... ..	" " ... ..	1913
Mahalla el Kubra ... ..	" " ... ..	Provincial Council... ..	1913
Kafr el Zayât ... ..	" " ... ..	" " ... ..	1913
Damanhûr ... ..	" " ... ..	Government grant... ..	1914
Shebin el Kôm ... ..	Public subscription ...	" " ... ..	1914
Sohâg ... ..	" " ... ..	" " ... ..	1914
Minia ... ..	Provincial Council... ..	" " ... ..	1915
Santa ... ..	" " ... ..	Provincial Council... ..	1915
Fayûm ... ..	" " ... ..	Government grant... ..	1916
<i>Travelling :—</i>			
No. 1 Camp ... ..	Sir Ernest Cassel ... ..	Sir Ernest Cassel ... ..	1904
" 2 ... ..	" " ... ..	" " ... ..	1905
Assiût ... ..	Provincial Council... ..	Provincial Council... ..	1912
Daqahliâ... ..	" " ... ..	" " ... ..	1913
<i>Travelling Hospitals closed for Financial Reasons :—</i>			
Gharbia No. 1 ... ..	Provincial Council... ..	Provincial Council... ..	1911
" " 2 ... ..	" " ... ..	" " ... ..	1911





## IV.—REPORT ON SECTION IV.

### 1. INFECTIOUS DISEASES.

The chief features to be remarked in connection with infectious diseases during 1916 are:—

- (i) The considerable increase in the case-incidence from typhus fever.
- (ii) The considerable increase in the case-incidence from relapsing fever.
- (iii) The large number of plague cases which occurred during the year and the large number of localities infected.
- (iv) A small outbreak of cholera.

#### (i) TYPHUS FEVER.

The number of typhus fever cases which occurred in Egypt during 1916 is nearly equal to the number of cases of this disease which occurred in the country during the previous three years. The following list shows the number of typhus cases and deaths reported during the last five years:—

TABLE XXXVI.—FIVE-YEAR COMPARISON OF TYPHUS FEVER CASES.

YEAR.	Cases.	Deaths.	Percentage.
1912 ... ..	5,380	1,658	30·2
1913 ... ..	4,936	1,438	28·9
1914 ... ..	9,508	2,533	26·6
1915 ... ..	17,096	4,216	25·2
1916 ... ..	30,507	7,095	23·2

The continuous drop in the death-rate is probably the result of better reporting of the disease.

As last year, the greater part of typhus cases occurred in Lower Egypt. The Mudiriyas which suffered most from the disease were Gharbiya, in which 5,652 cases were reported, and Daqahliya, where 5,268 cases occurred.

#### (ii) RELAPSING FEVER.

The number of relapsing fever cases which occurred in 1916 is the largest recorded in this country.

The following table shows the number of cases and deaths due to this disease reported during the last five years:—

TABLE XXXVII.—FIVE-YEAR COMPARISON OF RELAPSING FEVER CASES.

YEAR.	Cases.	Deaths.	Percentage.
1912 ... ..	220	19	8·6
1913 ... ..	342	45	13·4
1914 ... ..	211	28	13·1
1915 ... ..	761	72	9·4
1916 ... ..	10,494	826	7·8

The increase of typhus fever and relapsing fever is the result partly of the depletion of the staff for war work and partly of the movement of native labourers employed on military works. The fall in the death-rate probably indicates improvement in the reporting of cases.

#### (iii) PLAGUE.

The total number of declared cases of plague in 1916 was 1,702 as compared with 235 in 1915. The number of deaths was 828, showing a mortality of 48·7 per cent compared with 120 or 51 per cent in 1915. This is the largest number of cases reported in Egypt in one year.



The following list shows the number of cases, deaths and localities infected during the five years in the past decade in which the disease was most prevalent.

TABLE XXXVIII.—FIVE-YEAR COMPARISON OF PLAGUE CASES.

YEAR.	Cases.	Localities infected.	Deaths.	Deaths per cent.
1907 ... ..	1,253	108	914	72·9
1908 ... ..	1,511	146	780	51·6
1910 ... ..	1,238	148	615	49·7
1911 ... ..	1,656	153	1,041	62·9
1916 ... ..	1,702	178	828	48·7

The Mudiriya chiefly affected were : Faiyûm, in which 726 cases occurred ; Asyût 296 ; Minya 285.

✓ The number of pneumonic cases which occurred in 1916 was 96 as compared with 178 in 1911 and 147 in 1910. Of these 96 cases, three occurred in Alexandria and 93 in Upper Egypt.

As already stated in the report for the year 1915, the services of the Director of the Epidemic Section were requisitioned by the military authorities. In April 1916 he returned to duty with the Department.

#### (iv) CHOLERA.

A small outbreak of cholera occurred in August among the troops operating in the Sinai Peninsula. The disease was contracted as a result of the occupation, after the battle of Romani, of territory previously occupied by the Turks. The great majority of the cases were contracted during the pursuit of the routed enemy.

15 cases were bacteriologically diagnosed as cholera, of which 2 died. The first case occurred on August 8, 1916, and the last on August 23, 1916.

The small extent of the epidemic was doubtless due to the prompt recognition of the disease and the efficient measures taken by the Army medical authorities to suppress it.

The outbreak was of particular concern to this Department in view of the large number of Egyptian workmen employed by the military authorities on contract and the consequent movement of time-expired men back to their villages. On the removal of the quarantine measures taken by the military authorities in Sinai a system of passenger control for returning workmen was introduced (this is still in force and has been of much use in limiting the amount of reimported infectious disease). In addition, all preparations for an outbreak of cholera in the country were at once completed. Steps were taken to obtain legal power for accelerated action and a new decree was put forward. It has not yet become law.

No case occurred west of the Canal.

In September 1916 a small outbreak of para-cholera took place among the patients in a military convalescent hospital in Alexandria. It was apparently spread by a carrier from Mesopotamia. The military medical authorities have taken steps to collate the bacteriological results in this outbreak with those obtained from cases of the cholera group in Mesopotamia.

The number of cases was from 60 to 70. No deaths occurred and there were no cases outside the hospital.

The views of the Egyptian International Quarantine Board on this outbreak are set forth in the *procès-verbal* of their meeting held on December 5, 1916.

✓ The Department, believing that para-cholera is now a sufficiently defined class of disease has taken steps to have brought to the notice of the International Committee of Public Health, Paris, the questions of the possibility of arriving at an accepted definition of the disease and of the international measures which will in future require to be taken in regard to this disease.

(a) NOTIFIABLE INFECTIOUS DISEASES IN GENERAL.

TABLE XXXIX.—NOTIFIABLE INFECTIOUS DISEASES.

GOVERNORATES.	SMALLPOX.		MEASLES.		DIPHTHERIA.		TYPHOID.		TYPHUS.		RELAPSING.		PLAQUE.		SCARLET FEVER.		CEREBRO-SPINAL MENINGITIS.		CHOLERA.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Cairo ... ..	331	118	1,494	624	1,046	343	1,998	562	2,011	894	1,089	62	2	—	96	2	78	44	—	—
Alexandria ... ..	12	3	303	72	108	17	676	292	1,088	348	509	24	61	35	55	4	15	16	—	—
Damietta ... ..	1	2	80	23	11	8	11	7	408	54	—	—	—	—	—	—	—	—	—	—
Port Said ... ..	19	8	354	164	39	13	82	30	94	53	163	18	32	19	10	1	2	2	1	1
Suez ... ..	24	1	203	5	69	9	73	12	1	—	2,348	104	1	—	36	—	21	8	—	—
Ismailia ... ..	10	1	3	2	29	23	29	16	44	11	3,420	236	—	—	—	—	6	5	—	—
Western Desert ... ..	—	—	—	—	—	—	4	—	264	28	41	2	—	—	—	—	—	—	—	—
TOTAL... ..	397	133	2,437	890	1,302	413	2,873	919	3,910	1,388	7,570	446	96	54	197	7	122	75	1	1









TABLE XXXIX.—NOTIFIABLE INFECTIOUS DISEASES (continued).

PROVINCE AND DISTRICT.	SMALLPOX.		MEASLES.		DIPHTHERIA.		TYPHOID.		TYPHUS.		RELAPSING.		PLAGUE.		SCARLET FEVER.		CEREBRO-SPINAL MENINGITIS.		CHOLERA.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
<i>Faiyûm Province:—</i>																				
Faiyûm ... ..	3	2	44	8	47	29	31	9	24	12	1	1	229	103	—	—	2	2	—	—
Itsa ... ..	2	—	10	5	3	3	2	—	31	12	—	—	256	111	—	—	—	—	—	—
Sinnûris ... ..	—	—	7	1	21	17	1	—	67	21	—	—	241	126	—	—	—	—	—	—
TOTAL ... ..	5	2	61	14	71	49	34	9	122	45	1	1	726	340	—	—	2	2	—	—
<i>Beni Suef Province:—</i>																				
Beni Suef ... ..	3	—	7	4	24	13	23	8	134	46	17	—	76	28	—	—	2	2	—	—
Biba ... ..	—	—	57	35	3	2	1	1	21	10	—	—	104	61	—	—	—	—	—	—
Wasta ... ..	—	—	8	1	3	3	1	1	3	1	8	—	2	—	—	—	—	—	—	—
TOTAL ... ..	3	—	72	40	30	18	25	10	158	57	25	—	182	89	—	—	2	2	—	—
<i>Minya Province:—</i>																				
Minya ... ..	3	1	27	4	33	9	23	8	45	20	28	5	118	38	—	—	—	—	—	—
Abu Qurqas ... ..	29	13	36	22	1	1	—	—	27	13	32	6	40	16	—	—	—	—	—	—
Samalût ... ..	3	—	—	—	—	—	—	—	24	14	5	—	93	56	—	—	—	—	—	—
Beni Mazâr ... ..	—	—	3	—	2	2	1	—	15	7	19	4	9	7	—	—	—	—	—	—
Bahariya Oasis ... ..	—	—	—	—	—	—	—	—	49	3	—	—	—	—	—	—	—	—	—	—
Maghâgha ... ..	—	—	51	17	4	4	—	—	37	9	1	—	6	2	—	—	—	—	—	—
Fashn ... ..	1	—	78	22	3	1	—	—	106	21	13	2	19	8	—	—	—	—	—	—
TOTAL ... ..	36	14	195	65	43	17	24	8	303	87	98	17	285	127	—	—	—	—	—	—
<i>Asyût Province:—</i>																				
Asyût ... ..	45	20	66	44	48	33	104	39	438	192	3	—	71	46	1	—	1	1	—	—
Mallawi ... ..	77	27	3	3	6	3	10	3	48	18	—	—	113	49	—	—	—	—	—	—
Dairût ... ..	—	—	2	1	6	4	1	1	107	48	—	—	110	47	—	—	—	—	—	—
Manfalût ... ..	13	2	6	2	7	3	7	1	296	55	26	1	2	2	—	—	—	—	—	—

[illegible]



The following diseases were also recorded :—

TABLE XL.

Disease.	Cases.	Deaths.
Chicken-pox ... ..	297	1
Whooping cough ... ..	542	97
Parotitis ... ..	1,941	23
Malaria ... ..	394	65
Anthrax ... ..	28	24
Leprosy ... ..	29	19
Malta fever ... ..	5	2
Bilious fever ... ..	4	2

(b) PLAGUE.

TABLE XLI.—DETAILS OF PLAGUE CASES.

TOWN OR DISTRICT.	GOVERNORATE OR PROVINCE.	Existing.	NEW CASES.			Deaths in Hospital.	Cured.	Remaining.	DEATHS OUT OF HOSPITAL.			TOTAL.
			Bubonic.	Septicæmic.	Pneumonic.				Bubonic.	Septicæmic.	Pneumonic.	
Egyptians.												
Alexandria ...	Governorate	—	31	—	1	17	15	—	10	1	2	45
Cairo ... ..	"	—	1	—	—	—	1	—	—	—	—	1
Port Said ... ..	"	—	24	—	—	12	12	—	4	—	—	28
Kafr el Zayât ...	Gharbiya ...	4	1	—	—	—	5	—	1	1	—	3
Minûf ... ..	Minûfiya ...	—	12	—	—	7	5	—	—	—	—	12
Shibîn el Kôm ...	"	—	6	—	—	4	2	—	2	—	—	8
Qalyûb ... ..	Qalyûbiya...	—	4	—	—	—	4	—	—	—	—	4
Embâba ... ..	Giza ... ..	—	7	—	—	1	6	—	3	—	—	10
El 'Aiyât ... ..	"	—	17	—	—	4	13	—	1	—	—	18
Giza ... ..	"	—	1	—	—	1	—	—	1	1	—	3
El Saff ... ..	"	—	1	—	—	1	—	—	—	—	—	1
Itsa ... ..	Faiyûm ... ..	—	198	9	1	63	145	—	35	13	—	256
Sinnûris ... ..	"	—	173	6	—	64	115	—	41	21	—	241
Faiyûm ... ..	"	—	176	6	—	56	126	—	33	14	—	229
Beni Suef ... ..	Beni Suef...	—	69	—	—	21	48	—	6	1	—	76
Beba ... ..	"	—	83	1	1	42	43	—	15	3	1	104
Wâsta ... ..	"	—	2	—	—	—	2	—	—	—	—	2
Samalût ... ..	Minya ... ..	4	55	—	11	29	41	—	13	2	12	93
Minya ... ..	"	—	106	3	—	29	80	—	6	—	3	118
Abu Qurqâs ...	"	—	36	—	—	12	24	—	4	—	—	40
Beni Mazâr ...	"	—	2	—	1	1	2	—	4	—	2	9
Fashn ... ..	"	—	16	—	1	6	11	—	2	—	—	19
Maghâgha ... ..	"	—	4	—	—	—	4	—	—	—	2	6
Dairût ... ..	Asyût ... ..	1	88	4	5	34	64	—	8	5	—	110
Mallâwi ... ..	"	2	88	1	—	25	66	—	23	1	—	113
Asyût... ..	"	—	35	1	3	14	25	—	4	14	14	71
Manfalût ... ..	"	—	1	—	—	1	—	—	—	—	1	2
Girga ... ..	Girga ... ..	—	6	—	31	30	7	—	4	1	4	46
Tahta ... ..	"	—	1	—	—	—	1	—	—	—	—	1
Balyana ... ..	"	—	1	1	—	1	1	—	—	—	—	2
Solîâg ... ..	"	—	1	—	—	—	1	—	—	—	—	1
Nag' Hammâdi...	Qena ... ..	—	1	—	—	1	—	—	—	—	—	1
Luxor ... ..	"	—	1	1	—	1	1	—	1	1	—	4
Aswân ... ..	Aswân ... ..	—	2	—	—	1	1	—	—	—	—	2
TOTAL ... ..		11	1,250	33	55	478	871	—	221	79	41	1,679
Foreigners.												
Alexandria ...	—	1	16	—	—	5	12	—	—	—	—	16
Cairo ... ..	—	—	1	—	—	—	1	—	—	—	—	1
Port Said ... ..	—	—	4	—	—	3	1	—	—	—	—	4
Suez ... ..	—	—	1	—	—	—	1	—	—	—	—	1
Shibîn el Kôm ...	—	—	1	—	—	1	—	—	—	—	—	1
TOTAL ... ..		1	23	—	—	9	15	—	—	—	—	23
GRAND TOTAL ...		12	1,273	33	55	487	886	—	221	79	41	1,702

Number of cases, 1,702 ; number of deaths, 828 ; number of cured, 886.





TABLE XLIII.—NUMBER OF CASES AND DEATHS OF PLAGUE.

Town or District.	Province.	Cases.	Deaths.
Alexandria Governorate ...	—	61	35
Port Said ...	—	32	19
Suez ...	—	1	—
Cairo ...	—	2	—
Kafr el Zayât ...	Gharbiya ...	3	2
Minûf ...	Minûfiya ...	12	7
Shibîn el Kôm ...	" ...	9	7
Qalyûb ...	Qalyûbiya ...	4	—
Imbâba ...	Giza ...	10	4
El Saff ...	" ...	1	1
El 'Aiyât ...	" ...	18	5
Giza ...	" ...	3	3
Itsa ...	Faiyûm ...	256	111
Sinnûris ...	" ...	241	126
Faiyûm ...	" ...	229	103
Beni Suef ...	Beni Suef ...	76	28
Biba ...	" ...	104	61
El Wâsta ...	" ...	2	—
Samâlût ...	Minya ...	93	56
Minya ...	" ...	118	38
Abu Qurqâs ...	" ...	40	16
Beni Mazâr ...	" ...	9	7
El Fashn ...	" ...	19	8
Maghâgha ...	" ...	6	2
Asyût ...	Asyût ...	71	46
Dairût ...	" ...	110	47
Mallawi ...	" ...	113	49
Manfalût ...	" ...	2	2
Girga ...	Girga ...	46	39
Tahta ...	" ...	1	—
El Balyana ...	" ...	2	1
Sohâg ...	" ...	1	—
Nag' Hammâdi ...	Qena ...	1	1
Luxor ...	" ...	4	3
Aswân ...	Aswân ...	2	1
TOTAL ...		1,702	828

TABLE XLIV.—RECAPITULATION OF PLAGUE STATISTICS, 1899-1916.

YEAR.	Cases.*	Deaths.*	Deaths per Cent.
1899 ...	93	45	48·0
1900 ...	127	60	47·2
1901 ...	205	102	49·5
1902 ...	481	291	60·0
1903 ...	303	160	52·7
1904 ...	854	501	58·6
1905 ...	266	181	68·0
1906 ...	631	475	75·2
1907 ...	1,253	914	72·9
1908 ...	1,511	780	51·6
1909 ...	513	207	40·5
1910 ...	1,238	615	49·7
1911 ...	1,656	1,041	62·9
1912 ...	884	441	49·9
1913 ...	654	304	46·5
1914 ...	219	111	50·7
1915 ...	235	120	51·0
1916 ...	1,702	828	48·7
TOTAL ...	12,825	7,176	56

\* Including deaths out of hospital.

TABLE XLV.—MONTHLY COMPARISON OF PLAGUE CASES AND MORTALITY DURING THE YEARS 1914, 1915, AND 1916.

MONTH.	1914						1915						1916					
	Existing from Previous Year.	Admissions to Hospital.	Died in Hospital.	Recovered.	Died out of Hospital.	Existing from Previous Year.	Admissions to Hospital.	Died in Hospital.	Recovered.	Died out of Hospital.	Existing from Previous Year.	Admissions to Hospital.	Died in Hospital.	Recovered.	Died out of Hospital.	Existing from Previous Year.	Admissions to Hospital.	Died in Hospital.
January ... ..	—	5	—	3	5	1	3	2	2	5	12	24	10	20	7	—	—	—
February ... ..	—	3	1	3	2	—	5	4	1	3	—	39	19	9	14	—	—	—
March ... ..	—	3	—	1	—	—	2	1	1	—	—	278	92	109	59	—	—	—
April ... ..	—	11	4	5	3	—	36	13	1	8	—	479	183	235	122	—	—	—
May ... ..	—	53	30	20	14	—	51	14	27	6	—	350	123	295	86	—	—	—
June ... ..	—	29	11	17	6	—	44	16	48	11	—	137	36	151	43	—	—	—
July ... ..	—	34	11	24	4	—	14	6	19	2	—	38	20	48	8	—	—	—
August ... ..	—	19	3	11	—	—	3	1	3	3	—	5	—	8	1	—	—	—
September ... ..	—	14	3	9	1	—	3	3	—	1	—	4	1	4	—	—	—	—
October ... ..	—	5	2	11	2	—	1	—	1	—	—	1	—	4	—	—	—	—
November ... ..	—	4	—	2	1	—	4	3	1	1	—	3	—	—	1	—	—	—
December ... ..	—	1	2	1	—	—	22	10	—	7	—	3	3	3	—	—	—	—
ANNUAL TOTAL ... ..	—	181	73	107	38	1	188	73	104	47	12	1,361	487	886	341	—	—	—

Percentage of deaths in hospital to admission.	1914	1915	1916
	40.3%	38.8%	35.8%



(c) MALARIA.

The following table shows the number of cases of the disease which have come under the notice of the Administration during the year:—

TABLE XLVI.—CASES OF MALARIA NOTIFIED DURING 1916.

	Number of Cases.		Number of Cases.
<i>Governorates :—</i>		<i>Brought forward ... ..</i>	345
Alexandria ... ..	8	<i>Provinces :—</i>	
Cairo ... ..	65	Daqahliya... ..	3
Damietta ... ..	1	Qalyūbiya... ..	67
Port Said ... ..	11	Giza ... ..	30
Suez ... ..	111	Beni Suef... ..	12
<i>Provinces :—</i>		Faiyūm ... ..	12
Gharbiya ... ..	12	Minya ... ..	7
Minūfiya ... ..	67	Asyūt ... ..	5
Sharqiya ... ..	61	Girga ... ..	1
Beheira ... ..	9	Qena ... ..	8
		Aswān ... ..	3
<i>Carried forward ... ..</i>	345	<i>TOTAL ... ..</i>	493

2. PILGRIMAGE.

In 1916 the Grand Cherif of Mecca declared the independence of the Hejaz from the Ottoman Empire. Consequently the route to the Hejaz was opened to Egyptian pilgrims. Owing to the difficulty of providing ships for pilgrims, the Ministry of Interior issued Circular No. 30 on August 24, 1916, in which it was laid down that the Government had only provided ships for 1,000 pilgrims and that applications to make the pilgrimage should be submitted before September 3, 1916, and that such applications would be accepted according to the order in which they were submitted.

1,076 pilgrims left for the Hejaz in addition to the Mahmal escort, which amounted to 728 persons.

They embarked at Suez for Jedda on September 24, 1916, on two steamers, the *Neguileh* and *Mansourah*.

The Mahmal and its escort were embarked on one of His Majesty's cruisers.

To safeguard the pilgrims against possible infection with cholera they were all vaccinated against this disease by Dr. Wilson of the Qasr el 'Aini School of Medicine.

Owing to the fact that Medina had remained in Turkish hands, no visit there was made.

At the beginning of the pilgrimage the Quarantine Board declared it infected, but later on, on the receipt of information *re* the satisfactory state of health in the Hejaz, the Board again declared it "net."

The health of all the pilgrims was good. On arrival at Suez, only 7 were found sick and admitted to Suez Hospital—2 from dysentery, 3 from fever and 2 surgery cases.

The result of the further observation in their villages was very satisfactory, as all the pilgrims were traced and observed.

3. PASSENGER AND IMMIGRANT CONTROL.

TABLE XLVII.—PASSENGERS WHO LANDED AT ALEXANDRIA FROM SHIPS COMING FROM CHOLERA-INFECTED COUNTRIES.

MONTH.	PASSENGERS FOR CAIRO.						PASSENGERS FOR INTERIOR.						PASSENGERS REMAINED AT ALEXANDRIA.						TRANSIT PASSENGERS.						TOTAL.					
	1st and 2nd Class.			3rd Class.			1st and 2nd Class.			3rd Class.			1st and 2nd Class.			3rd Class.			1st and 2nd Class.			3rd Class.			1st and 2nd Class.			3rd Class.		
	Found.	Not found.	Percentage found.	Found.	Not found.	Percentage found.	Found.	Not found.	Percentage found.	Found.	Not found.	Percentage found.	Found.	Not found.	Percentage found.	Found.	Not found.	Percentage found.	Found.	Not found.	Percentage found.	Found.	Not found.	Percentage found.	Found.	Not found.	Percentage found.	Found.	Not found.	Percentage found.
January ...	9	1	88	976	225	76	17	—	100	3,459	83	97	68	—	100	394	21	94	—	—	—	2	1	66	94	1	98	4,831	330†	93
February ...	4	—	100	61	3	95	—	—	—	464	4	99	—	—	—	61	—	100	—	—	—	—	—	—	4	—	100	586	7	98
March ...	4	—	100	85	3	96	4	—	100	474	8	98	10	—	100	481	16	96	—	—	—	—	—	—	18	—	100	1,040	27	97
April ...	4	—	100	2	—	100	1	—	100	1	—	100	9	—	100	230	—	100	—	—	—	7	—	100	14	—	100	240	—	100
May ...	4	—	100	1	—	100	—	—	—	2	—	100	19	—	100	129	—	100	1	—	100	—	—	—	24	—	100	132	—	100
June ...	1	—	100	93	4	95	1	—	100	69	11	86	6	—	100	427	12	97	—	—	—	5	1	83	8	—	100	594	28	95
July ...	13	—	100	735	9	98	30	—	100	205	1	99	54	—	100	7	12	98	1	—	100	33	—	100	98	—	100	1,678	22	98
August ...	9	—	100	179	—	100	31	—	100	277	—	100	32	—	100	338	2	99	—	2	—	—	—	—	72	2	97	794	2	99
September ...	13	—	100	71	—	100	45	—	100	107	—	100	45	—	100	186	2	98	—	—	—	—	—	—	103	—	100	364	2	99
October ...	17	—	100	66	—	100	53	—	100	46	—	100	54	—	100	157	—	100	—	—	—	—	—	—	124	—	100	269	—	100
November ...	2	—	100	14	—	100	7	—	100	62	—	100	8	—	100	889	—	100	—	—	—	—	—	—	17	—	100	965	—	100
December ...	—	—	—	1	—	100	—	—	—	22	—	100	4	—	100	23	—	100	—	—	—	—	—	—	4	—	100	46	—	100
<b>TOTAL ...</b>	<b>80</b>	<b>1</b>	<b>98</b>	<b>2,284</b>	<b>244</b>	<b>89</b>	<b>189</b>	<b>—</b>	<b>100</b>	<b>5,188</b>	<b>107</b>	<b>97</b>	<b>309</b>	<b>—</b>	<b>100</b>	<b>4,020</b>	<b>65</b>	<b>98</b>	<b>2</b>	<b>2</b>	<b>50</b>	<b>47</b>	<b>2</b>	<b>95</b>	<b>580</b>	<b>3</b>	<b>99</b>	<b>11,539*</b>	<b>418</b>	<b>96</b>

\* Including passengers sent to Mafrúza Camp and the Government Hospital.

† Out of 330 not found, 329 are Súdís coming from Madros, which is under "Supplementary Measures."

Total Passengers, 1st, 2nd and 3rd Classes	Found ...	12,119
	Not found ...	421
Total (general) ...	Found ...	12,540
	Not found ...	421
	<b>Percentage of Passengers Found, 96.</b>	



TABLE XLVIII.—STATISTICS OF PASSENGERS WHO LANDED AT PORT SAID FROM SHIPS COMING FROM CHOLERA-INFECTED COUNTRIES DURING 1916.

	1ST AND 2ND CLASS.			3RD CLASS AND DECK PASSENGERS.			
	Total.	Found.	%	Total.	Found.	Not found.	%
Cairo ... ..	7	7	100	38	37	1	97
Alexandria... ..	1	1	100	18	17	1	94
Interior ... ..	4	4	100	27	26	1	96
Port Said ... ..	31	31	100	216	215	1	99
TOTAL ... ..	43	43	100	299	295	4	98

NOTE.—One transit passenger to Port Said not found is not included above.

Total number of passengers ... ..	343
Total passengers found ... ..	339
Total passengers not found ... ..	5
Percentage found ... ..	98

TABLE XLIX.—PASSENGERS ARRIVING AT SUEZ PORT DURING 1916.

MONTH.	PASSENGERS UNDER <i>Arrêté</i> .			PASSENGERS UNDER SUPPLEMENTARY MEASURES.			PASSENGERS OTHER PORTS.	GENERAL TOTAL.
	Traced.	Not Traced.	TOTAL.	Traced.	Not Traced.	TOTAL.		
January ... ..	—	—	—	—	—	—	328	328
February ... ..	—	—	—	2	—	2	121	123
March ... ..	15	—	15	—	—	—	77	92
April ... ..	22	—	22	6	—	6	152	180
May ... ..	10	—	10	1	—	1	94	105
June ... ..	24	—	24	14	—	14	214	252
July ... ..	24	—	24	—	—	—	161	185
August ... ..	83	—	83	8	—	8	209	300
September ... ..	7	—	7	18	1	19	130	156
October ... ..	38	—	38	11	—	11	110	159
November ... ..	4	—	4	13	—	13	247	264
December ... ..	43	2	45	—	—	—	93	138
TOTAL ... ..	270	2	272	73	1	74	1,936	2,282

Number of passengers arrived during the year 1913 ... ..	10,071
" " " " 1914 ... ..	13,420
" " " " 1915 ... ..	4,354

#### DAMIETTA.

The monthly number of ships arriving at Damietta was as follows :—

		Brought forward ...	6
January ... ..	—	July ... ..	4
February ... ..	—	August ... ..	2
March ... ..	—	September ... ..	17
April ... ..	1	October ... ..	7
May ... ..	3	November ... ..	—
June ... ..	2	December ... ..	—
Carried forward ...	6	Total ...	36

All these ships arrived from Cyprus. They had 295 sailors on board.

#### 4. VACCINATIONS.

TABLE L.—SUCCESSFUL VACCINATIONS AND REVACCINATIONS.

	SUCCESSFUL VACCINATIONS.		SUCCESSFUL REVACCINATIONS.	
	1914-1915	1915-1916	1914-1915	1915-1916
November and December ...	81,815	80,662	636	1,032
January 1 to October 31 ...	409,117	395,178	4,423	5,308
TOTAL ...	490,932	475,840	5,059	6,340

#### 5. "MULIDS."

In 1916 the Department gave its opinion regarding the holding of six *mulids*, the period of celebration of which varied from three to fifteen days each.

No other *mulids* were celebrated owing to the Circular of the Ministry of Interior dated August 27, 1914.

#### 6. BARBERS.

(a) Specially trained in first aid.

No barbers were trained in "first aid" in 1916 and no "first aid chests" were issued.

(b) 421 barbers were given sanitary permits during the year.



## V.—REPORT ON PUBLIC HEALTH LABORATORIES.

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The laboratories attached to the Department of Public Health include the following:—

1. The Central Laboratories (formerly Hygienic Institute), consisting of bacteriological and chemical sections.
2. The Vaccine Institute.
3. The Antirabic Institute.
4. The Serum Centrifuging Laboratory.

The name of the Hygienic Institute has been changed by Departmental Order No. 92 of November 28, 1916, to that of Public Health Laboratories.

### 1. CENTRAL LABORATORIES.

The total number of examinations made during the year in these laboratories was 21,397 as compared with 19,591 in 1915. Of these examinations, 9,529 were made for the military authorities, compared with 7,111 during 1915.

As stated in last year's report, during 1914 the presence of large bodies of troops in Egypt, with the creation of numerous hospitals in Cairo for the reception of the sick and wounded from the Gallipoli Peninsula, necessitated the provision of facilities for bacteriological diagnosis on a very considerable scale, and such bacteriological equipment as was available in the military stores was almost exhausted at once by the sudden demand. The Hygienic Institute supplied the Army with a large amount of glass, culture media, etc.; but it soon became evident that the stock of these materials in the Institute would not stand the strain if distributed to various military laboratories, and as it was not possible to obtain further supplies in any reasonable time from Europe, it was decided that, at any rate until military laboratory equipment could be obtained from England, it would be more economical to centralize the work as far as possible. With this object the services of the Hygienic Institute were placed at the disposal of the military authorities by the Director-General, and early in September the Institute was constituted the Central Bacteriological Laboratory for the Army work of the Cairo district.

During 1916 this work was continued, a Medical Officer of the R.A.M.C. being attached to the Laboratories until the month of November. Towards the end of 1916 the military authorities were enabled to arrange for most of the routine bacteriological diagnosis work of the Cairo military hospitals to be carried out in their own laboratories, so that the Public Health Laboratories will be relieved of a large amount of routine military bacteriological work.

During the year certain alterations were made in connexion with the general working of the laboratory. Owing to the difficulty in the past in obtaining suitable men as laboratory assistants a system has been begun of employing boys who have just left school and are able to write and read Arabic. These boys will serve an apprenticeship and it is hoped by this means that more suitable material will be available from which to choose the future laboratory assistants.

With regard to the staff, under the existing conditions it has been considered advisable to postpone the appointment of another second class bacteriologist until after the war.

The post of one of the chemists who was called up for military service in 1915 still remains vacant.



(a) BACTERIOLOGICAL SECTION.

In addition to the usual routine examinations made for Government hospitals and Government Services throughout the country, some 1,000 examinations were carried out for private patients.

With regard to these latter specimens, as stated in last year's report, all samples where the necessity for a bacteriological examination is of importance from a public health point of view, or where, on the recommendation of the Medical Officer of Health, an examination is desired, were examined free as part of the routine work, so that only a few special examinations (45) were made during the year, fees for which amounting to L.E. 79 being collected.

The routine examination for the Wassermann reaction of the blood of patients admitted in the Lunatic Asylum has been continued. These statistics in the hands of Dr. Warnock, Director of the Lunacy Division, are giving valuable information and may possibly help in clearing up some obscure points in the ætiology of insanity (*see* Dr. Warnock's annual reports for detailed results).

The following table gives a list of the examinations made under their several headings of "Government," "Private" and "Military."

TABLE LI.

NATURE OF EXAMINATION.	Government.	Private.	Military.	TOTAL.
Cholera ... ..	31	—	154	185
Plague ... ..	390	—	—	390
Cerebro-spinal meningitis ... ..	7	19	176	202
Diphtheria ... ..	218	689	2,334	3,241
Malaria and relapsing ... ..	2,820	38	408	3,266
Agglutination reaction for enteric ... ..	794	139	481	1,414
"    "    dysentery ... ..	—	—	35	35
"    "    Malta fever ... ..	18	6	7	31
Cultural examinations for enteric ... ..	10	5	2,656	2,671
"    "    dysentery (and microscopic)	6	11	1,225	1,242
Wassermann reaction ... ..	839	7	259	1,105
Films for gonorrhœa and <i>spirochæta pallida</i> ... ..	629	6	977	1,612
Sputum for tuberculosis ... ..	114	14	316	444
Urine for albumin, sugar, or both ... ..	13	—	10	23
"    bilharzia ova ... ..	91	2	5	98
Anthrax ... ..	9	—	—	9
Miscellaneous ... ..	29	10	101	140
GRAND TOTAL ... ..	6,018	946	9,144	16,108

The specimens examined for diphtheria include a large number from carriers, many of these examinations being made in the course of a very complete search for carriers in one of the military camps.



As the Central Bacteriological Laboratory (Cairo) for the military authorities—in addition to carrying out the usual routine examinations for the various military hospitals—the laboratories have investigated various points of special interest and have given assistance in making the necessary arrangements for the decentralization of the military work. Standard emulsions of different organisms for agglutination purposes were issued to various military laboratories, as well as tubes, media and other essentials as far as the stock of the laboratories would allow.

Several investigations have been carried out on points of interest cropping up in connexion with the routine work.

The results of bacteriological examination of the cases of "Enterica" carried out on behalf of the Army are being made the subject of a separate report.

At the request of the Central Administration a bacteriologist from the laboratories was present regularly for a considerable period at the inspection of public women at the *Bureau des Mœurs* and specimens for microscopic examination were taken from 632 cases. These are being separately reported on.

Reports on an outbreak of cholera and one of para-cholera were sent to the military authorities; also experiments were carried out and the value of bisulphate tablets as a means of disinfecting Army water bottles reported on.

Bacteriological examinations were also made for various Government Services and reports were submitted on samples of milk, fruit, etc., sent for analysis. Examinations were carried out for the Cairo Inspectorate of samples of water and ice, as well as of aerated waters prepared by local firms. A certain number of disinfection experiments were also performed, especially in connexion with cholera.

Investigations associated with an outbreak of pellagra amongst the Armenian refugees at Port Said necessitated periodic visits of one of the staff to the camp as well as the installation for part of the time of a small laboratory there and the residence in the camp of one of the junior bacteriological staff as well as a clerk from the Laboratory. Preliminary notes were written and submitted to the Director-General and statistics and data collected for a final report. A large number of chemical, bacteriological and blood examinations made in connexion with this work are not embodied in the present report but will be the subject of a separate communication.

*Anti-Scorpion Serum.*—During the year, eleven reports were received on the use of anti-scorpion serum. The results of all the reports received since this serum was first used in 1906 are as follows :—

TABLE LII.

AGE.	Total Number of Patients treated.	Number of Deaths.	Percentage of Deaths.
From 0 to 5 years ... ..	153	27	17·64
" 6 to 10 " ... ..	115	7	6·08
" 11 to 15 " ... ..	73	2	2·74
" 16 to 20 " ... ..	65	1	1·54
Over 20 years ... ..	264	—	—
Cases for which no age was given	16	—	—
TOTAL ... ..	686	37	5·39



(b) CHEMICAL SECTION.

The following chemical analyses have been performed during 1916:—

TABLE LIII.

SAMPLES RECEIVED FROM	Water.	MANZÛL, HALÂWA, ETC.		BUTTER.		MILK.				Drugs, etc.	Miscellaneous.	TOTAL.
		Narcotics or Alkaloids.		Genuine.	Adulterated.	Genuine.	Adulterated.	Doubtful (kind of milk not stated).	Abnormal.			
		Present.	Absent.									
Government Administrations...	87	51	56	39	6	1,983	705	6	8	43	104	3,088
General Parquet ... ..	—	99	97	9	7	—	—	—	—	1	9	222
Private persons... ..	—	—	—	2	—	16	3	—	—	—	1	22
Military ... ..	230	17	4	10	2	1	21	1	—	8	64	358
GRAND TOTAL ...	317	167	157	60	15	2,000	729	7	8	52	178	3,690

In addition to the above the following chemical examinations have been carried out:—

Distilled water ... ..	5
Ice ... ..	1
Tinned milk for Central Stores ... ..	5
Human milk ... ..	1
Condensed milk ... ..	1

*Milk Analysis.*—The daily analysis of milk on behalf of Cairo City Health Inspectorate has been continued during 1916. A summary of the results (which are included in the preceding table) is appended.

TABLE LIV.

DESCRIPTION.	Number.	Percentage.
Genuine ... ..	1,970	74
Adulterated (skimmed, watered, or both) ... ..	695	26
Skimmed ... ..	367	13.7
Watered... ..	221	8.3
Skimmed and watered ...	107	4
Abnormal ... ..	7	0.26
Doubtful (kind of milk not stated)	4	0.14

One sample of milk contained added cane sugar.

The following is a table of the miscellaneous analyses:—

TABLE LV.

	Government.	Military.	Parquet.	Private.
Bread ... ..	5	2	—	—
Flour and wheat bran ... ..	11	16	4	1
Edible oils and fats ... ..	43	3	4	—
Aerated waters, etc. ... ..	8	1	—	—
Various foodstuffs and beverages ...	29	9	1	—
Alum and alumino-ferric... ..	4	11	—	—
Bleaching powder ... ..	2	14	—	—
Shale oil ... ..	1	—	—	—
Wall plaster ... ..	—	1	—	—
Powder from German shell ... ..	—	1	—	—
Urine ... ..	—	1	—	—
Stomach and stomach washings ...	1	5	—	—
TOTAL ... ..	104	64	9	1

*Establishments of Standards.*—Sixty-seven analyses of genuine cow's milk from individual animals were made during the year, the animals being milked dry in the presence of a member of the staff. The results of these and previous analyses are to be published shortly.



(c) WATER SERVICE.

In the Annual Statistical Report of the Department for 1915 it was stated that :  
“ with a view to the hygienic control of water supplies in Egypt, a special Water Service was formed by the Department early in the year, and was placed in charge of the Director of the Hygienic Institute with the collaboration of the Chief Engineer of Municipalities and Local Commissions. It is intended that this service will undertake the regular inspection of all public water supplies, whether these are in the hands of the Government, Municipalities, Companies, or private individuals, and will concern itself with all questions relating to water supplies in Egypt.”

For various reasons—mainly connected with the European war—it has not been possible for the Department to develop this service, so that as yet there is no provision for a regular or adequate inspection of the public drinking water supplies of the country.

It is important that this state of affairs should be frankly recognized, as the fact that the Department has nominally created a “ Water Service ” for the control of the supplies gives the impression that these supplies are being regularly inspected and adequately controlled.

The present position of the question is as follows :—

Early in 1915 the Department, recognizing the urgent necessity of a regular and adequate control of the public water supplies and the desirability of a Service which would interest itself especially in the various problems connected with drinking water supplies in Egypt, decided on the creation of a Water Service.

No special staff for this purpose was at the moment available, but it was arranged that the Director of the Hygienic Institute should be in charge of the Service, with the collaboration, for engineering questions, of the Chief Engineer of Municipalities and Local Commissions. Bacteriological and chemical analyses, except in the case of Alexandria and the Suez Canal Company's supplies, were to be carried out in the Hygienic Institute, Cairo, where a post of second class bacteriologist was provided. Under the existing conditions it has been, however, thought advisable to postpone filling this post until after the war; and as it has not been possible to provide any special staff for the purpose of inspection, collection of samples, etc., the inspections have had to be made in person by the Director of the Hygienic Institute and the Chief Engineer of Municipalities, and as the time of these two officials is already fully occupied the Water Service naturally suffers.

Under the present conditions this state of affairs is to some extent perhaps unavoidable, but as soon as circumstances permit every effort should be made to put this Service on a sound basis.

The provision of safe drinking water supplies is now universally recognized as a fundamental public health measure, and in a country liable to infection with cholera is absolutely vital, if the population is to be protected from large outbreaks.

Although a great deal has been already accomplished by the Department of Public Health in the provision of water supplies for the larger Egyptian towns, this is only a beginning and much remains to be done.

The supplies, even of Cairo and Alexandria, leave much to be desired, and most of the smaller towns in Egypt are as yet unprovided with filtered supplies, the inhabitants taking their water generally from very questionable if not highly polluted sources.

Although the Water Service has been in existence for so short a time, its influence on the efficiency of many of the supplies is already evident, and a good beginning has been made. All the larger supplies have been visited and are being reported on. Where necessary, repeated visits have been made and suggestions for the improvement of the existing conditions or for necessary modifications drawn up.

All consignments of alum or “ alumino-ferric ” to be employed for the clarification of water are now examined, both for their content of available aluminium sulphate and for absence of arsenic, and the different sands employed are examined in the Laboratories for their suitability for use in filters.



A regular weekly examination is made of the Rod el Farag, Gîza and Me'âdi supplies and a daily bacteriological examination of the water from the Cairo supply, as supplied in town.

A regular bacteriological examination of the ice supplied in Cairo has been instituted and the very necessary examination of aerated waters on sale both in Cairo and the Provinces has been begun, although the available staff is not sufficient to deal with this question on any large scale. The results obtained already, however, show that grossly polluted aerated waters are sold in the country.

During the years 1915 and 1916, since the creation of the service, a total of 2,850 bacteriological and 716 chemical examinations of water, ice, and mineral waters have been made. This amount represents the maximum which can be carried out by the present staff.

The result of two years' working has amply justified the existence and emphasized the need of a Water Service, and it is to be hoped that, as soon as conditions permit, means will be found for its extension, with a view, not only to the control and improvement of existing supplies, but also to the study of the many problems connected with drinking water in Egypt.

The number of analyses of water and ice made for all purposes during the year are as follows :—

TABLE LVI.

<i>Bacteriological.</i>	Number of Samples.	Examined for Total Bacteria.	Examined for Lactose Fermenters.
Cairo :—			
Rôd el Farag supply ... ..	447	447	447
Giza supply ... ..	259	259	254
Me'âdi supply ... ..	336	336	336
Daily samples of tap water in Cairo	311	311	—
Heliopolis supply ... ..	1	1	1
Minya hospital well... ..	3	3	3
Imbâba (old well in Markaz garden) ...	1	1	1
Giza Aquarium... ..	2	2	2
Military supplies ... ..	27	27	27
Private „ ... ..	9	9	9
Aerated waters, etc... ..	9	9	9
Ice ... ..	181	181	181
TOTAL ... ..	1,586	1,586	1,270
<i>Chemical.</i>			
Public supplies ... ..	87	—	—
Military „ ... ..	230	—	—
TOTAL ... ..	317	—	—

In connexion with the military operations in Egypt, a large number of analyses have been made of waters from desert wells, both in the Eastern and Western areas. A detailed list of these is included in the “ Report of the Work done in the Central Bacteriological Laboratory (Hygienic Institute), Cairo, during the Year 1916,” which has been furnished to the military authorities.

## 2. VACCINE INSTITUTE.

During 1916 the number of doses issued has considerably increased as compared with the quantity supplied in the preceding year.

The amounts issued during the last six years are as follows :—

	Doses.
1911 ... ..	532,836
1912 ... ..	576,210
1913 .. ...	771,361
1914 ... ..	1,025,896
1915 ... ..	961,665
1916 ... ..	1,222,600

and show, except for 1915, a steady increase in the annual issue of vaccine.



The issue for 1916 was made up as follows :—

	Doses.
Public Health Inspectors ... ..	321,070
Extra to Public Health Inspectors ... ..	350,630
Egyptian Army ... ..	24,940
Ministry of Waqfs ... ..	2,420
Ministry of Education ... ..	10,065
Prisons Department ... ..	2,385
Suez Canal Company ... ..	2,600
Provincial Councils ... ..	2,660
Alexandria Municipality ... ..	100,000
Miscellaneous gratis (including British Army) ... ..	326,355
Sudan Government ... ..	58,880
Miscellaneous sales ... ..	20,595
<b>TOTAL ... ..</b>	<b>1,222,600</b>

Owing to the steady increase in the annual demands for vaccine, it has been found necessary to extend this Institute. During the year a new block was added, consisting of a laboratory for general bench work and for preparing and tubing the vaccine, a storage and packing room and an office for the clerk of the Institute.

The method of storing the lymph at a temperature of 2° C. has proved most satisfactory, and lymph which had been stored at this temperature for over two years, experimentally tried on children, was found to give perfect vesicles.

### 3. ANTIRABIC INSTITUTE.

In 1916, a total of 789 persons were treated in the Institute. From this number the following deductions should be made :—

- 5 persons who ceased to attend for treatment without satisfactory reason, or who died, during the course of treatment, of a disease other than rabies.
- 164 persons whose treatment was discontinued as being unnecessary, the observation of the animal for a period of ten days or more having shown it to be non-rabid.
- 24 persons whose treatment, although completed, must be considered valueless, the animal inflicting the bite having been proved healthy by rabbit inoculation.

The statistics, therefore, comprise 596 patients, an increase of 100 over the number treated in 1915. It is worthy of note that the maximum number of patients received in the Institute was 767 in 1912; but of these 136 came from Syria, leaving a total of 631 patients of Egyptian origin. This year's aggregate of 596 patients closely approaches the absolute maximum attained in 1912, and indicates either a real increase of rabies in Egypt, or at least a disquieting increase in the number of suspected animals.

#### I.—MONTHLY INCIDENCE.

The monthly incidence of the 596 cases dealt with in the statistics is shown below :—

Persons.					Persons.				
January ... ..	48	July ... ..	35		August ... ..	62			
February ... ..	27	August ... ..	62		September ... ..	62			
March ... ..	64	September ... ..	62		October ... ..	44			
April ... ..	51	October ... ..	44		November ... ..	52			
May ... ..	56	November ... ..	52		December ... ..	43			
June ... ..	52	December ... ..	43						

It may be remarked that the double maximum shown in the above figures coincides, as regards the month of March, with the rutting season, which leads to the congregation of animals, and as regards the months of August and September with the commencement of the Nile flood.



## II.—TOPOGRAPHICAL DISTRIBUTION.

The 596 persons treated may be subdivided as follows :—

Egyptians ... ..	538
Foreigners resident in Egypt ... ..	54
Foreigners not resident in Egypt ... ..	4

Their place of origin was :—

<i>Governorates :—</i>	<i>Persons.</i>	<i>Provinces :—</i>	<i>Persons.</i>
Cairo ... ..	64	Beheira ... ..	27
Alexandria ... ..	40	Giza ... ..	20
Suez Canal ... ..	10	Beni Suef ... ..	7
Damietta ... ..	5	Faiyûm ... ..	14
<i>Provinces :—</i>		Minya ... ..	8
Qalyûbiya ... ..	39	Asyût ... ..	26
Sharqiya ... ..	52	Girga ... ..	11
Daqahliya ... ..	82	Qena ... ..	13
Minûfiya ... ..	61	Aswân ... ..	4
Gharbiya ... ..	108	Abyssinia ... ..	5

## III.—CLASSIFICATION OF ANIMALS INFLECTING THE BITES.

The injuries to the 596 patients were inflicted by :—

Dogs ... ..	in 544 cases.
Cats ... ..	14 "
Wolves ... ..	16 "
Monkeys ... ..	2 "
Donkeys ... ..	9 "
Horses ... ..	2 "
Camels ... ..	3 "
Mongoose ... ..	1 "
Rabid human beings ... ..	5 "

## IV.—POSITION OF THE INJURIES.

51 cases were bites on the head ; 345 cases were bites on naked skin, of which 154 were serious and 191 slight ; 200 cases were bites through clothing.

## V.—NOTES ON THE ANIMALS INFLECTING THE BITES.

1. It is to be noted that the number of persons bitten does not correspond to the number of animals causing the bites reported by the Veterinary Service, as in several cases one animal caused the injury to more than one person.

2. As a result of their observation by the Veterinary Service, 163 animals, having bitten 164 persons, were found to be non-rabid.

3. Experimental inoculation of rabbits undertaken at the Institute showed that 22 animals (21 dogs and 1 cat), having bitten 24 persons, were healthy.

4. In a certain number of cases, definite diagnosis could not be established and these cases are considered as suspect. The details are as follows :—

194 animals escaped and could not be traced.

43 animals were killed and the carcasses destroyed.

95 carcasses of animals arrived at the Institute in a state of decomposition and no investigation was possible.

15 animals were declared suspect by Veterinary Inspectors.

8 animals remained suspect, the rabbit inoculation being inconclusive.

The total of suspected animals is therefore 355.

5. Rabies was considered to be proved in the case of 51 animals, having bitten 102 persons. The diagnosis was determined by :—

Veterinary Inspectors in the case of 24 animals (21 dogs, 2 donkeys, 1 cat), having bitten 43 persons ;



Rabbit inoculation in the case of 27 animals (26 dogs, 1 wolf), having bitten 59 persons. As regards the wolf, definite diagnosis was established by inoculation of a rabbit with the brain of one of the persons bitten and dying of rabies.

6. In the case of 13 animals, having bitten 29 persons, positive diagnosis of rabies is presumed by the death of one or more of the persons bitten.

#### VI.—METHOD OF TREATMENT.

No change was introduced, during the year, into the method of preventive vaccination described in the 1915 Report. A modification was, however, made in the serotherapeutic method used in cases of bites on the head.

Some explanations will be of interest.

Antirabic serum may be used in four different ways.

Dr. Marie works on the principle that when the virus is introduced into an organism, in unfavourable conditions, the virus confers immunity by the humoral reactions which it produces. He considers that the addition of antirabic serum to the virus of rabies creates such unfavourable conditions for the virus. The proportions of serum and virus may be calculated so as to give :—

A neutral mixture of virus-serum. Experience proves that this mixture does not confer immunity, as it does not enable animals to resist an inoculation with pure virus. It is therefore ineffective.

A virus-serum with an excess of serum. The results are unsatisfactory; no immunity is conferred, owing, no doubt, to the fact that the excess of serum prevents the action of the vaccine.

A virus-serum with an excess of virus. The results are more satisfactory; a temporary immunity is rapidly created.

Dr. Babes works on a different principle. He saturates the organism with a large quantity of anti-bodies by means of injections of pure antirabic serum; the immunity thus created allows the use both of a greater quantity of virus, and of stronger virus, in vaccination. The results appear to be very satisfactory.

In view of these facts, and having regard to the difficulty met with in the preparation of the virus-serum with an excess of virus, it was decided, at the beginning of 1916, to inject persons suffering from serious bites on the head with 15 or 20 c.c. of pure serum at the beginning of the treatment. Simultaneously, the usual series of vaccinating emulsions are injected into the other side of the abdomen; the injections of vaccine alone are then continued in doses very much greater than those employed in the usual treatment. This method has given satisfaction.

#### VII.—STATISTICS.

In accordance with the practice in other antirabic institutes, the statistics only comprise deaths occurring more than fifteen days after the treatment was completed.

Amongst the persons treated in 1916 there occurred five deaths. Table LVII attached gives the names and other particulars concerning each of these cases. The corrected mortality rate, representing the cases in which the treatment failed, is therefore 0·80 per cent.

In addition to the above, it is necessary to record the deaths of eleven other persons who died either during treatment or less than fifteen days after its completion. The gross mortality, comprising all deaths, is therefore 2·69 per cent. Included in the eleven deaths above mentioned is the patient No. 7,327. According to the report of the Public Health Inspector, this case died of rabies, but it is interesting to note that the rabbit inoculation of brain of the dog which was stated to have bitten the patient proved negative. Possibly the wrong animal was sent to the Institute.

Table LVIII gives a classification of the cases treated and the mortality rate.



TABLE LVII.—NOTES ON PATIENTS WHO DIED IN 1916.

Serial Number.	NAME OF PATIENT.	Age.	Sex.	Place where the Accident occurred.	Position of Injuries.	Nature and Number.	Bitten by	Date bitten.	Dates of Treatment.	Date of Death.	Place of Death.
6672	Salama Salem el Mus-sawi.	12	m.	El Atawi. Fâris-kûr district, Daqahliya.	Right fore-arm.	2 severe. 2 slight.	Dog. Diagnosis impossible.	Jan. 21.	Jan. 23- Feb. 12.	March 16 :— 44 days after the bite. 32 " " treatment.	El Atawi.
6697	Awad Afifi ... ..	5	m.	Schwag. Ashmûn district, Minûfiya.	Forehead.	1 severe. 5 slight.	Dog. Diagnosis impossible.	Feb. 10.	Feb. 11- March 2.	April 26 :— 75 days after the bite. 54 " " treatment.	Schwag.
6872	Taha Abd el Kader Mo-barek.	3	m.	Shanawan. Shibin el Kôm district, Minûfiya.	Left leg.	1 very severe.	Dog. Diagnosis impossible.	April 28.	April 30- May 20.	June 27 :— 59 days after the bite. 37 " " treatment.	Shanawan.
6879	Iabiba el Nadi ... ..	12	f.	El Zaatrak. Fâ-riskur district, Daqahliya.	Right hand.	1 severe.	Dog. Diagnosis impossible.	April 28.	May 1- May 21.	June 9 :— 41 days after the bite. 18 " " treatment.	El Zaatrak.
7139	Om Mohamed Mohamed	6	f.	Tel el Kebir. Zagzig district, Sharqiya.	Head, neck.	2 severe. 4 slight.	Dog. Diagnosis impossible.	Aug. 30.	Aug. 31- Sept. 21.	October 9 :— 39 days after the bite. 17 " " treatment.	Qasr el Aini.



TABLE LVIII.—RESULTS OF ANTIRABIC TREATMENT IN CAIRO DURING 1916.

	INJURIES ON THE HEAD.			INJURIES ON NAKED SKIN.			INJURIES THROUGH CLOTHING.			TOTALS.		
	Treated.	Died.	Mortality per Cent.	Treated.	Died.	Mortality per Cent.	Treated.	Died.	Mortality per Cent.	Treated.	Died.	Mortality per Cent.
Class A ... ..	6	0	0·0	32	0	0·0	21	0	0·0	59	0	0·0
„ B ... ..	6	0	0·0	29	0	0·0	8	0	0·0	43	0	0·0
„ C ... ..	39	2	5·1	284	3	1·0	171	0	0·0	494	5	1·0
	51	2	4·0	345	3	0·8	200	0	0·0	596	5	0·80

Class A.—The animal causing the bite was proved to be rabid by the development of rabies in animals bitten, or by experimental inoculation.

Class B.—The animal causing the bite was declared to be rabid by a veterinary surgeon.

Class C.—The animal causing the bite was suspected of rabies.

#### 4. SERUM CENTRIFUGING LABORATORY.

Arrangements were made for re-centrifuging and bottling the cattle plague serum stored in demijohns, the necessary supplies of bottles having, owing to the war, been with difficulty obtained.

17,239·5 doses (50 c.c.) of cattle plague serum have been issued on the demand of the Veterinary Service.

The amount of serum remaining in stock at the end of the year was 252,963 doses in bottles, together with 6,363 litres in demijohns, the whole representing a total of approximately 367,500 doses.







TABLE LX.—ANNUAL RETURN OF MEDICAL EXAMINATIONS MADE BY THE CENTRAL AND PROVINCIAL MEDICAL COMMISSIONS DURING THE YEAR ENDING ON DECEMBER 31, 1916.

COMMISSIONS.	OBJECT OF MEDICAL EXAMINATION.							TOTAL	CAUSES OF REJECTION OF CANDIDATES APPLYING FOR ENTRY TO SERVICE.						TOTAL.	
	NUMBER OF CASES.								DISEASES OF							
	For Admission to Service.	For Sick Leave.		For Invaliding from Service.		For Determination of Age.	Other Examinations if any.		Defective Vision.	Urinary System.	Respira-tory System.	Circula-tory System.	Nervous System.	Digestive System.		Other Miscella-neous Diseases.
		Granted.	Refused.	Invalided.	Pt for duty											
Central Medical Com.	2,343	1,647	86	974	115	27	42	5,033	482	355	7	121	—	—	10	975
Alexandria...	474	211	10	115	16	123	48	971	53	9	—	2	—	—	—	64
Suez ...	101	66	—	19	3	108	1	295	21	15	—	—	—	—	8	44
Port Said ...	55	60	1	33	7	5	3	156	5	—	—	—	—	—	—	5
Damietta ...	15	27	1	12	3	100	—	154	2	2	—	—	—	—	—	4
Beheira ...	132	424	35	163	33	35	5	759	17	24	—	10	—	—	—	51
Gharbiya ...	85	477	32	165	45	14	—	741	17	3	—	—	—	—	3	23
Minûfiya ...	196	175	14	131	44	36	6	544	38	45	2	1	—	—	—	86
Daqabliya ...	210	344	25	135	46	38	23	750	41	34	—	—	—	—	—	75
Sharqiya ...	117	220	—	164	65	41	—	542	13	11	3	4	—	1	3	35
Qalyûbiya ...	49	110	3	127	18	—	1	287	7	3	—	—	—	1	—	11
Giza ...	59	178	8	82	23	21	6	346	10	—	—	—	—	—	1	11
Faiyûm ...	52	56	5	71	40	23	—	202	13	1	—	—	—	—	1	15
Beni Suef ...	116	137	14	54	22	13	3	323	46	3	1	—	—	—	—	50
Minya...	129	153	1	105	17	25	4	416	39	4	1	—	—	—	—	44
Asyût ...	186	194	12	128	41	92	8	608	49	—	—	5	—	—	5	59
Girga ...	77	177	13	103	13	2	—	359	16	1	—	3	—	—	2	22
Qena ...	96	92	5	127	26	59	—	374	4	—	—	1	—	—	2	7
Aswân...	14	40	1	42	12	3	1	100	2	1	—	—	—	—	—	3
TOTAL ...	4,506	4,788	266	2,750	589	765	151	12,960	875	511	14	147	—	—	35	1,584



## VII.—REPORT OF THE INSPECTORATE OF PHARMACIES.

The work of the Inspectorate of Pharmacies has suffered considerably since the outbreak of war by reason of the mobilization of three Inspectors. This fact explains the limited number of inspections carried out during the past two years.

The appointment of an Assistant Chief Inspector in January 1917 will, however, allow the number of inspections to be increased.

*Cocaine.*—The Chief Inspector of Pharmacies considers it his duty to draw attention to the serious abuse of cocaine in the country.

The existing law is inadequate as far as it concerns pharmacists and authorized dealers in poisonous substances and practically ineffective with regard to others who traffic in this drug.

The maximum fine which can be imposed does not exceed P.T. 100, and it is necessary that the defendant be the proprietor of, or an assistant in a pharmacy in order to obtain from the tribunal a judgment of closure of the establishment in which the infraction of the law occurs.

Persons in possession of cocaine, but against whom no charge of illegal sale can be proved, are in no way affected by the law.

The most important traffic in cocaine is carried on outside of pharmacies by persons who are in no way connected with the profession, such as pension and café proprietors, cab and automobile drivers, etc.

In spite of these difficulties, the Inspectorate continues to do all in its power to check the abuse of the drug.

During the year 1916 seven prosecutions were instituted for the illegal sale of cocaine in pharmacies. As a result, four judgments of closure have been granted by the tribunal, whilst three cases are still pending.

In spite of the control exercised by the Inspectorate (with the help of the Customs authorities) on the importation of this product into the country, large quantities of cocaine are obtained clandestinely by means of sailors, special travellers and by false declaration at the Customs.

As the result of a certain amount of study which has been devoted to this matter, the Department has come to the conclusion that the following are the lines along which legislation intended to control the traffic in habit-forming drugs (morphine, cocaine or heroin) should be drawn up :—

(1) The words morphine, cocaine and heroin shall include all preparations, salts, derivatives or admixtures of one or more of these drugs.

The expression “ special authority ” shall mean :—

(a) A licence granted to a licensed medical practitioner, pharmacist or poison seller in accordance with the Pharmacy Law.

(b) A prescription granted by a licensed medical practitioner.

(2) No person other than a licensed medical practitioner, a licensed pharmacist, or poison seller shall without special authority purchase or attempt to purchase, sell or attempt to sell, or otherwise obtain, or have in his possession, any morphine, cocaine or heroin.

(3) No licensed medical practitioner shall :—

(a) Sell, supply or dispense any of the above mentioned drugs to any person whatsoever;

(b) Grant a prescription for any of the above mentioned drugs, except as medicine in the *bona fide* exercise of his profession;



- (c) Grant a prescription for any quantity greater than one gramme;
- (d) Deliver a prescription, otherwise than personally, to the patient and bearing the full name and address of both the patient and of the practitioner and the date of issue;
- (e) Medical practitioners and authorized dentists are entitled to order a quantity of not more than one gramme at a time for the use of their clinics. Such orders will be registered by the pharmacist in a special register.

This power of medical practitioners and authorized dentists under paragraph (e) may be withdrawn at any time.

(4) No licensed pharmacist shall :—

- (a) Supply any of the above mentioned drugs except on the prescription of a licensed medical practitioner bearing the full name and address both of the practitioner and the patient;
- (b) Supply any of the above mentioned drugs on a prescription for more than one gramme;
- (c) Supply any of the above mentioned drugs more than once on the same prescription.

(5) Every prescription for any of the above mentioned drugs shall be retained and filed by the pharmacist who supplies the drug, and a receipt for the prescription shall be given to the person to whom the drug is supplied.

Any prescription containing one of these drugs, when prepared by a pharmacist, will be entered in a special register with the full name of the medical practitioner, the full name and address of the patient, the date of the issue and the serial number of the register.

(6) Patent medicines containing not more than 0.1 per cent of these drugs may be sold by pharmacists only without prescription, but must be registered in a special register with the name and address of purchaser.

(7) Dealers licensed to sell these drugs under the Pharmacy Law shall be able to sell them only to authorized proprietors of pharmacies, under a written order bearing the date and signature of the purchaser, his address and in full letters the amount required.

*Hashish.*—A proclamation regarding *hashish* has been issued by the military authorities providing special penalties for illegal traffic in this drug.

*General.*—During the year, modifications have been made in the form of authorization to export poisonous herbs, etc., grown in the country, such as *datura*, *hyoscyamus*, etc. The old form of authorization had, after several years' experience, proved unsatisfactory. The permit is now made out in the same manner as that given for the exportation of native opium and a more effective control is assured by the additional information which it is necessary to give, such as quantities purchased, quantities exported, and the name and address of the consignee.

At one time, owing to the war and the cessation of trade with large manufacturers in hostile countries, it was feared that some important medicines would become unobtainable; however, thanks to the facilities afforded by the Allied countries and to the efforts of the Egyptian Government, no serious shortage in the supply of drugs has occurred, though there has been an increase in the prices of certain products, due to abnormal cost of production and transport.

The action of the Government in prohibiting the re-exportation of foreign medical products from Egypt and making the exportation of local medical products subject to special permission has also been instrumental in preventing a shortage of drugs in the local market.



Two judgments of fine and closure of premises in cases in which poisonous substances were sold illegally have been granted by the Courts. After consultation with the Contentieux, the authorizations held by the delinquents above mentioned were cancelled.

Before concluding this report, the Chief Inspector of Pharmacies would point out the need for the revision of the Pharmacy Law at present in force, the necessity of which is indicated by the several observations which figure in this brief report.

The present Pharmacy Law has been in force for ten years, during which period the Inspectorate has had many opportunities of noting its imperfections. It is hoped that before long a new law will be framed in order that the pharmaceutical profession, as well as the authorized dealers in poisonous substances, may be governed by an enactment more in keeping with the special conditions of this country and more in harmony with the legislation existing in other countries on the same subject.

During the year 1916, twenty-nine pharmacies have been closed or transformed into drug stores and forty-eight new pharmacies have been opened, seventeen of which belong to qualified pharmacists and thirty-one to unqualified persons.

The total number of pharmacies existing at the end of the year was three hundred and thirty-six.

Unfortunately, the proportion of pharmacies owned by unqualified persons still remains very high, being 40 per cent of the total.

TABLE LXI.—STATISTICS CONCERNING PHARMACIES.

	CAIRO.		ALEXANDRIA.		PROVINCES.		TOTAL.	
	Pharmacies owned by		Pharmacies owned by		Pharmacies owned by		Pharmacies owned by	
	Qualified Pharmacists.	Unqualified Persons.	Qualified Pharmacists.	Unqualified Persons.	Qualified Pharmacists.	Unqualified Persons.	Qualified Pharmacists.	Unqualified Persons.
Existing at end of year... ..	92	44	48	18	59	75	199	137
Inspected and found satisfactory... ..	3	2	7	2	3	6	13	10
Inspected and found unsatisfactory ... ..	1	2	—	1	—	2	1	5
Inspected and found mediocre ... ..	1	—	4	—	1	4	6	4
Opened ... ..	7	13	4	6	6	12	17	31
Closed... ..	6	7	1	3	5	7	12	17
<i>Procès-verbaux</i> drawn up for offences against the Law of 1904... ..	24	7	7	14	5	20	36	41
Sentenced ... ..	7	3	7	14	5	20	12	17
Acquitted ... ..	6	—	2	1	1	6	9	7
Pending ... ..	11	4	4	10	—	3	15	17

(1) Thirty-two samples of medicines were taken and analysed with the following result :—

- (a) One warning was sent to a qualified pharmacist at Alexandria.
- (b) Two *procès-verbaux* of contravention were drawn up against qualified pharmacists in Cairo, resulting in one sentence and one case pending.
- (c) Five *procès-verbaux* were drawn up against unqualified proprietors (Alexandria 1 and Provinces 4), resulting in one case pending (Alexandria), three sentences (Provinces) and one case filed (Provinces).
- (d) Twenty-four samples of medicines were found good.

- (2) Forty-four samples of *manzûl*\* were taken and analysed with the following result:—
- (a) Six *procès-verbaux* were drawn up against vendors (Cairo 2 and Provinces 4), resulting in two sentences (Cairo 1 and Provinces 1), four cases pending (Cairo 1 and Provinces 3).
  - (b) Twenty-eight samples of *manzûl* were found after analysis to be free from anæsthetic substances.
- (3) Fifteen authorizations to practise as pharmacists were issued to holders of the following diplomas : 2 Americans, 1 Italian and 12 Egyptians.
- (4) Four authorizations to practise as assistant pharmacists were issued to holders of the following certificates : 2 Egyptians, 1 Russian and 1 Maltese.
- (5) The total number of authorizations to sell poisons is sixty-nine, three establishments having been closed during the year.
- (6) Thirty-three offences against the Pharmacy Law had the following result :—
- (a) Four warnings were sent to qualified pharmacists in Cairo.
  - (b) Five warnings were sent to unqualified proprietors of pharmacies (Cairo 3 and Alexandria 2).
  - (c) Twenty-two *procès-verbaux* were drawn up against persons for the illegal practice of pharmacy and sale of poisons (Cairo 7, Alexandria 1 and Provinces 14), resulting in seven sentences (Cairo 1, Alexandria 1 and Provinces 5), one case filed (Provinces), fourteen cases pending (Cairo 6 and Provinces 8).
  - (d) Two *procès-verbaux* were drawn up against druggists (Alexandria 1 and Provinces 1), resulting in one acquittal (Alexandria) and one case pending (Provinces).

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\* *Manzûl* is a kind of sweet paste, common among the natives, containing tonic, anæsthetic, or aphrodisiac substances. Generally, all preparations of *Hashish* for internal use are sold under this name.



## VIII.—REPORT OF THE ENGINEERING BRANCH.

The report on this branch of the Department's work is drawn up with reference to the financial year April 1, 1916, to March 31, 1917.

### 1. SPECIAL CREDITS FOR NEW WORKS.

The following table shows various details concerning special credits granted for new works and the sums disbursed.

TABLE LXII.

NAME OF WORK.	Sum granted in Budget 1916-1917.	Total Grant.	Expenditure from April 1, 1916, to March 31, 1917.	Total Expenditure to March 31, 1917.	REMARKS.
	L.E.	L.E.	L.E.	L.E.	
1. Alexandria Hospital.—Comple- tion of additional pavilion ...	319	9,800	—	7,557	—
2. Alexandria Hospital.—Comple- tion of Nurses' House ...	91	2,800	—	2,207	—
3. Infectious Hospital, Zagazig.— Completion ...	35	2,040	42	1,979	L.E. 7 on Econo- mies, Travaux neufs.
4. Damanhûr Hospital.—Electric light installation ...	160	160	—	—	—
5. Abbasiya Fever Hospital.—New annexes ...	8,000	13,000	8,058	8,947	L.E. 58 on Econo- mies, Travaux neufs
6. Qasr el 'Aini Hospital.—Conver- sion of existing water-closets to water-carriage system, etc. ...	800	800	870	870	Credit increased by L.E. 70.
7. Port Said Hospital.—Connection to main sewer ...	610	610	540	540	Reduced by L.E. 70.
8. Enlargement of Vaccine Institute	700	700	606	606	—
9. Qasr el 'Aini Hospital.—New crude oil engine ...	500	500	428	428	—

The following brief notes give certain information concerning each of the above pieces of work :—

1. *Alexandria Hospital.*—Completion of additional pavilion for ninety beds. This building was completed and occupied at the end of 1913.

The credit granted in 1916 was for painting and colourwashing walls and a last coat of paint to woodwork of doors and windows, etc.

This work could not be completed owing to the premises being occupied by wounded soldiers.

2. *Alexandria Hospital Nurses' House, Completion.*—This building was completed in 1914 and occupied. The credit granted for 1916 was for painting. Owing to these quarters being occupied by extra nurses, this work has had to be again postponed.

3. *Zagazig Hospital, Completion of Infectious Block.*—The credit granted in 1916 was for electric light installation. This work was completed and handed over on February 26, 1917.

4. *Damanhûr Hospital, Electric Light Installation.*—This work could not be proceeded with, as the work upon the electric light installation of the town has been suspended owing to the war.

5. *Fever Hospital, Abbasiya, New Annexes.*—These annexes, consisting of two 34-bed pavilions for second class patients, 1 patients' discharging block, 1 attendants' bath block and modification of kitchen and laundry have been completed and handed over in November 1916.

The sanitary installation for the above was completed in December 1916 and the electric light installation in March 1917.



The whole of the permanent buildings of the Fever Hospital are now connected to the public sewer, and the old septic tanks, fosses and filters filled in.

6. *Qasr el 'Aini Hospital*.—An entirely new drainage system has been carried out and connected to the public sewer.

The old pail closets have been finally suppressed, the closets modified and converted into water-carriage system. Additional slop and ordinary sinks have been fixed and the old insanitary fosses filled up. The above work was completed in December 1916.

The sanitary condition of this hospital may now be considered satisfactory.

7. *Port Said Hospital*.—This hospital has also been provided with a new drainage system similar to the above. Water-closets have been substituted for the pail closets and connected to the public sewer.

The cost and inconvenience of removing pails and emptying fosses is thus done away with. The fosses have been filled up, thus considerably improving the general sanitary condition of the premises.

This work was carried out departmentally and completed in December 1916.

8. *Enlargement of Vaccine Institute*.—A new annexe for this Institute was completed and handed over in 1916.

The gas, electric light and water installations for this annexe were completed in January 1917.

9. *Qasr el Aini New Crude Oil Engine*.—As the old gas producer plant which was supplying the hospital with power for electric lighting and washing machinery had become worn out and expensive to run, it was removed and a new 25 h.p. oil engine for crude oil substituted.

The saving in the cost of running, according to a report from the Chief Electrical Engineer, Ministry of Public Works, is estimated at about L.E. 500 per year.

## 2. REPAIRS.

The repairs and aménagements credits for the budget year 1915-1916 were L.E. 5,919+800 = L.E. 6,719.

The expenditure from April 1, 1916, to March 31, 1917, was L.E. 6,719.

The following repairs were effected :—

TABLE LXIII.

NAME OF BUILDING.	Repairs.		Aménagements.		NAME OF BUILDING.	Repairs.		Aménagements.	
	L.E.	M.	L.E.	M.		L.E.	M.	L.E.	M.
Abbasia Fever Hospital.	366	919	24	331	<i>Brought forward</i> ...	5,071	423	741	318
Alexandria Hospital...	645	631	13	972	Faiyûm Ophthalmic Hos-				
Asyût Hospital ... ..	26	120	—	—	pital... ..	6	989	—	—
Benha Hospital... ..	26	519	—	—	Mansûra Ophthalmic Hos-				
Beni Suef Hospital ... ..	15	813	40	730	pital... ..	13	691	—	—
Damanhûr Hospital... ..	34	135	—	—	Minya Ophthalmic Hos-				
Damietta Hospital ... ..	0	050	0	210	pital... ..	24	272	—	—
Isna Hospital ... ..	0	950	—	—	Shibin el Kôm Ophthalmic				
Faiyûm Hospital ... ..	8	530	—	—	Hospital... ..	20	260	—	—
Hôd el Marsûd Hospital... ..	18	848	4	482	Sohâg Ophthalmic Hos-				
Qasr el 'Aini Hospital ... ..	2,513	909	365	407	pital... ..	0	550	—	—
Mansûra Hospital ... ..	16	342	—	—	Tanta Ophthalmic Hos-				
Mersa Matrûh Hospital ... ..	25	558	—	—	pital... ..	15	675	—	—
Minya Hospital ... ..	32	220	27	155	Zagazig Ophthalmic Hos-				
Qena Hospital ... ..	6	910	2	500	pital... ..	19	289	—	—
Port Said Hospital ... ..	1,125	694	254	481	Qena Ophthalmic Hos-pital				
Suez Hospital ... ..	97	527	6	750	Buildings, Central Admini-				
Shibin el Kôm Hospital ... ..	21	900	—	—	stration ... ..	85	698	9	175
Sohâg Hospital ... ..	8	371	—	—	Central Administration				
Tanta Hospital ... ..	18	035	—	—	Institutes ... ..	110	619	4	500
Zagazig Hospital ... ..	21	123	1	300	Public latrines ... ..	29	495	2	262
Asyût Ophthalmic Hospital	30	127	—	—	Disinfecting stations ...	20	938	—	—
Giza Ophthalmic Hospital	3	320	—	—	Scavenging and Watering				
Beni Suef Ophthalmic Hos-					Service ... ..	92	713	—	—
pital... ..	3	800	—	—	Various ... ..	346	029	35	300
Damanhûr Ophthalmic					Public Health Offices, etc.	59	154	6	975
Hospital ... ..	3	072	—	—					
<i>Carried forward</i> ...	5,071	423	741	318	<i>TOTAL</i> ... ..	5,919	470	799	530



### 3. WORKS PAID FOR BY OTHER ADMINISTRATIONS AND EXECUTED DEPARTMENTALLY.

DESCRIPTION OF WORK.	Cost.
	L.E.
<i>On Survey Department Account.</i>	
Drainage of offices, Sharia el Dawawin ... ..	91
<i>On Ministry of Public Works' Account.</i>	
Faiyûm Ophthalmic Hospital—arranging drainage ... ..	27
<i>On Deposit from Shawarbi Pasha's Waqfs.</i>	
Sundry repairs to Qalyûb Hospital ... ..	53
Repairs to examination room and out-patient block ... ..	35
<i>On "Dépenses Militaires."</i>	
Lock Hospital, Ezbekiya, sundry repairs ... ..	70
" " " 1 native water-closet in place of broken one ...	3
" " " arranging wire windows ... ..	3
New Bureau des Mœurs, Darb el Nûbi, division wall ... ..	25
" " " new sink, etc. ... ..	10
Lock Hospital, Hôd el Marsûd:—	
Sundry alterations and whitewashing ... ..	58
Five native water-closets, etc. ... ..	98
Repairs to Malkas ... ..	25
Fixing new stove ... ..	9
Fixing large wooden gates at entrance ... ..	6
Building large window in store ... ..	3
Repairing old cooking stove ... ..	8
Abu el Ela stables, connecting up to main drain ... ..	45
<i>On General Hospitals' Account.</i>	
Giza, sinking tube well, etc. ... ..	6
Kafr el Dawar, sinking tube well and fixing tank and pump ...	15
<i>On Chapter III, Ophthalmic Hospitals.</i>	
Iron curtain rods for out-patients' shelter, Zagazig Ophthalmic Hospital	5
<i>On Provincial Councils' Account.</i>	
Santa Ophthalmic Hospital, fixing latrine basins ... ..	4
Kafr el Zayât Ophthalmic Hospital, fixing new pump ... ..	26
<i>On Stores Chapter.</i>	
Repairing and repainting furniture, Alexandria Hospital ... ..	80
<i>On Economies, "Travaux Neufs" Account.</i>	
Qantaret el Dikka latrine, connexion to main sewer ... ..	10
Abu el Ela latrine, connexion to main sewer ... ..	7
Stables of Scavenging and Watering Service, Bulâq, connexion to main sewer ... ..	268
Fumm el Khalig disinfecting station, connexion to main sewer ...	48
Infectious Hospital, Port Said, connexion to main sewer ... ..	264
Qasr el 'Aini Hospital, building rubbish destructor ... ..	16
" " " erection of new sewing rooms on roof of wash-house and conversion of existing sewing rooms to a coal store ...	299
<i>On Prophylactic Credit.</i>	
Kiosk for Disinfection at Abbasiya Fever Hospital ... ..	49
Sinking tube well at Epidemic Store, Minya ... ..	4
<i>On Precautions against Cholera.</i>	
Alexandria Hospital, extension of accommodation, new washhouse, drainage to temporary mortuary, and fences ... ..	159
Ismailia Hospital, laying on water supply and various works ... ..	36
Suez Infectious Hospital, accommodation for cholera cases ... ..	100
Suez, fly-proof latrines ... ..	13
Zeitiya, accommodation for cholera cases ... ..	58
Various works ... ..	40

The following materials were bought in order to bring the stock of pitcher pumps and filter points up to 300, and the necessary piping to 15 metres per pump:—

Pitcher pumps	2-inch ... ..	No. 121	L.E. 103
Driving points	2 „ ... ..	No. 164	115
Steam piping	2 „ ... ..	1,690	1/4 feet 169
Black iron piping	2 „ ... ..	4,655	„ 320

#### 4.—SANITARY INSTALLATIONS.

(Calendar Year, January 1 to December 31, 1916.)

<i>Cinemas, Schools, Public Latrines, etc.</i>	Number.
Examined, reported upon, and approved ... ..	23

##### *Etablissements Insalubres.*

Examined and modifications suggested ... ..	199
Examined and approved... ..	83

##### *Mosques.*

###### *Old Mosques :—*

Examined and reported upon... ..	725
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###### *New Mosques :—*

Plans approved (private and Waqfs)... ..	22
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##### *Houses examined and approved.*

Abbásiya ... ..	1
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## IX.—REPORT ON THE STORES BRANCH.

### EXPENDITURE.

The following is a comparison of the budgetary estimates for the year 1916-1917 :—

TABLE LXIV.

	1916	1917
	L.E.	L.E.
Equipment... ..	19,857	43,460
Instruments ... ..	4,223	7,565
Drugs and special chemicals ... ..	20,196	20,425
Epidemic ... ..	6,783	24,397
Clothing ... ..	720	929
Repairs ... ..	2,441	4,030
Transport ... ..	733	200
Forage ... ..	681	639
<b>TOTAL ... ..</b>	<b>55,634</b>	<b>101,645</b>

	1915	1916
	L.E.	L.E.
Stores bought locally ... ..	30,777	54,000
„ abroad ... ..	14,946	34,000
2,300 invoices have been dealt with.		

### ESTIMATES.

As indicated by the above figures, the stores budget for 1917 differs considerably from its predecessors. The large increase of over 100 per cent on that of 1916 is due to the following causes :—

The estimation of requirements has been made on an extended and more comprehensive basis than hitherto, leading to an increase in quantities and also approximately 50 per cent increase in the classes of articles included therein.

For the first time, epidemic stores have been estimated by quantities as is the case with other sections of the Department, and the method of supplying stores for this section on a single money grant has been abandoned. Further, in connexion with the decentralization of epidemic stores depots referred to later on in this report, the Director of the Epidemic Section has compiled establishments of stores to be held in each province.

Provision in the estimates to complete these establishments has led to an increase over average expenditure on this head of approximately L.E. 8,000, although considerable reductions in the quantities had to be made later owing to the heavy increase in prices of all goods.

These reductions will have to be made good in following budgets, but unless epidemic requirements experience considerable expansion it may be anticipated that expenditure for this service will gradually decrease until the level of making up wastage is reached, when it will become more or less stationary.

The installation of small laboratories in general hospitals and the development of x-ray work has also led to increased expenditure. These items now form part of the regular budget and may be expected to increase until installations have been completed in all hospitals.

Further marked increases have been necessary for the Central Laboratories and the Central Stores workshops.



In the actual form of the stores budget several changes have also been introduced, the principal being the division of expenditure into definite compartments, *e.g.* motor cars, etc., laboratories, etc., and the reduction of local purchasing to a minimum. A first attempt has also been made to include entirely new requirements in the budget and thus relieve the strain on the cash margin (5 per cent of the budget) of subsequent unforeseen expenditure.

As a good deal of misapprehension exists regarding the method of expenditure, the following main points may be of interest :—

The basis of the estimates is the average consumption of the last three years. To this average an extra margin of 25 per cent is allowed to meet increased requirements and carrying over stock until new annual supplies are obtained.

In the case of the Epidemic Section the margin has been increased to 40 per cent for certain classes of stores. The budget is quantitative, that is, expenditure is confined to the actual stores and quantities in the budget, and it is not permissible to use the economy on one item to purchase new unforeseen articles or increased quantities of others. A cash margin of 5 per cent of the total estimates is added and this is the only sum at the disposal of the Department to meet any unforeseen demands that may occur in the course of the year.

#### CONTRACTS.

	1915	1916
Number of contracts made during the year ... ..	130	100
Total value of contracts of the Department, including rations, etc. ...	L.E. 91,124	

Value of contracts for Central Stores :—

Equipment ... ..	„ 22,571
Drugs ... ..	„ 16,125

The following is a comparison of the main contracts in 1915-1916 :—

TABLE LXV.

CONTRACT.	RATES.				VALUE OF CONTRACT.		
	1915		1916		1915	1916	
	L.E.	M.	L.E.	M.	L.E.	L.E.	M.
(1) Petroleum ... .. per tin	0	140	—	—	420	595	000
(2) Crude oil ... .. per kilo.	0	005	—	—	110	172	000
(3) Milk in tins ... ..	0	029	0	045	232	540	000
(4) Meat for Qasr el 'Aini Hospital :—							
Mutton ... ..	0	060	0	055	2,500	3,566	000
Beef ... ..	0	045	0	040			
Meat for Fever Hospital :—							
Mutton ... ..	0	065	0	055			
Beef ... ..	0	050	0	045			
(5) Native bread :—							
Qasr el 'Aini Hospital ... ..	0	010 $\frac{3}{4}$	0	009 $\frac{1}{2}$	1,955	1,615	000
Fever Hospital ... ..	0	011	0	009 $\frac{1}{2}$			
(6) <i>Bersim</i> , Scavenging and Watering							
Service ... .. per qantâr	0	033	0	035	815	906	000
(7) Straw bedding ... .. per ton	1	350	1	100	513	396	000
(8) <i>Tibn</i> (from Domains) ... ..	3	000	2	380	2,280	1,808	000
(9) Water vans ... .. each	98	000	—	—	296	—	—
(10) Rabbits for Antirabic Institute ... ..	0	075	0	060	192	108	000
(11) Rations for Cairo hospitals ... ..	—	—	—	—	8,172	13,908	820
(12) Rations for provincial hospitals ... ..	—	—	—	—	24,160	32,492	647
(13) Alcohol ... .. per kilo.	0	019 $\frac{1}{2}$	0	032 $\frac{1}{2}$	588	1,405	966
(14) Ice ... .. per block	0	019	0	036	225	507	750
(15) Equipment, etc. ... ..	—	—	—	—	16,180	22,571	165
(16) Drugs, general ... ..	—	—	—	—	9,472	15,604	480*
(17) Drugs, local adjudication ... ..	—	—	—	—	1,754	520	953
(18) Coal ... ..	—	—	—	—	5,108	2,212	000

\* This figure represents the value of drugs for Central Stores only ; other Departments are not included.



# GENERAL EQUIPMENT.

TABLE LXVI.—COMPARISON OF PRICES OF MAIN ITEMS BETWEEN 1915 AND 1916.

Item No.	DESCRIPTION.	Rate in Milliemes.	
		1915	1916
80	Bedsteads, 2nd class ... ..	2,230	4,600
104	Blankets, white woollen ... ..	550	850
107	" brown " ... ..	405	510
133	Boots, shawishes... ..	535	575
228	Cases for mattresses ... ..	318	550
416	Drawers, 2nd class ... ..	46	53
468	Gallabias, large ... ..	125	182
495	Gowns, hospital ... ..	685	1,080
547	Jackets, calico ... ..	61	82
569	Jerseys, blue ... ..	188	350
706	Mattresses, felt ... ..	192	440
765 a	Pannikins, aluminium ... ..	60	49
866	Pots, copper... .. per kilo.	115	—
981	Sheets, 2nd class ... ..	366	490
984	" draw, thick ... ..	108	290
991	Shirts ... ..	54.5	75
1011	Shoes, <i>Tamurgis</i> ... ..	205	320
1037	Slippers ... ..	145	200
1190	Towels, white ... ..	64	130
1455	<i>Crin végétal</i> ... .. per kilo.	11	12
1594	Material No. 3 ... .. per mètre	21	24.5
1608	" No. 17, bed ticking ... ..	69	150
1630	" No. 39, blue flannel ... ..	265	360
1660	<i>Arachid</i> oil ... .. per kilo.	57	70
1770	Soap, washing, in cases ... ..	35	49
1771	" soft ... ..	34	55

## DRUGS.

The expenditure on drugs has again increased over 1915.

Prices reached a very high level and it is not anticipated that there will be any substantial reduction for some time to come.

The following is a short comparison :—

TABLE LXVII.

DESCRIPTION.	Price in Milliemes.	
	1915	1916
Aspirin ... .. per kilo.	915	6,000
Acid, boric ... ..	035	043
Acid, carbolic ... ..	126	280
Alcohol ... ..	019½	032½
Bismuth carbonate ... ..	1,251	1,950
Copper sulphate ... ..	061	071
Glycerine ... ..	110	148
Iodine, pure ... ..	1,972	2,193
Magnesium sulphate ... ..	009	020
Castor oil ... ..	039	103
Turpentine ... ..	089	079
Opium ... ..	3,047	5,000
Potassium iodide ... ..	1,422	2,240
Potassium bromide ... ..	1,800	2,441
Quinine sulphate ... ..	2,021	3,952
Sodium bicarbonate ... ..	006	011
Vaseline... ..	076	100
Sodium salicylate... ..	577	2,490
Cod liver oil ... ..	036	167
Iodoform ... ..	2,660	2,405

Preparations to the value of L.E. 4,933 as against L.E. 5,125 for the previous year were made in the Drug Store.

Medicines to the value of L.E. 2,963 were sold by the various dispensaries of the Department.

## STORE TRANSACTIONS.

The following statistics cover the general work of the store-keeping section and accounting offices for the central stores of the Department :—

	REQUISITIONS VOUCHERS.	
	Issued.	Stores received at Headquarters.
Equipment ... ..	6,275	2,221
Drugs ... ..	3,322	540
Epidemic ... ..	2,433	1,182
Bûlaq Store ... ..	202	63
Surgical instruments ... ..	1,625	355
Kohna Store ... ..	3,459	2,050
Forage ... ..	145	119
Hygienic Institute ... ..	13	13
<b>TOTAL ... ..</b>	<b>17,474</b>	<b>6,543</b>

Number of charges of permanent stores in the Department ... .. 250

Value of stores issued on payment :—

	L.E.
From General Stores... ..	6,404
From Epidemic Store... ..	769

Value of stocks on April 1, 1917 :—

	L.E.
Instrument Store ... ..	4,563
Drug Store ... ..	19,337
Equipment Store... ..	22,294
Kohna Store... ..	112

## ORGANIZATION.

### CENTRAL STORES.

During the past year a considerable amount of reorganization has taken place in all sections of the Central Stores.

The staff has been regrouped and the work organized by sections in the following main divisions :—

*Stores :—*

(10 storekeepers, 30 storemen).

Equipment.	Surgical Instruments Store.
Drug Store.	Kohna Store.
Epidemic Store.	Auxiliary Store

*Ledger Section.*—Twelve clerks. This section deals with the movement of stock and controls all transactions that occur in the storehouses.

Ninety ledgers and journals are kept.

*Permanent Charge Section.*—Seven clerks and 199 ledgers.

All transactions which affect the store charges of the Department, such as stocktaking, periodical accounts, losses, the receipt or return of stores are controlled by this section. The permanent charges at present number 250 and there are 400 personal charges for uniforms.



*Supply Section.*—Five clerks. This office deals with the purchasing of stores, including contracts, orders, shipping, payment, sales, and controls expenditure. During the year, 100 contracts and 1,971 orders were dealt with.

*Registration, Correspondence and Archives Office.*—Four clerks. 19,219 inward letters, including requisitions, and 11,104 outward (not including forms and vouchers) during the year.

In carrying out the above organization considerable changes in staff have been necessary. The latter is now constituted as follows:—

	No.
Clerk, 1st class ... ..	1
Clerks, 2nd „ ... ..	2
„ 3rd „ ... ..	3
Storekeepers, Drug Store... ..	2
„ 3rd class ... ..	2
„ 4th „ ... ..	7
Clerks, 4th class ... ..	16
„ temporary ... ..	11
	— 43
<i>Workshops:—</i>	
Chief foreman ... ..	1
Clerk of work ... ..	1
	— 2
	45

7 foremen and 45 artisans.

The workshops are divided as follows:—

Workmen, instruments' workshop... ..	8
Carpenters' workshop ... ..	19
Blacksmiths' „ ... ..	6
Tentmakers' „ ... ..	5
Tinsmiths' „ ... ..	3
Tailors' „ ... ..	3
Painters' „ ... ..	8
	— 52
Dispensary servants ... ..	16
Drivers and syces ... ..	17
Storemen ... ..	30
	— 63
TOTAL ... ..	160

*Stores.*—To meet the inadequacy of storage accommodation at headquarters an auxiliary depot has been opened in Bûlâq near the railway goods siding.

This depot occupies 1,603 square metres and a regular storekeeper has been appointed in charge.

The Central Epidemic Stores have been definitely incorporated in the Central Stores and two permanent storekeepers appointed.

The system between the various stores of supplying each other with equipment against payment has been abolished.

The procedure for issuing stores has been altered to facilitate quicker issue, and a new system of control and speeding-up introduced.

*Permanent Charges.*—All charges of the Department have been thoroughly revised.

The issue of uniforms has been unified and a special system of card accounts introduced. There are 400 accounts for uniforms.

*Supply Office.*—The work of estimates, contract orders and sales has been co-ordinated. The control of delivery, payment, clearance of stores, etc., is now established on the card index system.

*Workshops.*—A costing system has been introduced and the arrangement of work brought into line with other Government workshops.



*General Reorganization.*—In the store work of the Department generally, several important reforms have also been introduced during the year, the principal being the decentralization of Epidemic Stores.

Up to the present epidemic season the practice has been to draw stores straight from the Central Stores into the cordons. This arrangement has the great disadvantage of congesting work at headquarters at a critical time and delaying the supply of equipment which was needed urgently over a wide field of epidemics, besides entailing considerable expense for transport.

To meet this, a scheme of store establishments has been compiled by the Director of Section IV for each province. These establishments are to be held by the provincial stores, so that in future the stock at the Central Stores will be confined to making good the wastage when the season is finished and to holding reserves to meet any exceptional demands. Each store has been inspected, new premises engaged, additional storekeepers appointed, and it is hoped to complete the reorganization finally during the coming year.

This reorganization has rendered possible the conversion of the Epidemic Store budget on the lines mentioned under the paragraph dealing with the stores estimates and enabled timely and systematic provision to be made in place of the former hurried purchasing to meet demands that had already arisen.

Another most important decision on stores is that embodied in Departmental Order No. 76 of September 23, 1916, on the subject of responsibility.

In the above order, demarcation has been definitely made between the administrative responsibility of chiefs of units and the material responsibility of chargees.

A further notable departure from past procedure has been introduced in the method of purchasing contract stores.

Hitherto our supplies have been almost exclusively furnished by local agents.

With the expansion of the stores budget to over L.E. 100,000 it appeared desirable to get into touch with the original manufacturers and to this end our contract supplies were brought to the notice of the trade.

At the same time considerable modifications were made in the Government contract clauses to facilitate tendering.

In the quotations received the experiment has proved very successful and it is hoped that under normal conditions of trade the bulk of our stores will be supplied by the actual manufacturers.

## WORKSHOPS.

For the first time, the departmental workshops have been organized on a costing system. This has necessarily involved the introduction of costing ledgers, forms, etc., but at the same time the necessary data have been furnished for survey and control of work.

The workshops are composed of the following seven sections, employing on an average between fifty and sixty men :—

Workshop.	Employees.	Workshop.	Employees.
Instruments ... ..	8	Tinsmiths ... ..	3
Carpenters ... ..	19	Tailors ... ..	3
Blacksmiths ... ..	6	Painters ... ..	8
Tentmakers ... ..	5		

The original budget grant of L.E. 2,441 on this head has been increased to L.E. 4,600, but this sum is designed to meet not only the expenditure of our own workshops, but also that carried out for our account by other departments and private firms.

The number of orders dealt with during the year is 3,000, consuming L.E. 2,400 in material and L.E. 1,400 in labour.



As will be seen from the following tables, which give the main items of work for each shop, the output of work is more of a repairing nature than manufacturing. Only in two lines has manufacture been definitely undertaken, namely, in aseptic furniture and tentage. In the former case the economy realized in past experiments has led to the whole of the aseptic furniture for 1917 being placed in the hands of our own shops instead of being purchased from home. The result as regards workmanship should prove interesting, as recent trials made by the Department point to the probability of native workmen turning out quite as good equipment in this line as home firms.

The latest autoclaves, entirely satisfactory and well finished, have been supplied by a local tinsmith.

The following will be put in hand during the year :—

Arm baths.	Tables, dressing, glass top.
Sand bath.	Bed tables.
Leg baths.	Tables, instrument, and irrigator stands.
Fever bath.	„ dressing.
Instrument cabinets.	„ anæsthetic.
Covers for dressing tables.	„ operation.
Extension apparatus.	Trolleys, operation.
Inhalers, zinc.	Ammonia apparatus.
Towel rails.	Formaline „
Bandage rollers.	Bed-cradles.
Washhand stands, Down.	Zinc dressing boxes.
10-litre irrigator stands.	Splints, wood and iron.
Portable shelves.	Cabinet for eye instruments.
Instrument stands.	Milk sterilizer.
Operation stools.	Hot-air sterilizer.

The following have been made during the year :—

	Departmental Shops.	London Price.
	L.E.	L.E.
Lead-lined x-ray photo-plate boxes ... ..	4,188	—
Irrigator stands ... ..	7,097	9,000
Operation trolleys ... ..	5,088	13,500
Fever bath ... ..	8,550	11,000
Dressing tables... ..	5,122	11,000
Table, x-ray plate rack ... ..	3,558	—
Salts, bed-cradle ... ..	1,684	1,350
Dressing wagon ... ..	4,046	9,335
“Eureka” operation tables ... ..	6,500	10,000
Towel rails ... ..	894	1,500
Racks, eye knives ... ..	673	1,000

As regards tentage, the adoption of tents in place of straw huts for epidemic purposes has considerably increased the importance of this item as a regular supply, and in future this section of the workshops will probably be substantially increased.

In reviewing the repair character of the work, which makes up the bulk of the output, the most important feature is the instrument-repairing and sharpening shop.

Eight employees are engaged in this section. The broad divisions are edge (scalpels, etc.), blunt (forceps), scissors and eye instruments. The latter category is the most expert, such work as the resetting of keratomes and iridectomy knives having to be sent home to the makers (Weiss & Co.).

The latter inconvenience will only be got over by engaging an expert from home for this particular work.



# INSTRUMENT-REPAIRING SHOP.

## Ophthalmic Section.

Lead discs ... ..	82,600	Razors... ..	24
Batteries ... ..	36	Eye scissors ... ..	204
Scoops... ..	36	Autoclaves ... ..	8
Eye scalpels ... ..	2,508	Instrument sterilizers ... ..	10
Hypodermic needles... ..	500	Hypodermic syringes ... ..	30
Perimeters ... ..	7	Microscopes ... ..	2

## General Instrument Repairs.

Aspirators ... ..	12	Retractors ... ..	2
Catheters ... ..	16	Laryngoscopes ... ..	2
Directors, probes ... ..	66	Vaginal speculums ... ..	20
Artery forceps ... ..	160	Eye speculums ... ..	22
Dissecting forceps ... ..	152	Autoclaves ... ..	16
Bone forceps ... ..	38	Dressing kettles ... ..	10
Eye forceps ... ..	16	Brass syringes ... ..	20
Midwifery forceps ... ..	10	Hypodermic syringes ... ..	50
Mouth gags... ..	4	Dressing tables ... ..	20
Chisels and gouges ... ..	128	Trephines ... ..	16
Guillotines ... ..	14	Trocars ... ..	34
Vulcellum hook forceps ... ..	36	Bandage machine knives... ..	1,800
Amputation knives ... ..	80	Mincing machine knives ... ..	182
Bistouries ... ..	100	Chloroform bottles ... ..	20
Cartilage knives ... ..	130	Diphtheria syringes ... ..	10
Scalpels, operation ... ..	1,826	P.M. hammers ... ..	28
P.M. scalpels ... ..	208	Water cushions ... ..	10
Lancets ... ..	128	Lithotrites ... ..	8
Hypodermic needles, mounted ... ..	1,050	Sterilizer lamps ... ..	12
Nævus needles ... ..	36	Thermo-cauteries ... ..	14
Razors... ..	314	Lenses ... ..	8
Amputation saws ... ..	20	Bandage machines ... ..	2
Finger saws ... ..	40	Operation tables ... ..	4
P.M. saws ... ..	60	Trolleys ... ..	4
Curved scissors ... ..	288	Operation stools... ..	6
Straight scissors ... ..	1,006	Lamps ... ..	30
P.M. scissors ... ..	70		

The following tables show the nature of the work carried out in the other shops:—

## TINSMITHS' SHOP.

### New Work.

Vermorels ... ..	11	Funnels ... ..	300
Meshes for wire mattresses ... ..	5,000	Douche cans ... ..	6
Foot baths ... ..	2	Zinc pots ... ..	20
Leg baths ... ..	2	Bed-pans ... ..	13
Percolators... ..	2		

### Repairs.

Water cans... ..	244	Copper bed-pans ... ..	6
Ice chests relined ... ..	27	Pannikin trays ... ..	20
Vermorels ... ..	157	Zinc baths ... ..	17
Vermorel pipes... ..	61	Candlesticks ... ..	31
"    nozzles ... ..	29	Arm bath ... ..	6
Foot warmers ... ..	113	Soldering tins and drums ... ..	724
Lanterns ... ..	67	Fitting glass panes ... ..	111
Lamps... ..	53	Cutting panes of glass ... ..	966
"    table ... ..	6	Copper pans ... ..	17
"    spirit ... ..	89	Bed ticket holders ... ..	449
Milk cans, K.A. ... ..	310	Formaline apparatus ... ..	17
Bedsteads ... ..	167	Ammonia ... ..	23

## TENTMAKERS' SHOP.

### New Work.

Pillows ... ..	605	Tent sacks ... ..	570
Mattresses ... ..	436	Awnings, K. A. H. ... ..	13
Mattress cases ... ..	224	"    Fayûm Ophthalmic Hospital ... ..	For Army Patients.
Tents ... ..	53	"    Zagazig ... ..	
Curtains, sets ... ..	16	"    Benha ... ..	
Cart awnings ... ..	9	"    Tanta ... ..	



*Repairs.*

Pillows ... ..	832	Cushions ... ..	20
Mattresses ... ..	132	Tibn sacks ... ..	26
Tents ... ..	224	Bed cases ... ..	20
Stretchers ... ..	176	Travelling beds, covers ... ..	23
Sacks, disinfecting ... ..	265	chairs, upholstered ... ..	42
"  grain... ..	63	Deck chairs ... ..	12

PAINTERS' SHOP.

*Painting furniture :—*

Minya Hospital.	Isna Hospital.
Fayûm Hospital.	El 'Atf Health Office.
Asyût Hospital.	Bûlâq Health Office.
Kafr el Zayât Travelling Hospital, Ophthalmic.	Shubra Health Office.
Mehalla el Kobra Travelling Hospital, Ophthalmic.	Port Said Hospital.

758 Bed numbers in wards of Qasr el 'Aini Hospital.

Tables ... ..	451	Water barrows ... ..	7
Bedsteads, portable-ward-operation, etc.	609	Vermorels ... ..	11
Boxes, specimen, canteen, fever, small-pox	544	Trays, waiters' ... ..	40
Chairs ... ..	252	Fever baths ... ..	2
Screens ... ..	62	Iron drums... ..	11
Cupboards, assorted ... ..	52	Lanterns ... ..	65
Iron supports ... ..	162	Bed rests ... ..	10
Boards... ..	353	Ice chests ... ..	6
Pail covers ... ..	50	Sterilizers ... ..	3
Sacks, tent ... ..	300	Hat racks ... ..	15
Sofas ... ..	6	Autoclaves ... ..	4
Waste-paper boxes ... ..	68	Weighing machines... ..	2
Water cans... ..	118	2nd class ambulance ... ..	1
Cups ... ..	300	Pails ... ..	78
Measures ... ..	150	Forms ... ..	48
Basins ... ..	20	Trolleys ... ..	8
Bed ticket holders ... ..	446	Machines, various ... ..	19

BLACKSMITHS' SHOP.

*New Work.*

Iron brackets ... ..	2,036	Fever baths ... ..	2
Keys ... ..	230	Dressing tables ... ..	16
Angles... ..	392	Salters, bed ... ..	1
Hinges... ..	22	Operation trolley ... ..	2
Brackets ... ..	20	Irrigator stands... ..	4
Iron rods ... ..	77	Towel rails ... ..	4
Iron rings ... ..	98	Stands for evaporating dish ... ..	6

*Repairs.*

Bedsteads ... ..	354	Carts ... ..	43
Zir and tesht supports ... ..	213	Water barrows ... ..	10
Hasps and staples ... ..	176	Wheelbarrows ... ..	10
Locks ... ..	105	Filters... ..	15
Iron tables, travelling ... ..	175	Kitchen stoves ... ..	3
Drums, cyllin ... ..	131		

TAILORS' SHOP.

*New Work.*

Mosquito nets ... ..	151	Pillowslips ... ..	196
Operating coats ... ..	36	Flags, hospital pattern ... ..	40
Sisters' aprons ... ..	24	Gallabias ... ..	153
Table napkins ... ..	288	Sheets, 1st class ... ..	328
Operation aprons, 1st class ... ..	86	Flannel coats ... ..	26
Shirts, different ... ..	434	Drawers ... ..	25
Veils ... ..	600	Aprons, tamurgi ... ..	1,000
Sun protectors ... ..	36	Sofa cushion covers, sets ... ..	20
Screen covers, 4-fold ... ..	44	Trousers, tamurgi ... ..	50
Screen, covers, 3-fold ... ..	49	Stretchers ... ..	13
Towels ... ..	610	Tablecloths ... ..	22

*Repairs.*

Blankets ... ..	203	Gallabias ... ..	69
Jackets ... ..	131	Sheets ... ..	274
Trousers ... ..	89	Caps ... ..	18
Overcoats ... ..	24	Gallabias, blue ... ..	20

CARPENTERS' SHOP.

Description.	New.	Repair.	Description.	New.	Repair.
Tables ... ..	13	137	Crutches ... ..	100	—
Scrubbers ... ..	7	36	Boxes, sulphuric acid ... ..	16	—
Poles, tent ... ..	58	—	Cupboards ... ..	15	41
Chairs ... ..	—	372	Zir covers ... ..	136	—
" wheel ... ..	—	15	Barrack tables ... ..	22	—
Cupboards, death certificate ... ..	7	—	Bedsteads, camp ... ..	6	97
Frames and boards ... ..	145	13	Bath mats ... ..	15	—
Specimen boxes ... ..	—	265	Wheel barrows ... ..	—	12
Cholera boxes ... ..	61	2	Ice boxes, small ... ..	14	7
Ticket, patients' ... ..	6	—	" chests, large ... ..	—	5
Small-pox ... ..	—	134	Stays for disinfecting machine ... ..	60	—
P. M. boxes ... ..	6	6	Mosquito frames, sets ... ..	48	83
Waiters ... ..	36	4	Barrels ... ..	—	28
Meat safes ... ..	2	2	Packing boxes ... ..	443	5,000
Screens ... ..	1	24	Crates ... ..	20	—
Chairs, camp ... ..	—	22	Boxes, canteen ... ..	—	41
" wood ... ..	—	65	Barrel supports ... ..	10	—
" office ... ..	2	—	Paper baskets ... ..	81	4
Brackets, fire ... ..	21	—	Equipment Store, shelving ... ..	—	—
Motor boards ... ..	12	—	Instrument room, shelving ... ..	—	—
Straw store ... ..	1	—	Workshop, shelving ... ..	—	—
Partitions, Equipment Store ... ..	40	—	Drawers, Hygienic Inst. Stores ... ..	76	76
Water-closets ... ..	—	6	Forms, 2-metre ... ..	39	3
Tent door supports ... ..	33	13	Hat racks ... ..	14	—
Wall plugs, K. A. ... ..	1,700	—	Shelves ... ..	20	14
Step ladders ... ..	8	1	Boxes, diphtheria ... ..	—	320
Stretchers ... ..	—	52	Bed ticket holders ... ..	248	18
Back rests ... ..	—	30			



# X.—REPORT ON CAIRO SCAVENGING AND WATERING SERVICE.

## STREET AREA.

Extension of area in 1916 amounted to 12,272 square metres of macadam and asphalt roads, bringing the total area of public roads under the charge of the Service, at the end of the year, to 3,133,351 square metres.

A statement of areas and extensions for the last three years is appended :—

TABLE LXVIII.

YEAR.	Area.	Extension during Year.
	Square Metres.	Square Metres.
1914 ... ..	3,095,554	145,554
1915 ... ..	3,121,079	25,525
1916 ... ..	3,133,351	12,272

Earth roads of an approximate area of 500,000 square metres are included in above figures. This area is scavenged as far as credits allow.

*Work on Private Account.*—In addition to the figures given in Table I, the Service operates on an area of 81,143 square metres of macadamized private roads, against payment. The area is unchanged from the previous year and is as follows :—

	Square Metres.
Roads in Abbasiya Barracks ... ..	31,817
Egyptian State Railways approach roads to temporary military railway platforms ... ..	38,756
Property of the Société Belge-Egyptienne de l'Ezbekieh ... ..	8,570
Property of the Société des Biens-Fonds Urbains et Ruraux ... ..	2,000
TOTAL ... ..	81,143

## Water Consumption.

Tabular statement of net consumption by the Scavenging and Watering Service for the past three years :—

TABLE LXIX.

MONTH.	1914	1915	1916
	Cubic Metres.	Cubic Metres.	Cubic Metres.
January ... ..	31,830	15,514	18,300
February ... ..	29,521	19,924	18,608
March ... ..	51,814	34,566	39,577
April ... ..	61,933	48,293	67,387
May ... ..	84,332	53,709	73,301
June ... ..	90,645	76,517	85,497
July ... ..	92,367	71,689	78,868
August ... ..	74,799	75,378	74,965
September ... ..	69,664	62,516	71,477
October ... ..	31,733	51,598	50,641
November ... ..	23,874	38,458	33,885
December ... ..	11,814	27,386	27,303
TOTAL ... ..	654,326	575,548	639,809



*Rolling Stock.*—After deduction of condemned material, sales to Army or Government Departments, and inclusive of new material purchased, the strength of rolling stock, etc., on charge of the Service was as below :—

TABLE LXX.

	1914	1915	1916
Double water vans ... ..	74	78	89
Single water carts ... ..	83	77	89
Double dust vans ... ..	69	73	77
Single dust carts ... ..	197	208	203
Machine brushes ... ..	38	38	40
Trolley carts ... ..	13	13	13
Sewage carts ... ..	26	20	34
Hand carts ... ..	109	117	120
Dust bins ... ..	420	470	477
Steam pumps ... ..	3	3	1
Hand pumps ... ..	6	6	6

During 1916 one single water cart for donkey was sold to the Army authorities.

Twelve water carts (included in above table) were on loan to the Army authorities for work in the different camps in Cairo district.

Comparative prices of new rolling stock for the last three years are shown hereunder :—

	1914		1915		1916	
	L.E.	M.	L.E.	M.	L.E.	M.
Single dust carts ... ..	14	500	15	299	22	100
Double dust vans ... ..	59	701	67	767	73	454
Single water carts ... ..	21	—	23	540	34	100
Double water carts ... ..	72	—	81	—	98	450

Repairs were executed in Service workshops. New material was purchased from the Mechanical Service, Tura Prisons, and by adjudication.

*Harness.*—Made as usual at the Model Workshops. The prices were :—

	1914		1915		1916	
	L.E.	M.	L.E.	M.	L.E.	M.
Double harness ... ..	5	300	6	—	6	800
Single harness ... ..	4	200	4	600	5	200

For a short period in 1916, the Service made up its own harness, as the Model Workshops were unable to supply, owing to pressure of work, but this was abandoned as soon as the Model Workshops could resume delivery, as the Service had not sufficient stock of leather to continue the work.

Repairs were executed, as usual, in Service workshops.

*Animals.*—At the beginning of 1916 the number of animals on strength was: Mules 547, horses 18, donkeys 13.

During 1916 the following number of animals were struck off, owing to wastage or drafting to the Provinces and return of 25 mules to Army: Mules 80, donkeys 2.

As it was found impossible to obtain sufficient mules of suitable type from local sources, an arrangement was made, entailing a special credit from the Ministry of Finance, to purchase 56 American mules from the British Army, at a cost of L.E. 55 each. These were taken over in November 1916 and have proved very satisfactory.



In December 1916 the Service still remained below its estimated strength for the year by 10 mules and 2 donkeys.

TABLE LXXI.—ANIMALS CAST AND PURCHASED.

	1914	1915	1916
Animals cast :—			
Mules ... ..	51	37	80
Horses ... ..	1	—	—
Donkeys... ..	3	4	2
Animals purchased :—			
Mules ... ..	43	84	73
Horses ... ..	1	—	—
Donkeys... ..	—	—	3
Strength at end of year :—			
Mules ... ..	500	547	540
Horses ... ..	18	18	18
Donkeys... ..	17	13	14

*Buildings.*—Owing to want of sufficient credit, no new stabling accommodation was undertaken. The stable drainage at Bûlâq central stables was connected up with the city sewage system and is working satisfactorily.

*Bicycles.*—Scavenging and Watering Service: fourteen bicycles were struck off as past use and replaced, and one bicycle was purchased.

Central Stores: two machines were struck off and replaced, and one bicycle was purchased.

Tabular statement of bicycle establishment at end of :—

	1914	1915	1916
Scavenging and Watering Service..	60	60	61
Central Stores ... ..	49	52	53
TOTAL ... ..	109	112	114

Owing to Singer machines not being available, the New Hudson type of bicycle is now being used and proves satisfactory, though not so strong as the Singer make.

Average cost of repairs per bicycle per annum was :—

1914		1915		1916	
L.E.	M.	L.E.	M.	L.E.	M.
3	536	3	408	5	094

*Motor Cycle.*—This has run, during 1916, 2,407 kilometres at a cost of L.E. 13·703 milliemmes for upkeep, i.e. approximately 6 milliemmes per kilometer.

*Forage.*—On the recommendation of the Veterinary Service, barley and *tibn* were supplied direct by the Domains Administration and found very satisfactory, no cleaning being necessary.

TABLE LXXII.

PRICES.						
1914		1915		1916		
L.E.	M.	L.E.	M.	L.E.	M.	
Barley ... ..	8 200	8 301	9 094	} per ton of 1,000 kilos.		
Bran... ..	5 910	5 910	5 910			
<i>Tibn</i> ... ..	2 900	3 —	2 380			
Straw ... ..	1 375	1 350	1 100	} per qantâr of 100 rotls.		
<i>Bersim</i> ... ..	0 037	0 033	0 027			

Bran continued to be supplied by Egyptian Army Supplies Department from Tura mills.

*Bersim* and straw were supplied by contractors, after public adjudication

*Shoeing*.—Average cost per set per month :—

1914		1915		1916	
L. E.	M.	L. E.	M.	L. E.	M.
0	056	0	059	0	087

*General Stores*.—Prices of these were very high and delivery was very much delayed.

*Refuse Disposal*.—As in all large cities in other countries, the disposal of street sweepings and household refuse is a problem the satisfactory solution of which is not an easy matter.

The total quantity of refuse collected by the carts of the Scavenging and Watering Service in 1916 is calculated on data given later in this note at 279 tons per day, or 102,114 tons per annum.

This was disposed of partly by dumping and partly by burning at the refuse destructor in Old Cairo.

Burning by means of high temperature refuse destructor is the most sanitary method of disposal of refuse, but this is very expensive unless the heat generated can be utilized for some municipal enterprise such as, for instance, the lighting of a town by electricity. This cannot be done in Cairo, so that the heat is mostly wasted. The working expenses of the destructor amount to about L.E. 1,372 per annum and the amount of refuse burned by it is thirty tons a day, or 10,950 tons per annum, less the days when it is out of action for repairs. The only uses to which the heat can be put are, firstly, to supply steam to the slaughter-house, effecting thus an economy in coal of L.E. 450 in pre-war days and consequently much more at the present time, and, secondly, to heat a crematory furnace for the cremation of dead animals, the destruction of government papers sent down from time to time, and of tobacco seized at the Custom House.

The remainder of the refuse, 249 tons per day, was dumped at seven different sites in the outskirts of Cairo.

The following are the details of disposal of refuse for 1916 :—

TABLE LXXIII.

NAME.	Single Dust Cart. 1 c.m. capacity.	Double Dust Van. 2 c.m.s. capacity.
Madbah ... ..	64	77
Shanawāni ... ..	58	—
Giza ... ..	19	19
Bab el Husseinia ... ..	94	29
Shubra ... ..	27	3
Imbāba ... ..	33	—
Mataria ... ..	42	—
TOTAL ... ..	337	128

In addition, 154 single dust-cartloads were delivered daily to fifty-four native baths, against payment, and thirty tons of rubbish were daily burnt at the destructor.

Reckoning a cartload of one cubic metre as about one-third ton weight, the total daily output was, in 1916 :—

Tipping ... ..	198 tons.
Native baths ... ..	51 „
Destroyed at destructor ... ..	30 „
TOTAL ... ..	279 tons.

or for the whole year 102,114 tons.



TABLE LXXIV.—TABULAR STATEMENT OF RUBBISH OUTPUT PER ANNUM.

	1914	1915	1916
	Tons.	Tons.	Tons.
Tipping ... ..	68,985	54,020	72,468
Native Baths ... ..	20,075	20,440	18,666
Destructor ... ..	10,950	10,950	10,980
<b>TOTAL ... ..</b>	<b>100,010</b>	<b>85,410</b>	<b>102,114</b>

The situations of the existing dumping sites are open to most serious objections on account of their proximity to the habitations of the town.

The Madbah *dépotoir* has become a mound of refuse higher than the roofs of the houses in its immediate vicinity and the necessity of finding another site is an urgent necessity.

As regards the Husseinîya *dépotoir*, in view of the scheme in course of being put into execution for the levelling of large areas of land in the neighbourhood, in order to render these suitable for building purposes, this site has become unsuitable as a dumping ground.

In short, the question of the disposal of the refuse of Cairo city is becoming more acute every day and will necessitate the elaboration of a scheme involving very considerable expenditure by the Government in the near future.

In any such scheme the two alternatives at our disposal are burning and dumping. The former would require an increase in the number of cells at the destructor to allow of 279 tons of refuse being burned every day instead of only 30. In addition to the capital outlay necessary, there would be a corresponding increase in the annual expenditure. In fact, the cost of this method would be almost prohibitive.

As regards the other alternative, dumping is a method of disposal peculiarly well suited to Cairo on account of its surroundings of desert. The great difficulty in connexion with the dumping of refuse in the desert at a sufficient distance from the town is that of transport. The only two practicable methods of effecting this are by rail or by motor vehicles. Until recently it seemed that existing railways might perhaps be utilized for the purpose, *viz.*: the quarry railways which run along the eastern outskirts of the town to the desert on the north and south of the Citadel. It appeared quite feasible to remove the refuse in this way to certain parts on the desert south of Cairo. The most promising of these railways has, however, lately been taken up. Unless, therefore, a special railway of some kind is laid down, it seems probable that motor transport will offer the only solution of the difficulty.

*Drainage Transport Service.*—There has been no extension of this in 1916, but a certain number of the mules have been employed daily by the Main Drainage Department on transport of material, etc., for their Service in dust carts loaned by this Service.

*Municipal Supply Service.*—During 1916, the credit for this work (L.E. 3,000) was exceeded by L.E. 1,891.

*Stables.*—In July 1916, at the request of the military authorities, the temporary stable for forty-four animals at Abu el Ela was given over to them, and is used by their Transport Service.

Since the purchase of fifty-six mules from the Army, and consequent addition of strength, the available stable accommodation in the Service has become very limited.



*Work executed for the Account of the Army.*—In August 1916, at the request of the Army authorities, daily collection of refuse from the following offices in Cairo was undertaken against payment, the Army loaning the necessary pair of mules, which were stabled and fed by the Service.

Headquarters, Savoy Hotel.

Qasr el Nil Barracks.

Abu el Ela Transport Stables (collection from here ceased in November, 1916).

Military Police Barracks, Bab el Hadid.

Old Headquarters, Sharia Qasr el Nil.

Salonica Garage.

Army Post Office.

*Destructor.*—Annual upkeep, inclusive of screening, was :—

1914	1915	1916
L.E.	L.E.	L.E.
1,306	1,268	1,247

Average cost per day, inclusive of non-working periods, was :—

1914	1915	1916
L.E. M.	L.E. M.	L.E. M.
3 578	3 474	3 417

*Upkeep of Taps.*—The following was the expenditure under this head in :—

1914	1915	1916
L.E.	L.E.	L.E.
572	367	395

*Daily-paid Labour.*—In the course of 1916, owing to the better rates of pay offered by the Army and the Egyptian Labour Corps, as compared with the Scavenging and Watering Service, a number of drivers, etc., left work, and it became difficult to replace them with capable drivers.

Tabular statement of strength of daily-paid labour appended :—

TABLE LXXV.

	1914	1915	1916
Drivers :—			
Water Cart ... ..	125	114	120
Dust Cart ... ..	329	334	349
Sweepers ... ..	589	510	595
Miscellaneous ... ..	76	75	82
TOTAL ... ..	1,119	1,033	1,146



# XI.—GENERAL.

## 1. BUDGET.

The Budget for the year April 1, 1916, to March 31, 1917, was fixed at ...	L.E.	385,449
That for 1915 was fixed at ...	„	385,498
Showing a decrease of ...	„	49

TABLE LXXVI.

		1916	1915	Increase.	Decrease.
		L.E.	L.E.	L.E.	L.E.
CHAPTER I.—CENTRAL SERVICES.					
Art.	1. Salaries, wages, and allowances...	68,704	67,218	1,486	—
„	2. Transport ... ..	6,550	6,550	—	—
„	3. Food ... ..	868	868	—	—
„	4. Storage of serum ... ..	350	350	—	—
„	5. Forage and shoeing ... ..	879	729	150	—
„	6. Rent, water, light, sewage, etc. ...	1,269	1,216	53	—
„	7. Books and periodicals ... ..	372	372	—	—
„	8. Telephones and telegrams ... ..	400	394	6	—
„	9. Petties ... ..	1,774	1,774	—	—
„	10. Purchase of animals ... ..	1,040	1,969	—	929
	Material ... ..	—	193	—	193
		82,206	81,633	1,695	1,122
CHAPTER II.—INSPECTORATES.					
Art.	11. Salaries, wages, and allowances ...	54,041	54,362	—	321
„	12. Transport ... ..	7,868	7,768	100	—
„	13. Rent, water, light, sewage, etc. ...	2,476	2,713	—	237
„	14. Telephones and telegrams ... ..	510	462	48	—
„	15. Petties ... ..	313	313	—	—
„	16. Free water fountains ... ..	3,000	2,588	412	—
		68,208	68,206	560	558
CHAPTER III.—HOSPITALS.					
Art.	17. Salaries, wages, and allowances ...	52,427	50,429	1,998	—
„	18. Transport ... ..	1,872	1,822	50	—
„	19. Rent, water, light, sewage, etc. ...	10,045	7,874	2,171	—
„	20. Food ... ..	30,058	25,987	4,071	—
„	21. Forage and shoeing... ..	43	48	—	5
„	22. Books and periodicals ... ..	31	31	—	—
„	23. Telephones and telegrams ... ..	333	284	49	—
„	24. Petties ... ..	984	974	10	—
		95,793	87,449	8,349	5
CHAPTER IV.—SCAVENGING AND WATERING SERVICE.					
Art.	25. Salaries, wages, and allowances ...	23,435	23,467	—	32
„	26. Uniforms ... ..	450	441	9	—
„	27. Forage and shoeing... ..	11,424	11,193	231	—
„	28. Water ... ..	5,913	5,814	99	—
„	29. Light, sewage, etc. ... ..	205	205	—	—
„	30. Upkeep of plant ... ..	2,270	2,670	—	400
„	31. Material ... ..	5,608	6,366	—	758
„	32. Stores, etc., sold to Municipalities and Local Commissions... ..	3,000	3,000	—	—
„	33. Telephones and telegrams ... ..	60	60	—	—
„	34. Petties ... ..	100	218	—	118
„	35. Purchase of animals ... ..	1,096	1,096	—	—
„	36. Upkeep of gullies ... ..	1,460	1,460	—	—
		55,021	55,990	339	1,308
Carried forward...		301,228	293,278	10,943	2,993

TABLE LXXVI (continued).

	1916	1915	Increase.	Decrease.
	L.E.	L.E.	L.E.	L.E.
<i>Brought forward...</i>	301,288	293,278	10,943	2,993
CHAPTER V.—GENERAL EXPENSES.				
Art. 37. General Stores ...	51,935	48,112	3,823	—
" 38. Uniforms ...	720	720	—	—
" 39. Repairs of material and equipment	2,441	2,441	—	—
" 40. Supplies to Provincial Councils ...	2,500	2,500	—	—
" 41. Sanitary barbers ...	1,500	1,500	—	—
" 42. Upkeep of buildings ...	5,919	5,809	110	—
" 43. Alterations ...	800	800	—	—
" Sanitation of Mosques ...	—	410	—	410
" 44. Disinfecting ships ...	4,800	4,800	—	—
" 45. Maintenance of temporary lazarets at Gabbari...	4,560	4,560	—	—
" 46. New Works ...	25,020	34,754	—	9,734
	100,195	106,406	3,933	10,144
To deduct:	401,423	399,684	14,876	13,137
Services rendered ...	15,974	14,186	—	1,788
TOTAL ...	385,449	385,498	14,876	14,925
Net decrease ...	—	—	49	—

Original Credit ...	L.E.	371,352
To add:—		
Transfer from Ministry of Finance...	L.E.	636
Supplementary Credit ...	14,550	15,186
		386,538
To deduct:—		
(a) Transfer to—		
Survey Department, Ministry of Finance (Statistics) ...	487	
Ministry of the Interior ...	312	
(b) For services rendered by—		
Economat ...	241	1,040
		385,498
Original Credit ...		385,449
To add: Supplementary credits ...		33,433
		418,882
TOTAL...		418,882
Total expenditure...		426,083
DEFICIT ...		7,201

Further provision for the cost of services rendered to this Department has been made in the budgets of the following Departments:—

TABLE LXXVII.

	1916	1915
	L.E.	L.E.
Ministry of Finance (Stationery Office) ...	1,540	1,299
" " (Government Press) ...	1,500	2,346
" " (Post Office)... ..	1,792	1,629
" " (Customs) ... ..	550	550
Ministry of Public Works (Bâtiments) ...	—	238
Provinces and Governorates (Police) ...	228	222
Pensions ... ..	11,961	11,028
TOTAL ... ..	17,571	17,312



TABLE LXXVIII.—NEW WORKS.

	1916	Expended.
	L.E.	L.E.
Completion of works at Alexandria Hospital and purchase of utensils...	319	—
Completion of building for Sisters at Alexandria Hospital ... ..	91	—
Damanhūr Hospital electric light installation ... ..	160	—
Completion of buildings, Zagazig Infectious Ho-pital ... ..	35	35
Extension of Ablasiya Infectious Hospital ... ..	8,000	9,037
Qasr el 'Aini Hospital (connexion with main drainage and installation of water-closet in place of pails) ... ..	800	870
Equipment for the Suez Hospital Laboratory ... ..	50	—
Port Said Hospital (connexion with main drainage and installation of water-closet in place of pails) ... ..	610	538
Vaccine Institute enlargement ... ..	700	607
Vaccine Institute equipment ... ..	100	—
Equipment for the Faiyūm Ophthalmic Hospital ... ..	470	320
Initial cost of scavenging and watering new roads ... ..	513	513
Prophylactic measures against ankylostoma ... ..	9,000	909
Prophylactic measures against cholera ... ..	3,952	2,288
Reorganization of archives ... ..	220	14
Abu el Ela latrines (connexion with main drainage.) ... ..	—	5
Fumm el Khalig disinfecting station (connexion with main drainage) ... ..	—	40
Scavenging and Watering Service (connexion with main drainage) ... ..	—	269
Qasr el 'Aini Hospital (construction of a destructor) ... ..	—	16
Purchase of an automobile for Epidemic Service ... ..	—	240
Building a new sewing room at Qasr el 'Aini Hospital ... ..	—	305
Port Said Infectious Hospital (connexion with main drainage) ... ..	—	267
Zagazig Infectious Hospital (electric light installation) ... ..	—	8
Purchase of oil engine for supply of electric light to the Qasr el 'Aini Hospital	—	428
<b>TOTAL ... ..</b>	<b>25,020</b>	<b>16,709</b>

## 2. STAFF.

TABLE LXXIX.—PERMANENT EMPLOYEES.

CATEGORY.	1916	1915	CATEGORY.	1916	1915
<b>Technical.</b>			<i>Brought forward</i> ...		
Director-General... ..	1	1	Midwives ... ..	44	44
Assistant Director-General... ..	1	1	Director of Stores ... ..	1	1
Directors of Sections (special class)... ..	3	3	Chief Inspector of Pharmacies... ..	1	1
President, Medical Commission ... ..	1	1	Assistant Inspector of Pharmacies ... ..	1	1
Inspector, Cairo City ... ..	1	1	Pharmacists, 3rd class ... ..	4	4
Inspectors (special class) ... ..	2	2	4th " ... ..	14	14
Divisional Inspectors ... ..	7	7	Assistant Pharmacists ... ..	5	5
Sub-Directors of Sections ... ..	2	2	Chief Inspector, Scavenging and Watering Service ... ..	1	1
Vice-President Medical Commission... ..	1	1	Inspector, Scavenging and Watering Service ... ..	1	2
Inspectress ... ..	1	1	Assistant Inspector, Scavenging and Watering Service ... ..	1	1
Inspectors, 2nd class ... ..	7	7	Inspector ... ..	1	1
3rd " ... ..	18	19			
Sanitary Engineer, 1st class ... ..	1	1	<b>Clerical.</b>		
"          2nd " ... ..	1	1	Directors of Service ... ..	2	2
"          3rd " ... ..	1	1	Sub-Directors of Service ... ..	2	2
Director of Technical Institutes... ..	1	1	Chefs de Bureau... ..	2	2
Bacteriologist, 1st class ... ..	1	1	Sous-Chefs de Bureau ... ..	4	6
Bacteriologists, 2nd " ... ..	2	2	Employees, 1st class ... ..	9	8
"          3rd " ... ..	2	2	2nd " ... ..	18	19
Assistant Bacteriologists ... ..	4	2	3rd " ... ..	32	32
Chemist, 1st class ... ..	—	1	4th " ... ..	125	115
Chemists, 2nd " ... ..	2	1	Chief Storekeeper ... ..	1	1
"          3rd " ... ..	2	3	Storekeepers, 2nd class ... ..	2	2
Assistant Chemists ... ..	2	2	3rd " ... ..	2	1
Director, Alexandria Hospital ... ..	1	1	4th " ... ..	8	9
Medical Officers, 1st class... ..	1	1			
"          2nd " ... ..	4	4			
"          3rd " ... ..	8	8			
"          4th " { Cat. A... ..	23	23			
" B... ..	174	171			
<i>Carried forward</i> ...	275	272	<b>TOTAL ... ..</b>	<b>556</b>	<b>546</b>



TABLE LXXX.—TEMPORARY EMPLOYEES.

CATEGORY.	1916	1915	CATEGORY.	1916	1915
Medical Officers ... ..	42	32	Clerks ... ..	80	67
Inspectors (Epidemics) ... ..	4	5	Works foremen ... ..	211	163
Inspector (Stores) ... ..	1	1	Mechanic ... ..	2	2
Engineers ... ..	5	5	Meter inspector ... ..	1	1
Matron ... ..	3	1	Stable masters ... ..	1	1
Nursing Sisters ... ..	24	21	Director, Antirabic Institute ... ..	3	3
Assistant, Laboratory, 1st class ... ..	1	2	Storekeepers ... ..	1	1
				17	10
<i>Carried forward</i> ...	80	67	<i>Total</i> ... ..	316	248

TABLE LXXXI.—HORS CADRE EMPLOYEES.

CATEGORY.	1916	1915	CATEGORY.	1916	1915
Chief attendants ... ..	77	44	<i>Brought forward</i> ...	547	319
Male " ... ..	279	148	Cooks ... ..	45	34
Female " ... ..	128	69	Printers ... ..	3	3
Assistants, Laboratory, 2nd class ... ..	5	1	Overseers ... ..	31	29
" " 3rd " ... ..	5	7	<i>Mouwens</i> ... ..	20	13
" " 4th " ... ..	9	6	Sanitary Barbers ... ..	173	253
Disinfectors, 1st class ... ..	12	12	Mechanics ... ..	1	1
" 2nd " ... ..	32	32	Various categories ... ..	800	620
<i>Carried forward</i> ...	547	319	<i>Total</i> ... ..	1,620	1,272

N.B.—The number of Hors Cadre for 1915 does not include those who were attached to Qasr el 'Aini, Abbasiya Fever, Suez, Port Said, and Alexandria Hospitals.

### 3. AUTHORIZATIONS TO PRACTISE THE MEDICAL AND ALLIED PROFESSIONS,

The total number of authorizations to practise medicine, etc., granted during 1916 amounted to 86, subdivided as follows:—

TABLE LXXXII.

AUTHORIZATIONS.	NATIONALITY.						TOTAL.	
	British.	French.	Egyptians.	Italians.	Russians.	Greeks.	1915	1916
Medical ... ..	4	1	32	—	—	2	53	39
Pharmaceutical:—								
(1) Pharmacists ... ..	—	—	13	1	—	1	8	15
(2) Assistant pharmacists ... ..	1	—	2	—	1	—	—	4
Veterinary ... ..	—	—	14	—	—	—	12	14
Midwifery ... ..	1	—	10	1	1	1	20	14
Dental ... ..	—	—	—	—	—	—	8	—
<i>Grand Total</i> ... ..							101	86

### 4. LEGAL.

The only new enactments bearing on the work of the Department published in 1916 were:—

An *arrêté* dated February 22, modifying the "Tableau n° 2" annexed to the Pharmacy Law. Copper sulfate is included.

Two *arrêtés* making additions to the list of the towns and villages where Law No. 13 of 1904 on the "Etablissements Insalubres, Incommodes et Dangereux de la catégorie 'B'" is to be applied: *Arrêté* of August 5: Qalyûbiya-Choubra el Kheima. *Arrêté* of September 23: Girga-Sâhel Tahta.

Law No. 18 of August 8: Filling and draining of ponds and marshes.



TABLE LXXXIII.—LEGISLATION.

[illegible]



Passenger control in case of cholera abroad. *Arrêté* of January 21, 1911... .. 13

Navigation on the Mahmudia Canal in time of cholera. *Arrêté* of January 16, 1911... .. —

Prophylactic measures against infectious diseases. Law No. 15 of June 12, 1912... .. 4,110

Excavations and *birkas* near habitations. Decree of April 26, 1900... .. 35

Pharmacy and sale of poisons. Law No. 14 of September 15, 1904... .. 61

Assistant pharmacists. Law No. 20 of November 17, 1911... .. 20

Transport of rags during epidemics. Law No. 1 of March 10, 1906, and *Arrêté* of October 30, 1913... .. 1

Control of returning pilgrims. *Arrêté* of June 14, 1914... .. 32

Public latrines and *dépendances* of mosques and *zawias*. Law No. 14 of July 1, 1911... .. 87

Births and deaths. Decree of August 11, 1912... .. 1,075

*Etablissements incommodes, insalubres et dangereux*. Law No. 13 of August 28, 1904, and *Arrêté* of August 29, 1904, completed by *Arrêté* of June 11, 1905... .. 808

Cleanliness of streets. *Arrêté* of June 7, 1913... .. 89

Adulteration of milk under Article 302 of the Penal Code... .. 643

General sanitary contraventions against Native and Mixed Penal Codes... .. 437

Total Number reported... .. 10,084

Convictions obtained... .. 8,915

Acquittals... .. 320

Filed... .. 509

Under consideration... .. 340



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