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Contributors

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REPORT
ON THE
Sanitary Condition
OF THE
County Borough
OF
Birkenhead,
FOR THE YEAR 1916,
BY
Dr. R. SYDNEY MARSDEN, F.R.S. (Edin.)
M.R.I.A., F. Inst. Chem., etc.
Medical Officer of Health.

BIRKENHEAD:

WILSON & JONES, 92 HAMILTON STREET.

1917.



R. E. ROBERT

OF THE

Sanitary Commission

General Secretary

Director

FOR THE YEAR 1877

DR. R. SYDN. DEAN (H. L. DEAN)

AND THE SANITARY COMMISSION

OF THE UNITED KINGDOM



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1917.



HEALTH DEPARTMENT COMMITTEE

OF THE

BIRKENHEAD TOWN COUNCIL

1916-17

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MR. ALDERMAN THOMAS (Chairman of the Committee)

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HEALTH COMMITTEE
OF THE
BIRKENHEAD TOWN COUNCIL,
1916-17.

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MR. COUNCILLOR DAVID ROGER ROWLANDS.

AND

HIS WORSHIP THE MAYOR.

(JAMES MERRITT, Esq.)

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Tuberculosis Officer and Assistant M.O.H.
CYRIL BANKS, M.B., B.Surg. (Lond.) D.P.H.

Borough Bacteriologist.
PROFESSOR J. M. BEATTIE, M.D., Ch.M. (Edin.), M.A.,
University of Liverpool.

Borough Analyst.
HERBERT E. DAVIES, M.A. (Camb.), B.Sc., F. Inst. Chem.

Chief Inspector and Inspector under the Food and Drugs Acts.
WILLIAM DAWSON, ASSOC. SAN. INST.

Chief Clerk.
JOSEPH BENNETT.

Statistical Clerk.
JOHN OWEN.

And Four Junior Clerks.

Inspector of Meat, Fish, and Slaughter Houses.
JOHN M. CARNIE. *Assistant—*A. CARNIE.

Inspector of Housing.
A. LONGSTAFF.

Four District Sanitary Inspectors.
Inspector of Workshops and Bakehouses.
S. G. RACKHAM.

Inspector under the Shops Act, 1912.
Disinfecting Inspector.
An Inspector of Common Lodging Houses and Houses let in Lodgings.

Health Visitors.
Four Female Health Visitors, one of whom acts as Inspector of
Midwives.

Keeper of Disinfecting Station and Three Disinfecting Labourers.

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*To the Mayor, Aldermen, and Council of the
County Borough of Birkenhead.*

GENTLEMEN,

I have the honour of submitting to you my Twenty-Fifth Annual Report to the Health Committee on the Health of Birkenhead, viz., that for the year 1916, which is remarkable as showing the healthy condition of the people in spite of the difficulties caused by the war. The Death Rates and Infantile Mortality Rates are the lowest yet recorded.

There is no doubt in my mind that this general condition of good health is due largely to the fact that the children are being better fed than in normal years. Owing to the men being at the War, the separation allowances are going to the mothers, and the women, in most cases, spend them on food and clothing for the children, with the result that the latter have greater resisting power against disease, and infectious fevers have not spread, the number of cases treated in the Fever Hospital during the past two years shewing a marked decline. If this condition of feeding could be continued, and better housing facilities provided, I think the death rates might still be very largely reduced.

This Report is on similar lines to my previous ones, for convenience of reference.

I am much indebted to Mr. W. Dawson and Mr. J. Owen for the assistance they have given me in preparing this report.

I am,

Your obedient servant,

R. SYDNEY MARSDEN,

MEDICAL OFFICER OF HEALTH.

PUBLIC HEALTH DEPARTMENT,
TOWN HALL,

March 24th, 1917.

COUNTY BOROUGH OF BIRKENHEAD

DURING 1916.

SHORT SUMMARY.

Area in Acres	3,850, or a little more than 6 sq. miles.
Population (at Midsummer)	142,622
No. of Inhabited Houses (Police estimate).....	26,851
Number of Inhabited Houses at time of Census, 1911	24,343
Number of Persons per House at time of Census, 1911	5·3
Rateable Value	£721,569
1d. in the £ yielded for General Purposes	£2,820
1d. in the £ yielded for Sanitary purposes	£2,550
Number of Persons per Acre (Density of Population)	37·0
Birth Rate per 1,000 living	26·9
Death Rate do.	14·2
Zymotic Death Rate per 1,000 living	1·3
Phthisis Death Rate do.	1·2
Average Death Rate last 10 years	15·1
Deaths of Children under 1 year of age to 1,000 Births	105
Percentage of Uncertified Deaths	0·14
Houses provided with Ashbins (approximately)	19,420
Houses provided with Ashpits do.	7,380

All the houses are provided with w.c's. with the exception of about 18 which have privies. 12 of these are not used. The 6 are in places where at present w.c's. cannot be provided. There are 3 earth closets in Oxton.

THE SANITARY CONDITION

OF THE

COUNTY BOROUGH OF BIRKENHEAD

DURING 1916.

Report of the Medical Officer of Health to the Health Committee.

Again I am able to report that the Health of the Borough, as estimated by the general mortality, during the year 1916, was in a most satisfactory condition, the Death rate of 14·2 per 1,000 being the lowest ever recorded, and 1·4 less than the low rate of last year.

The Infantile Death rate, 105 per 1000 births, is also the lowest yet recorded, except that for the year 1912 (98), and must be regarded as highly satisfactory, showing as it does a gradually steady decrease year by year. The Zymotic death rate is also down 0·2 per 1000, but the Phthisis rate remains the same as last year. I cannot give comparisons with other towns this year, as I have been unable to get the information.

The birth rate for the year, 26·9, is 0·5 less than last year, but is one of the highest rates in the country.

The following Table shows the Birth and Death rates during the last twenty-five years:—

BIRKENHEAD	Year	Population	Density per acre	Death Rate per 1000	Birth Rate per 1000	Infantile Death Rate per 1000 births	Total Zymotic Death Rate per 1000	Phthisis Death Rate per 1000
	1892	102038	26·5	19·2	32·7	170	3·0	1·5
	1902	113231	29·4	17·5	32·1	151	2·3	1·7
	1912	133521	34·6	14·7	28·2	98	1·4	1·1
	1913	135740	35·2	14·9	28·7	117	1·5	1·2
	1914	137996	35·8	15·6	27·3	122	1·7	1·0
	1915	140291	36·4	15·6	27·4	122	1·5	1·2
	1916	142622	37·0	14·2	26·9	105	1·3	1·2

When we consider the great growth in density of the population per acre (no less than 10 per acre) during these 25 years, and the great amount of overcrowding that exists, it is remarkable that the health of the people has remained so good and the mortality rates been kept down.

HOUSING OF THE WORKING CLASSES.

In my 1913 Report (p. 9) I gave a short history of the subject of "Housing" in the Borough up to the end of that year, and on pages 8 and 9 of my last year's report I gave a full description of the GILBROOK ESTATE HOUSING SCHEME, which, however, has not been gone on with for the present, owing to the difficulty of getting money and labour during the War.

The subject, however, has greatly increased in importance at the present time owing to the large influx of men and families into the town, due to the extension and increase of work at Messrs. Cammell Laird & Co., thereby rendering the present number of houses in the town totally unequal to the demand, and, as I said last year, I do not think that this demand will be met in the future by private enterprise, but will have to be provided by the Corporation, and I estimate that at least 1,000 houses will have to be provided especially to meet the call for houses at low rents of from 3/- to 5/- per week.

ESTIMATE OF THE POPULATION.

For the purposes of this Annual Report an estimate is required of the number of persons living at Midsummer, 1916, and I have estimated that on the 30th June of that year the population was 142,622, and on this estimate have based the statistics in this report.

The question of housing is one intimately connected with the estimate of population in the Borough, and because, owing to the large amount of overcrowding above referred to, the average

number of persons per house at the present time will be considerably above the Census average.

There are no empty cottage houses available, and even amongst the larger private houses there were 45 less unoccupied on the 30th June, 1916, than there were a year before. Many of these have been taken and (even in good parts of the town) are let off in rooms and occupied by a number of different families.

Taking all these facts into consideration, I am confident that my estimate of the population is not in excess. The number of births registered also remain proportionate, the excess of births over deaths being 1814, as against 1651 in 1915.

THE REGISTRAR GENERAL'S ESTIMATE OF POPULATION.

I have received a communication from the Registrar General saying that the following estimates of population have been adopted in his Office for the calculation of the death rate and birth rate in the Borough of Birkenhead for the year 1916, viz:—

For the death rate . . . 134,404

For the birth rate . . . 146,234

The former is an estimate of the civilian population, the latter of the total population based on the assumption that the ratio between the total and the civilian population is the same in the Borough as in England and Wales as a whole. With a view to approximation to the population amongst which the births have occurred, the total population of England and Wales for this purpose has been calculated by adding to the published estimate for 1914 the natural increase up to the middle of the year 1916.

A statement, shewing a summary of the vital statistics for England and Wales and for groups of towns during 1916, is here given.

Death-rate and Analysis of Mortality during the Year 1916.

	ANNUAL DEATH-RATE PER 1000 LIVING*								RATE PER 1000 BIRTHS		PERCENTAGE OF TOTAL DEATHS			
	All Causes	Enteric Fever	Small-pox	Measles	Scarlatina	Whooping-cough	Diphtheria	Violence	Diarrhoea and Enteritis (under 2 Years)	Total Deaths under One Year	Deaths in Public Institutions	Certified Causes	Inquest Cases	Uncertified Causes of Death
England and Wales ..	14.0	0.03	0.00	0.15	0.04	0.16	0.14	0.66	12.47	91	24.2	91.3	7.2	1.5
96 Great Towns, including London (Census Populations exceeding 50,000) ..	14.4	0.03	0.00	0.21	0.04	0.21	0.15	0.53	16.24	99	29.6	91.2	7.8	1.0
148 Smaller Towns (Census Populations 20000-50000)	13.0	0.03	0.00	0.14	0.04	0.14	0.15	0.46	10.79	90	16.4	92.5	5.7	1.8
London	14.3	0.02	..	0.19	0.03	0.18	0.14	0.56	15.80	89	45.6	90.1	9.8	0.1

* The death-rates for England and Wales are based upon deaths in the whole population and upon an estimated total population of 36,250,000. The birth-rate similarly calculated is 21.6 per 1000. The death-rates for the towns are based upon civil deaths and estimated civil populations. The birth-rates cannot be stated. In all cases the population used relates to the year 1915.

In accordance with the Registrar General's request I give the following return :—

Population as per Registrar General	No. of persons per acre	Birth Rate	Death Rate	Zymotic Death Rate	Phthisis Death Rate	Infantile Mortality per 1000 Births
134,404	34·8	26·3	15·1	1·4	1·3	105

For the reasons given in my last year's Report (p. 10) I totally disagree with this method of estimation.

MATERNITY AND CHILD WELFARE.

It will be remembered that in relation to this matter I gave a very full account of our proposed scheme and its methods of working in my last year's Report (pp. 11-13), and I do not, therefore, feel called upon to repeat it again here.

In the meantime, the premises have now been secured and were formally opened by the Mayor (James Merritt, Esq.) on the 7th November, 1916.

Other agencies at work, which are of importance in relation to this subject, I think should be referred to.

On the 9th March, 1916, the " Birkenhead Day Nursery " was opened at 3 Cole Street, and has been a great success, evidently supplying a long felt want.

The Nursery is open daily from 7-30 a.m. to 7 p.m., Saturdays until 1-30 p.m., for any children from one month up to five years of age, whose mothers have to go out working, or who may be deprived of proper guardianship, for some other reason.

The children are under the supervision of a qualified Matron, and staff of Nurses.

Any mothers who have either casual or regular employment could not do better than leave their little ones at the Nursery

during the time they are away from home, as they will be well fed, clean, warm and thoroughly well cared for during the day.

FEEES.

One child—per day	...	...	...	4d.
One child—per week	...	...	...	1s. 8d.
One child—Saturdays...	..	...	...	2d.
Two children of same family...	...	...	...	7d.

THE LIVERPOOL INVALID CHILDREN'S ASSOCIATION

have also opened a Branch in Hamilton Square, Birkenhead—the hours of attendance at which are—

Mondays and Fridays	...	10 a.m. to 3 p.m.
Wednesdays	...	10 a.m. to 12-30 p.m.

They work on very friendly terms with the Child Welfare Centre, and give special aid and extra nourishment to deserving and necessitous cases recommended to them from the centre, which is a very great advantage.

Another important institution which has been opened during the year is

"THE BIRKENHEAD RESCUE ASSOCIATION HOME FOR MOTHERS AND BABIES"

at 23 Grange Mount. This is doing very helpful work, and here unmarried mothers are received with some kindness and help. The need for such a Home has long been felt and deserves full support.

SPECIAL WORK DONE IN CONSEQUENCE OF THE WAR.

A good deal of extra work has had to be done by the

Health Department in connection with the outbreak of the War and the opening of a number of Schools, Dwelling-houses and other buildings for Military purposes, all of which have had to be examined and reported upon as to their sanitary arrangements and conditions, and where necessary put into proper order.

The premises have also been frequently and regularly inspected.

Special arrangements have been made for the frequent removal of the domestic refuse.

The following is a summary of the work done in this connection by the Department, viz:—

The number of premises occupied by and in connection with the troops and carefully inspected by us is ... 18

i.e., Hospitals	...	...	7
Barracks and Billets...			6
Nurses Hostels	...		5

The number of visits paid by the District Sanitary Inspectors to the above premises was 824, and a number of visits of inspection have also been made by the Chief Inspector of Nuisances and myself.

The total number of articles of bedding, clothing, etc., disinfected for the Military Authorities during 1916 was 10,880. A large proportion of these being in a verminous condition.

There were also 26 soldiers cleansed for vermin at the Disinfecting Station.

In the succeeding pages of this report will be found details of the work carried on by the Public Health Department, together with the vital and mortal statistics of the Borough during the year under consideration, as follows:—

**DETAILED STATEMENT OF
THE WORK OF THE PUBLIC HEALTH DEPARTMENT
DURING 1916.**

Ordinary Sanitary Operations.—The ordinary sanitary operations of the Department have continued to receive unremitting attention. House-to-house inspections of the cottage property in the Borough have been regularly made. Gulleys and passage drains have been periodically cleansed, public fountains, &c., have been scoured and kept in order, and the systematic removal of ashpit and house refuse at stated intervals is now carried out by the Borough Surveyor's Department.

Summary of Nuisances, &c.—The summary of nuisances investigated and dealt with during 1916 is as follows:—

	1916.
Number of nuisances reported	6631
Number of formal notices given	2196
Number abated after formal notice and without proceedings	2196
Number of cases in which proceedings had to be taken for ordinary nuisances	nil
Number abated after proceedings... ..	nil
House disinfecting notices... ..	220
Nuisances at houses let in lodgings	103
Nuisances at common lodging houses	67
Notices for cleansing of filthy houses	9

A brief statement of the other measures taken in 1916 for correcting or getting rid of whatever appeared to be prejudicial to health is subjoined.

Sanitary defects reported by the Inspectors and referred for the action of the Borough Surveyor	538
Matters reported to Water Engineer	195
Matters reported to Borough Treasurer	48
Houses or parts of houses specially disinfected by formalin or other disinfectants	701

Notice to whitewash and efficiently cleanse milk-houses, cowsheds and dairies, given and complied with	...	...	...	...	400
Offensive privies abolished	...	...	...	...	—
Parcels of infected bedding and clothes disinfected at the Disinfecting Station	..	...	...	...	582
Parcels of infected or discarded bedding and clothes destroyed	...	...	...	...	457
Carcases of dogs and cats &c. removed from pools or waste land and buried	...	...	...	...	89
Deposits of putrid fish and other objectionable refuse removed	...	...	...	...	3
Total	...	...	...	...	3013

In addition to the above, the following work has been done:—

Number of excavations made for the purpose of testing the condition of house drains	71
Number of smoke tests applied to drains of premises reconstructed under the supervision of this Department	66
Number of water tests applied to drains.	74
Number of smoke tests applied to the drains of new buildings, in conjunction with the Borough Surveyor's Department	24

District Inspections.—The following is a statement of the work done by the District Inspectors of Nuisances and the Disinfecting Inspector during 1916.

					Number of Visits and Revisits made to Insanitary Property.
District I.—Inspector Croshaw (on active service)...					4015
„	II.—	„	Lee	...	3714
„	III.—	„	H. T. Taylor	...	3825
„	IV.—	„	W. H. Tilston	...	4246
Disinfecting Inspector Isaac Taylor					5084
Total					20884

District 1 visits made by Inspectors of 2, 3 and 4 Districts.

Smoke Nuisances.—Observations were taken of the smoke emitted from the factory and other chimneys of the Borough during the year 1916. 1 notice was served for the abatement of a smoke nuisance and 2 notices to raise chimneys.

Inspection of School Premises.

Working in conjunction with the Education Department, I had 17 schools specially examined by the District Inspectors and reported thereon to the Education Committee.

Inspection of Common Lodging Houses and Houses let in Lodgings.

The following is a statement of the work performed during the year 1916 by the Inspector of Common Lodging Houses and Houses let in Lodgings, viz:—

REGISTERED COMMON LODGING HOUSES.

Day Inspections	...	...	...	...	...	4425
Night Inspections	..	...	...	...	...	437
The total number of registered lodging houses is 17.						

REGISTERED HOUSES LET IN LODGINGS.

Day Inspections	...	...	...	...	...	3578
Night Inspections	...	...	..	...	...	370

The total number of houses let in lodgings on the register at the end of 1916 was 744.

Corporation Tenement Dwellings.—356 visits were made during the year by the Inspector of Lodging Houses, &c., and 269 nuisances were reported, which have been abated.

Factory and Workshop Acts, 1901 and 1907.

In connection with the carrying out of the provisions of these Acts, the following is a statement of the work done by the Inspector during the year, viz:—

1066 visits have been made to workshops.

436 visits have been made to bakehouses.

34 visits have been made to workplaces.

74 visits have been made to homeworkers' premises.

15 workshops, including 2 bakehouses, have been placed on the register during the year, making a total of 473 up to the end of 1916, of which 57 are bakehouses and 48 are confectioners' shops.

18 workshops have been closed.

28 nuisances in connection with workshops have been reported and abated.

1 notice has been served for the abatement of a nuisance arising out of defective drainage.

9 notices to cleanse and limewash the workshops have been served and complied with.

463 occupiers of workshops have limewashed their premises under inspection, but without waiting for the formal notice.

No case of overcrowding has been reported during the year.

2 failures to affix abstract of the Factory and Workshops Act (s. 133), have been reported and dealt with.

Lists of out-workers have been carefully kept, and notices in the form prescribed by the Secretary of State, as given in my Report for 1892 (pp. 57 and 58), have been served when necessary.

Laundries.—141 visits were made during the year to the 53 laundries at present on the register.

Bakehouses.—The duties involved in carrying out the provisions of the Acts relating to the sanitary condition of bakehouses have been put under a special Inspector, and during the year 436 visits have been made to bakehouses.

There has been a very great improvement secured by this systematic inspection.

SHOPS ACTS, 1912 and 1913.

(Which repeal the Shops Regulations Acts, 1892—1911.)

The total number of visits paid to the various shops under the provisions of the above Acts and orders made thereunder during the year was 10043.

The particulars respecting the various proceedings and prosecutions taken under these Acts and Orders during the year are as follows, viz:—

236 infringements were reported and 111 letters of warning sent in connection therewith, prosecutions being taken in 3 cases, with the following results:—

For failing to close the shops for the sale of certain articles on Weekly Half-holiday.

		Fine. Including
Ditto	Ditto	30/- Costs.
Ditto	Ditto	10/- „
Ditto	Ditto	6/- „

The following Orders have been made under the provisions of the Shops Act, 1912, and came into operation during the year, viz:—

The Birkenhead Half-holiday (No. 1) Order, 1916.

The Birkenhead Half-holiday (No. 2) Order, 1916.

The Birkenhead Closing Order, 1916.

In addition to the above Orders, an Order was made on the 24th day of October, 1916, by the Secretary of State under Regulation 10.B of the Defence of the Realm (Consolidation) Regulations, 1914, for the early Closing of Shops during the Winter months.

The Order came into operation on the 30th day of October, 1916, and expires on the 30th day of April, 1917.

Administration of the Factory and Workshop Acts, 1901 & 1907,

IN CONNECTION WITH

Factories, Workshops, Laundries, Workplaces and
Homework.

1. INSPECTION.

Including inspections made by Sanitary Inspectors or Inspectors of Nuisances.

Premises. (1)	Number of		
	Inspections. (2)	Written Notices. (3)	Prosecutions. (4)
Factories (including Factory Laundries) ..	Nil	—	—
Workshops (including Workshop Laundries)	1643	10	—
Workplaces (other than Outworkers' premises included in Part 3 of this Report) ..	34	—	—
Total	1677	10	—

2. DEFECTS FOUND.

Particulars. (1)	Number of Defects			Number of Prosecutions. (5)
	Found (2)	Remed'd (3)	Referred to H.M. Inspector (4)	
Nuisances under the Public Health Acts :—*				
Want of cleanliness	1	1	—	—
Want of ventilation	—	—	—	—
Overcrowding	—	—	—	—
Want of drainage of floors	—	—	—	—
Other Nuisances	5	5	—	—
Sanitary accommodation { insufficient	—	—	—	—
{ unsuitable or defective	1	1	—	—
{ not separate for sexes	—	—	—	—
Offences under the Factory and Workshop Act :—				
Illegal occupation of underground bakehouse (s. 101)	—	—	—	—
Breach of special sanitary requirements for bakehouses (ss. 97 to 100)	21	21	—	—
Other offences (excluding offences relating to outworks which are included in Part 3 of this Report)	—	—	—	—
Total	28	28	—	—

* Including those specified in sections 2, 3, 7 and 8 of the Factory and Workshop Acts as remediable under the Public Health Acts.

3. HOME WORK.

[illegible]

SYSTEMERRORS.—^oIf an occupier gives out work of more than one of the classes specified in column 1, and subdivides his list in such a way as to show the number of workers in each class of work, the list should be included among those in column 2 (or 5 as the case may be) against the principal class only, but the outworkers should be assigned in columns 3 and 4 (or 6 and 7) into their respective classes. A footnote should be added to show that this has been done.

* The figures required in columns 2, 3 and 4 are the total number of the lists received from those employers who comply strictly with the statutory duty of sending two lists each year and of the entries of names of outworkers in those lists. The entries in column 2 must necessarily be even numbers, as there will be two lists for each employer—in some previous returns old numbers have been inserted. The figures in columns 3 and 4 will usually be (approximately) double of the number of individual outworkers whose names are given, since in the February and August lists of the same employer the same outworker's name will often be repeated.

4. REGISTERED WORKSHOPS.

Workshops on the Register (s. 131) at the end of the year.	1	2	Number.
Bakehouses	..	..	57
Confectioners	..	..	48
Laundries	..	..	53
Other Workshops	..	..	315
Total number of workshops on Register	..	..	473

important classes of workshops, such as houses may be enumerated here.

5. OTHER MATTERS.

Class. 1.	Number 2
Matters notified to H.M. Inspector of Factories :— Failure to affix Abstract of the Factory and Workshop Act, (s. 133) Notified by H.M. Inspector	2 —
Action taken in matters referred by H.M. Inspector as remedi- able under the Public Health Acts, but not under the Factory and Workshop Act, (s. 5)	These matters were attended to at the time.
Other	None
Underground Bakehouses (s. 101) :— Certificates granted during the year In use at the end of the year	None 37

These matters were attended to at the time.

THE MIDWIVES ACT, 1902.

In connection with the carrying out of the provisions of this Act, the usual routine was carried out during the year, viz: visiting the homes of midwives, interviewing them in connection with their work and explaining the provisions of the Act and the rules laid down for their guidance by the Central Midwives Board.

During the year 1916, 72 midwives entered their names on the local register as practising in the borough, being 6 less than last year, but names are constantly being added to the roll. Of the above 72, three of them subsequently left the district, and their names have been removed from the register accordingly. 7 midwives gave notice of change of address, and one had her name taken off the register at her own request. Two midwives died during the year.

During the year I received eight complaints against midwives. All of these were carefully investigated, and in six cases the midwives in question interviewed, and two appeared before the Health Committee and were reprimanded. 14 complaints were investigated by the Inspector of midwives. The Inspector also interviewed 11 midwives on minor matters where no complaint had been made.

Notices were received from midwives of 75 still births (43 male and 32 female) having occurred; and 373 cases were notified in which medical aid had been called in, as against 418 last year.

The Inspector of midwives paid 353 visits of inspection to midwives, and I also inspected the bags and registers of a small number.

I received great assistance in connection with enquiries under this Act from the Female Health Visitors, and some 26 reports were made by them to me in important cases.

59 cases of unnotified births occurred. 41 of these were attended by medical practitioners, 7 by certified midwives, 3 by the Maternity Hospital Authorities, and 8 by the Union Authorities.

NOTIFICATION OF BIRTHS ACT, 1907.

This Act was adopted in the Borough on January 3rd, 1912, and three women Health Visitors were appointed in connection with carrying out the work.

No. of births notified during the year	...	...	3943
No. of births attended by medical practitioners	...	...	1034
„ „ by midwives ..	...	...	2666
„ „ in Maternity Hospital	...	...	212
„ „ in Union Infirmary...	..	..	31
Total number of stillbirths for the year	...	...	121
Of these Medical Practitioners notified	...	...	39
Maternity Hospital „	...	...	7
Union Infirmary „	...	...	—
Midwives „	...	...	75

The following is a record of the cases visited by the women Health Visitors during 1916, viz. :—

3129 first visits were paid to the homes.

4912 re-visits were made.

1076 visits were paid in relation to cases of measles.

2957 visits were made to children over 1 year and under 5 years.

2841 infants were found to be breast fed.

44 infants were breast and artificially fed.

110 infants were fed on artificial foods.

Medical attention was advised in 124 cases and 64 cases of ophthalmia and 183 cases of slight inflammation of the eyes were carefully watched and recovery resulted in each case.

64 cases of Ophthalmia Neonatorum were notified.

73 enquiries were made in illness from diarrhœa, and also in 75 cases where death from diarrhœa had occurred.

26 cases were referred to the Medical Officer of Health for special consideration.

41 cases of nuisances were reported to the Public Health Department. 6 cases were referred to the Charity Organisation Society, and 7 cases reported to the Society for the Prevention of Cruelty to Children.

8 cases were sent to the School Clinic and 5 to the Tuberculosis Dispensary.

5 cases were reported to the Medical Officer to the Mental Deficiency Committee.

The Ladies' Committee of the Society for the Prevention of Cruelty to Children, with whom we work jointly in regard to many matters, have allowed extra nourishment in the case of 125 children, and milk and cereals to 44 nursing mothers.

6 children were sent to a convalescent home.

237 cases were visited for the Soldiers and Sailors Families' Association.

This voluntary and extra work has been very cheerfully undertaken by the Health Visitors, and the Committee have reason to believe that the work is much appreciated by the Association.

INFECTIOUS DISEASES (PREVENTION) ACT, 1890.

274 Public Library and 15 School Library books were collected from infected houses and disinfected, and two books were destroyed.

CLEANSING OF PERSONS ACT, 1897.

26 soldiers were cleansed under the provisions of this Act, at the special bath provided for this purpose at the Disinfecting Station in Corporation Road, and their clothing disinfected.

SEIZURE AND DESTRUCTION OF UNWHOLESOME MEAT, FISH AND VEGETABLES.

The Meat and Food Inspector has furnished the following particulars of meat, &c., unfit for human food, seized and destroyed during 1916.

Of the total weight of the meat destroyed, some was voluntarily surrendered by the butchers, they having called the Inspector's attention to it.

As in all recent years, a considerable proportion of the meat taken was on premises in connection with the Foreign Animals

Wharf, Woodside, and No. 4 Shed, Wallasey. The total number of animals dealt with here, viz: 137,142 oxen and 605 sheep, was much less than in previous years.

The total number of animals killed was as follows, viz:

AT WOODSIDE LAIRAGE.

	Oxen	Sheep
Foreign (United States) ...	...	...
Irish	136782	...

AT WALLASEY LANDING STAGE AND NO. 4 SHED, WALLASEY LAIRAGE.

	Oxen	Sheep
Canadian and American ...	...	...
Irish	360	605

AT THE BIRKENHEAD ABATTOIR, NEW CHESTER ROAD.

Oxen, 1325; Sheep, 2222; Lambs, 7232; Calves, 329; Pigs, 4407; the total number of animals killed being 15,515.

STATEMENT OF TOTAL SEIZURES

For the Year 1916.

Total number of—

Carcases seized during 1916 ... 559, weighing 169,059 lbs.
 Immature Calves seized during 1916 320, weighing 6,647 lbs.

Total... 879, weighing 175,706 lbs.

376 Parts of Carcases seized ... weight 23,384 lbs.
 Offal seized ,, 227,853 lbs.
 2 Carcases of Veal taken at Abattoirs ,, 130 lbs.

Of the above, the number of carcasses seized at—

	Beasts	Sheep&Lambs	Calves	Goats	Immature Calves	Pigs
Woodside—Foreign...	...	...	...	...	...	...
„ Irish ...	188	...	...	...	...	...
Abattoirs ...	12	3	2	...	...	5
Wallasey Stage ...	125	125	...	20	...	50
Wallasey No. 4 Shed	...	11	...	2	...	8
Wallasey No. 5 ...	...	...	...	...	...	3
Shops & Market Hall	1	...	...	...	...	6
	326	139	2	22	...	72

Parts of carcasses seized at —

Woodside—Foreign ... weight — lbs.
 „ Irish ... ,, 22570 lbs.
 Abattoirs ,, 814 lbs.
 Wallasey Stage ,, — lbs.
 Wallasey No. 4 Shed ,, —
23384 lbs.

In addition to the above the following articles were seized,
 viz. :—

Market Hall ... Beef 28 lbs.
 „ „ Offal 10 lbs.
 Shops Offal 160 lbs.
 „ „ Meat 36 lbs.
 „ „ Duck 3 lbs.

Pacific Road and other premises—

Ox Feet 72 lbs.
Total weight ... 309 lbs.

Calves.—The “Maintenance of Live Stock Order, 1915,” came into operation on the 23rd of August, 1915, and is still in force.

Tuberculosis in the Animals.

The following is a Statement of the number of cases dealt with during the year 1st January to 31st December, 1916.

	WOODSIDE & WALLASEY STAGE.		THE ABATTOIRS.			
	No. Weighing lbs.		Cattle		Pigs	
	No.	lbs.	No.	lbs.weight	No.	lbs.weight
FOREIGN CATTLE -						
No. where whole carcase was taken	—	—	—	—	—	—
No. where part only was taken . . .	—	—	—	—	—	—
No. where offal only was taken ..	—	—	—	—	—	—
	—	—	—	—	—	—
IRISH CATTLE—						
No. where whole carcase was taken	168	68980	8	3895	—	—
No. where part only was taken . . .	371	22570	5	814	5	138
No. where offal only was taken ..	179	17900	9	900	—	—
No. where small offal was taken ..	24	1008	3	126	15	111

Actinomycosis at Woodside.

One head or tongue, 35 lbs.

In addition to the above, 224 lbs. of Apple Pulp was seized at the Jam Works.

PROCEEDINGS TAKEN UNDER THE “SALE OF FOOD AND DRUGS ACTS, 1875 to 1907.”

The Chief Inspector (Mr. William Dawson) gives the following summary of proceedings taken under these Acts during 1916.

During the twelve months ending the 31st December, 1916, the following samples were taken and analysed, viz.:—

Article	Number Samples taken formally	Number Samples taken informally	Article	Number Samples taken formally	Number Samples taken informally
Milk ...	128	4	Rum ...	3	...
Butter ...	58	1	Gin ...	3	...
Self-raising Flour	12	—	Cream ...	3	...
Sweets ...	12	—	Castor Oil ...	2	...
Lard ...	10	—	Camphorated Oil	2	...
Bread ...	10	—	Epsom Salts	2	...
Coffee ...	8	—	Sugar ...	2	...
Cheese ...	7	—	Margarine ...	1	...
Cocoa ...	6	—	Sausage ...	1	...
Ground Rice	6	—	Liquorice Powder	1	...
Baking Powder	6	—	Cod Liver Oil	1	...
Egg Powder	6	—	Skimmed Milk	1	...
Malt Vinegar	6	—	Preserved Cream	1	...
Beer ...	6	—	Dripping ...	1	...
Whisky ...	5	—	Black Curr'nt Jam	—	1
Olive Oil ...	4	—	Strawberry Jam	—	1
Pepper ...	4	—	Raspberry Jam	—	1
Brandy ...	3	—	Damson Jam	—	1

Samples taken formally...321. Informally...9.

Total number of Samples analysed during the year...330

Out of the above, 22 samples of Milk, 7 of Self-raising Flour, 3 of Cream, 2 of Butter, 1 of Ground Rice, 1 of Egg Powder, 1 of Gin, 1 of Olive Oil and 1 of Sweets were reported adulterated, and proceedings were taken in respect of 12 samples of Milk, 6 of Self-raising Flour, 1 of Butter, 1 of Gin and 1 of Olive Oil.

With reference to the remaining samples reported adulterated the Health Committee, after consideration and hearing the Vendors' explanation, decided it was inadvisable to institute proceedings, and the Vendors were subsequently cautioned.

In the case, however, of Butter sample No. 302, reported to contain 20·20 per cent. of water, inquiry was made into the matter, when it was found that the Butter was exported from Ireland, and full particulars respecting the sample were supplied to the Board of Agriculture and Fisheries.

Informal Samples.

All the samples taken informally for analysis during the year were found pure, with one exception, viz :—Milk Sample No. 290.

The particulars respecting the samples in which proceedings were taken are as follows:—

Quarter Ending	Article.	No.	Amount of Adulteration.	Fine Inflicted.	Costs Imposed
1916.				£ s. d.	£ s. d. including costs
March 31	Milk ..	3	Deficient in fat to the extent of 25% ₀ , also containing 13% ₀ of added water ..	2 0 0	
	Milk ..	6	Deficient in fat to the extent of 16% ₀ ..	1 0 0	including costs
	Milk ..	19	Deficient in fat to the extent of 28% ₀ ..	1 0 0	including costs
	Gin ..	27	Equal to degress under proof 40·46 ..	Withdrawn upon payment of costs	0 5 6
June 30	Milk ..	72	Deficient in fat to the extent of 6% ₀ ..	1 0 0	including costs
	Milk ..	74	Deficient in fat to the extent of 14% ₀ ..	1 0 0	including costs
	Milk ..	79	Deficient in fat to the extent of 13% ₀ ..	1 0 0	including costs
	Milk ..	95	Deficient in fat to the extent of 10% ₀ ..	Dismissed	
	Milk ..	96	Deficient in fat to the extent of 8% ₀ ..	Dismissed	
	Milk ..	103	Deficient in fat to the extent of 17% ₀ ..	0 8 0	including costs
September 30 ..	Olive Oil	137	Mineral Oil 7·5 %	1 0 0	1 1 0
	Butter ..	180	80% ₀ of foreign fats .. Unstamped wrapper ..	2 0 0 2 0 0	including costs
	Milk ..	189	Deficient in fat to the extent of 38% ₀ ..	3 0 0	including costs
	Milk ..	212	5% ₀ added water ..	1 0 0	including costs
December 31 ..	Milk ..	239	Deficient in fat to the extent of 16% ₀ ..	1 0 0	including costs
	Self-raising flour	263	Sulphate of Lime 0·73% ₀ ..	0 12 0	including costs
	Self-raising flour	274	Sulphate of Lime 1·13% ₀ ..	0 12 0	including costs
	Self-raising flour	293	Sulphate of Lime 0·90% ₀ ..	3 0 0	including costs
	Self-raising flour	294	Sulphate of Lime 1·19% ₀ ..	3 0 0	including costs
	Self-raising flour	295	Sulphate of Lime 1·99% ₀ ..	3 0 0	including costs
	Self-raising flour	296	Sulphate of Lime 1·47% ₀ ..	3 0 0	including costs

A Summons was issued, and a penalty of eight shillings including costs imposed, under Section 9 of the Act of 1899, on a person for "not having his name and address conspicuously inscribed on the vehicle" from which he was retailing milk.

Milk Samples Nos. 95 and 96.

These two samples were taken in course of delivery from a farmer to a local dairyman.

When the cases came before the Court, the Magistrates, after hearing the evidence and considering the matter, stated that, having regard to the fact that the difference between a sample of milk taken from the cows and analysed on behalf of the farmer, and the official samples analysed by the Public Analyst was so small, they had come to the conclusion that the milk had not been tampered with before arrival at Woodside Railway Station, and under the circumstances, and on the authority of a recent case decided in the High Court (*Hunt v. Richardson*), they dismissed both informations.

PUBLIC HEALTH (Milk and Cream) REGULATIONS, 1912.

Report for the year ended 31st December, 1916.

1. Milk, and Cream not sold as Preserved Cream.

	(a) Number of samples examined for the presence of a preservative.	(b) Number in which a preservative was reported to be present.
Milk ..	132	—
Cream ...	3	3

- (b) With reference to the 3 samples of Cream reported to contain Boric Acid and sold contrary to the provisions of the Regulations, the vendors were afforded an opportunity of furnishing explanations in writing. After duly considering the explanations and all the circumstances in connection therewith, the Local Authority decided to caution the vendors.

2. Cream sold as Preserved Cream.

- (a) Instances in which samples have been submitted for analysis to ascertain if the statements on the label as to preservative were correct :—

(1) Correct statements made	...	...	1
(2) Statements incorrect	...	...	0

- (b) Determination made of Milk fat in Cream sold as Preserved Cream :—

(1) Above 35 per cent	...	...	4
(2) Below 35 per cent	...	...	0

- (c) Instances where (apart from analysis) the requirements as to labelling or declaration of preserved cream in Article V. (1) and the proviso in Article V. (2) of the Regulations have not been observed :—

Article V. (1)	...	...	...	nil
Article V. (2)	...	...	...	nil

- (d) Particulars of each case in which the Regulations have not been complied with and action taken :—Nil.

3. Thickening Substances.

The Public Analyst has not found any evidence of the addition of any thickening substance to the samples of Cream or Preserved Cream which have been analysed.

4. Other observation, if any.

Nil.

Composition of Milk Samples.

The following Schedule shews the composition of each sample of milk analysed during the year ending, 31st December, 1916.

Date of Sample	Identifi'n Number given in Quart'ly Report	Percentage of Fat	Percentage of Solids not Fat	Date of Sample	Identifi'n Number given in Quart'ly Report	Percentage of Fat	Percentage of Solids not Fat
Jan. 24	2	3.17	8.96	Apr. 5	54	3.90	8.55
	3	1.96	7.39		55	3.62	8.77
	4	5.02	8.65		56	3.49	8.83
	5	2.85	8.47		57	2.94	9.00
	6	2.52	8.99		58	2.88	8.47
	7	4.00	9.01		59	3.66	8.75
25	8	2.82	8.61	11	66	3.17	8.60
	9	3.01	8.62		67	3.12	8.82
	10	4.72	8.90	12	68	3.04	8.39
	11	4.15	8.87		69	3.29	9.17
	12	3.15	9.10		70	5.29	8.52
	13	3.21	8.69		71	3.31	8.56
26	14	3.20	8.81		72	2.82	8.82
	15	3.52	8.71		73	3.74	8.85
	16	3.50	8.54		74	2.58	8.88
	17	3.07	8.79	17	75	3.09	8.95
	18	4.89	8.65		76	6.22	8.83
	19	2.16	8.92		77	3.14	8.78
27	20	3.82	8.63		78	3.83	8.57
	21	4.30	8.95		79	2.61	8.80
	22	3.40	8.52		80	3.59	8.85
	23	3.46	8.44	18	81	3.18	8.54
	24	3.15	9.03		82	3.33	8.79
31	29	2.82	8.66		83	3.43	8.96
	30	3.19	8.79	19	84	3.87	8.60
Feb. 23	38	3.58	8.98		85	3.59	8.91
	39	4.02	9.26	May 2	92	3.34	8.81
	40	4.97	8.81	10	93	3.18	9.02
	41	3.32	8.73	16	95	2.70	8.90
	42	3.11	9.09		96	2.76	8.80
	43	3.09	8.82	17	103	2.49	8.50
Apr. 4	48	3.10	8.49		104	2.96	9.01
	49	3.54	8.92	July 1	123	3.60	9.11
	50	3.06	8.82	Aug. 15	184	3.35	8.86
	51	2.97	8.81		185	3.25	8.92
	52	3.17	8.75		186	3.95	8.88
	53	3.60	8.72		187	4.10	8.51

Date of Sample	Identifi'n Number given in Quart'ly Report	Percentage of Fat	Percentage of Solids not Fat	Date of Sample	Identifi'n Number given in Quart'ly Report	Percentage of Fat	Percentage of Solids not Fats
Aug. 15	188	4.70	8.88	Sept 26	233	4.42	8.62
	189	1.86	8.47	Oct. 2	234	3.88	8.87
22	196	3.46	8.64		235	3.49	9.06
	197	3.15	8.79		236	3.73	9.20
	198	3.08	8.80		237	4.07	9.30
	199	4.21	8.46		238	4.50	9.04
	200	3.60	8.55		239	2.52	9.09
	201	3.31	8.95	9	244	3.34	9.32
24	208	3.79	8.69		245	3.75	8.91
	209	5.37	8.45		246	3.61	9.09
	210	3.92	8.65		247	3.62	9.15
	211	3.40	8.59		248	4.60	9.08
	212	3.58	8.07		249	3.93	9.03
	213	3.30	8.62	25	276	4.02	9.44
29	214	3.70	8.75		277	4.30	8.54
Sept. 5	215	4.25	8.98		278	4.09	9.26
	216	4.56	8.88		279	3.70	9.28
	217	5.03	8.35		280	3.69	9.06
	218	2.70	8.89		281	3.39	8.59
11	223	2.89	9.10	Nov. 10	289	3.00	8.80
	224	2.55	8.68		290	2.58	8.63
	225	3.04	8.99		291	3.62	8.76
18	226	2.91	8.98	Dec. 5	308	3.38	8.61
	227	4.75	8.96		309	3.54	9.30
26	228	3.71	9.10		310	4.54	8.53
	229	3.78	8.74		311	3.69	9.08
	230	3.39	9.00		312	4.79	9.37
	231	3.39	8.72		313	3.66	8.76
	232	3.12	8.95	14	323	3.10	9.00

AVERAGE PERCENTAGE:—Fat, 3.49; Solids not Fat, 8.86

Contagious Diseases (Animals) Act, 1886.

The Milkhouses.—The regulation of dairies, cowsheds, and milk-shops, and the supervision of milk-sellers, has had systematic attention for a number of years. Special care is taken that the ventilation, lighting, cleansing, draining, and water supply of premises used for milk-trade are thoroughly efficient. The register

of milk-sellers is revised week by week. The total number of milk-shops is 195, in addition there are 32 purveyors of milk, 11 cowsheds, and 46 farmers resident outside the Borough, registered to purvey milk inside the Borough.

Twice every year notice is sent to all the milk-sellers requiring that the walls and ceilings of every room in the occupation of Registered Milk-sellers, used for storage or sale of milk, shall be lime-washed, that is to say, in March and September; but if the walls are painted, then they must be washed and thoroughly cleansed twice every year, in March and September.

One person was summoned, and a penalty of eight shillings, including costs, imposed, for selling milk without being registered as a milk dealer.

Meteorological Results.

I am indebted to W. E. Plummer, Esq., M.A., F.R.A.S., the Director, for the following return from the

LIVERPOOL OBSERVATORY, BIDSTON, BIRKENHEAD.

1916				Mean Tempera- ture	Mean Barometer	Rainfall 1 ft. above ground
				° F	Inches	Inches
January	..	..	..	46.6	30.063	1.352
February	..	..	..	39.4	29.744	3.060
March	..	..	..	38.6	29.715	1.668
April	..	..	..	46.9	29.876	1.441
May	..	..	..	52.9	29.910	2.768
June	..	..	..	53.5	29.911	1.942
July	..	..	..	59.2	30.027	1.174
August	..	..	..	61.4	29.914	1.900
September	..	..	..	56.4	30.040	2.353
October	..	..	..	51.6	29.741	3.381
November	..	..	..	45.2	29.680	2.169
December	..	..	..	37.5	29.614	1.658

Mean Barometer for the whole year 1916=29.853 inches.

Mean Barometer for the past 50 years=29.920 inches.

Number of wet days in 1916=195.

Total amount of rainfall at Bidston, 1916=24.866 inches.

Average rainfall for last 50 years=28.310 inches

Mean Temperature for 1916=49°·1

The figures for the years 1867—1899 are given in my Report for 1904, and those for the years 1901—1914 in my Reports for those years.

WATER SUPPLY.

The water supply of the Borough is from deep wells in the old red sandstone, and is of excellent quality.

The following Report, kindly supplied by the Water

Engineer, is of interest:—

COUNTY-BOROUGH OF BIRKENHEAD.

Year	Actual Consumption for Trade and Municipal Purposes (Measured)	Actual Consumption for Domestic and Miscellaneous Purposes	Estimated Population of Water Area-Borough Less Oxtan and Plus Bidston, Oxtan being supplied by the Wirral Water-works Co.	Average Rate per head per day for Domestic and Miscellaneous Purposes	Average Rate per head per day for Trade and Municipal Purposes	Average Rate per head per day for all purposes
	Gallons	Gallons		Gallons	Gallons	Gallons
Census						
1911	398,116,720	959,355,666	123,397	21.30	8.83	30.13
1912	411,815,000	1,013,418,295	125,716	22.81	8.97	31.78
1913	470,213,400	1,068,392,067	128,036	22.86	10.06	32.92
1914	488,148,100	1,019,385,456	130,486	22.03	10.25	32.28
1915	526,891,770	1,114,671,452	132,939	22.97	10.86	33.83
1916	590,597,600	1,155,939,228	135,438	23.32	11.92	35.24

The figures for the years 1901 to 1910 are given in my Annual Report for 1915.

PREVALENCE OF ZYMOTIC SICKNESS DURING 1916.

Notification of Cases of Dangerous Infectious Diseases.—The Infectious Disease (Notification) Act, 1889, requires householders and medical men in attendance to notify cases of dangerous infectious diseases to the Sanitary Authority, and gives facilities

for supplementing the statement of the mortality from zymotic diseases, month by month, as they were reported. The diseases which require to be notified to the Authority as "dangerous infectious diseases" are:--

Small-pox.	Fevers	Typhus.
Scarlatina.		Typhoid.
Diphtheria.		Continued.
Membranous Croup.		Relapsing.
Erysipelas.		Puerperal Septicæmia.
Cerebro Spinal		Acute Poliomyelitis.
Meningitis.		Cholera.
Measles and German Measles.		

The cases notified appear in the following return, showing that 410 cases were notified during the year, being 111 less than the number notified last year, excluding Measles and German Measles.

The notification of Measles which was discontinued after 7th August, 1907, again came into operation on the 1st January, 1916. The number of cases notified during the year was 1773.

Measles	...	...	...	...	1607
German Measles	...	...	...	...	166

The following Table gives the number of Notifications of Dangerous Infectious Diseases in each month of the year.

1916.	Smallpox	Scarlatina	Diphtheria	Typhus	Typhoid	Puerperal Fever	Fever	Mem. Croup	Erysipelas	Poliomyelitis	Cerebro Spinal Men.	Cholera	Measles and German Measles	Total
January	..	36	18	..	2	1	..	2	11	..	..	..	42	112
February	..	19	11	..	1	..	..	..	11	..	..	..	18	60
March	..	25	7	..	2	..	..	..	11	..	..	..	22	67
April	..	24	5	..	4	2	..	1	6	..	1	..	41	84
May	..	24	7	..	1	1	..	..	6	..	..	..	84	123
June	..	11	6	..	..	..	..	..	5	..	..	..	114	136
July	..	14	1	..	1	..	..	2	7	..	..	..	130	155
August	..	11	3	..	1	..	..	..	2	1	1	..	80	99
September	..	8	7	..	1	..	..	1	7	1	..	..	174	199
October	..	12	9	..	2	..	..	..	8	..	..	..	353	384
November	..	10	8	..	..	..	..	2	7	..	..	..	400	427
December	..	5	6	..	1	..	..	..	10	..	..	..	315	337
Total..	..	199	88	..	16	4	..	8	91	2	2	..	1773	2183

The figures for the years 1882-1903 will be found at page 25 in my report for 1905, and for 1904-1914 on page 59 in my report for 1914.

MILITARY & NAVAL CASES OF INFECTIOUS DISEASES
notified during the year ended 31st, December, 1916.

17 Military and 2 Naval cases were notified during the year,
viz :—

Scarlet Fever ...	...	...	...	9
Erysipelas ...	...	...	...	3
Measles ...	...	...	...	4
German Measles ...	...	...	...	3

Tuberculosis.

In addition, 11 Military and 1 Naval cases of Pulmonary and 2 Military cases of non-Pulmonary Tuberculosis were notified during the year.

SMALL-POX.

No cases of Smallpox were notified during the year.

I am indebted to the Borough Surveyor for the following information relating to the

Number of New Houses erected in the Borough,				
April 1st, 1911, to December 31st, 1913	...	...	...	814
January 1st to December 31st, 1914	...	...	...	246
„ „ 1915	...	...	...	136
„ „ 1916	...	...	...	28

The number of houses demolished since taking of Census in 1911 was 165, a net gain of 1059.

The following table gives particulars respecting Erection of New Houses and Demolition of Houses in the Borough during each year from 1892 to 1916 :—

Year		New Houses Erected	Houses Demolished	Net Increase
1892		99	...	...
1893	Average	108	...	...
1894	per year	139	...	...
1895	130	175	...	...
		521	81	440
1896		255	8	247
1897		349	6	343
1898	Average	438	125	313
1899	per year	434	28	406
1900	385.9	408	81	327
1901		420	66	354
		2304	314	1990
1902		646	10	636
1903		897	10	887
1904	Average	643	8	635
1905	per year	848	152	696
1906	677.3	472	35	437
1907		685	14	671
1908		550	52	498
		4741	281	4460
1909		293	77	216
1910		255	7	248
1911	Average	232	9	223
1912	per year	273	44	229
1913	up to	339	67	272
1914	1915	246	18	228
1915	253	136	*32	104
1916		28	1	27
		1802	255	1547
	TOTALS...	9368	931	8437

*This includes 26 back to back houses converted into 13 through houses.

VITAL AND MORTAL STATISTICS FOR THE YEAR.

Area—The Borough has an area of 3850 acres, or a little more than six square miles.

Population.—The Census was taken in England and Wales on April 2nd, 1911, and showed the number of persons in Birkenhead to be 130,794, being 19,879 more than the number shown in the Census taken on April 1st, 1901.

At the time of the 1901 Census the number of inhabited houses was 19,744, giving an average number of persons per house of 5·6; the number of houses in the Borough at the time of the 1911 Census was 24,343 giving an average number of persons per house of 5·3.

I estimate the population in 1916 as 142,622 (see page 8).

I am indebted to the Chief Constable for the following Return of uninhabited property in the Borough of Birkenhead for the half year ending 31st December, 1916 :—

District	Half-year ended 31st Dec., 1916.					Half-year ended 30th June, 1916.				
	Private Houses	Shops	Cot-tages.	Dock Cot-tages	Total	Private Houses	Shops	Cot-tages	Dock Cot-tages	Total
Birkenhead ..	50	52	2	..	104	57	51	..	..	108
Claughton and Oxta ..	83	64	..	70	217	99	12	..	68	179
Tranmere and Bebington..	27	50	..	..	77	28	53	..	..	81
Totals	160	166	2	70	398	184	116	..	68	368

Total uninhabited and unoccupied property, 31st December, 1915, was 397, so there was an increase of 1 at the end of 1916, as compared with the previous year.

DWELLING HOUSES, &c.

The approximate estimate of dwelling-houses of all descriptions within the Borough, including Institutions, at 31st December, 1916 26,851

The approximate estimate of schoolrooms, warehouses, &c. 1240

Births and Deaths in Birkenhead.—During the year 1916 the returns of the local registrars recorded 3885 births and 2034 deaths in the Borough of Birkenhead. The natural increase in the population in 1916 was therefore 1851. Of the births 1961 were males and 1924 were females; of the deaths 1077 were males and 957 were females.

Further particulars as to the births and deaths in the Borough registered in each quarter of the year, and in each towuship are given in the subjoined table. Those occurring in Union Workhouse are entered separately. Thirty-seven births have been subsequently transferred by the Registrar General to other districts. These have not been deducted in the following table, but 5 births sent to us by the Registrar General have been included. This table is made up week by week.

BIRTHS	1st Qr.		2nd Qr.		3rd Qr.		4th Qr.		1916		Total
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Birkenhead	279	298	324	280	269	285	239	262	1131	1125	2256
Claughton	22	26	34	20	22	24	15	17	93	87	180
Tranmere	175	163	182	170	169	165	144	142	670	640	1310
Oxton	4	5	4	4	5	6	8	7	21	22	43
Bebington	6	7	7	7	11	8	7	9	31	31	62
Union Hospital	2	3	4	7	5	6	4	3	15	19	34
Birkenhead Borough ..	483	502	555	488	481	494	437	440	1961	1924	3885

DEATHS.	1st Qr.		2nd Qr.		3rd Qr.		4th Qr.		1916		Total
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Birkenhead	142	143	127	86	111	100	149	138	529	467	996
Claughton	11	16	10	14	8	3	10	13	39	46	85
Tranmere	63	73	67	65	53	46	76	76	259	260	519
Oxton	5	5	6	7	..	4	6	8	17	24	41
Bebington	2	7	3	5	8	7	..	6	13	25	38
Union Hospital	60	40	56	38	56	26	48	31	220	135	355
Birkenhead Borough	243	284	269	215	236	186	289	272	1077	957	2034

The next table shows the revised estimated population of Birkenhead, the density of population and the number of births, deaths and zymotic deaths, and also the birth and death rates deducible from these figures for the years 1900 to 1916. These

figures for the years 1878 to 1899 were given in my reports for the years 1898 and 1899. This table has been revised since the figures of the 1911 census have been published.

Year	Revised Estimated Population at Midsummer	Persons per acre.	BIRTHS.		DEATHS.		ZYMOTIC DEATHS.	
			Number of Births	Birth rate per 1000 per annum	Number of Deaths	Death rate per 1000 per annum	Number of Deaths	Death rate per 1000 per annum
1900	110,042	28.5	3428	31.1	1935	17.8	209	1.8
1901	111,377	28.9	3230	29.0	2031	18.5	353	3.1
1902	113,231	29.4	3646	32.1	1989	17.5	270	2.3
1903	115,117	29.9	3516	30.5	1937	16.8	260	2.2
1904	117,034	30.3	3805	32.5	2232	19.4	465	3.9
1905	118,982	30.9	3707	31.1	1833	15.4	239	2.0
1906	120,964	31.4	3733	30.8	2078	17.1	371	3.0
1907	122,978	31.9	3727	30.3	1829	14.8	253	2.0
1908	125,026	32.4	3775	30.1	1929	15.4	267	2.1
1909	127,108	33.0	3737	29.4	1930	15.1	180	1.4
1910	129,227	33.5	3730	28.8	1933	15.4	251	1.9
1911	131,377	34.1	3732	28.4	2107	16.0	304	2.3
1912	133,521	34.6	3774	28.2	1964	14.7	197	1.4
1913	135,740	35.2	3607	28.7	2032	14.9	205	1.5
1914	137,996	35.8	3772	27.3	2153	15.6	244	1.7
1915	140,291	36.4	3844	27.4	2193	15.6	211	1.5
1916	142,622	37.0	3848	26.9	2034	14.2	196	1.3

On page 61 of my report for the year 1914 is a table giving the estimated populations of the Wards in the Borough from 1911—1920.

Infantile Mortality during 6 years, 1911 to 1916.

Year.	No. of Births.	Total Deaths of Infants under 1 year.	Deaths from Diarrhoea under 1 year.	Total Deaths of Infants per 1000 Births.	Deaths of Infants from Diarrhoea per 1000 Births.
*1911	3732	509	134	136	35.9
*1912	3774	371	20	98	5.2
*1913	3907	458	68	117	17.4
*1914	3772	462	36	122	9.5
*1915	3844	469	68	122	17.6
*1916	3848	407	55	105	14.2

* This is the revised rate after the Registrar General has transferred births from other towns. It cannot be compared with other towns unless we had all their revised rates. The figures for 1904—1910 are on page 64 of my report for 1914.

**Causes of Infantile Mortality during the past six years
(1911 to 1916.)**

Cause of Death.	YEARS.					
	1911	1912	1913	1914	1915	1916
Chicken-pox	..	..	..	4	1	..
Measles	5	7	2	12	2	7
Scarlet Fever	1	..	..	..	..	..
Diphtheria and Mem. Croup..	1	2	4	1	2	..
Whooping Cough	13	20	15	16	21	14
Diarrhoea	134	20	68	36	68	55
Enteritis	24	19	64	58	56	35
Gastritis	7	5	12	2	8	5
Premature Birth	53	60	50	67	64	64
Congenital Defects	24	17	15	17	23	22
Teething	7	4	6	4	2	6
Inanition and Privation	10	17	11	10	..	..
Debility	65	70	81	80	92	70
Tabes Mesenterica.....	5	1	2	2	1	1
Other Tubercular Diseases....	14	8	10	8	7	14
Erysipelas	..	2	..	3	..	1
Syphilis	1	2	6	7	2	6
Rickets	1	..	1	1	..	..
Meningitis (not tuberculous)..	7	6	5	5	2	5
Convulsions.....	18	9	14	14	11	11
Bronchitis	41	24	27	26	27	14
Pneumonia	40	31	33	64	49	49
Heart Disease.....	2	9	1	1	..	..
Suffocation, overlaying, etc....	7	13	8	10	8	3
Other Causes	29	25	23	14	23	25
Total Deaths per annum....	509	371	458	462	469	407
No. of Births per annum....	3732	3774	3907	3772	3844	3848
Death Rate per 1000 per annum per 1000 Births	136	98	117	122	122	105

The figures for 1906-10 are given in my last year's report.

Average Death Rate per 1000 per annum, per 1000 Births for the 6 years 1911 to 1916,
equals 116.

The Table shewing the comparative Birth and Death Rates in the great towns is omitted this year as the population of most of the towns has been greatly altered owing to the movement of troops and war workers during these special times, and the rates therefore would not be accurate or of any value.

The proportion of Deaths of Infants under One year to the Births registered.—The proportion in Birkenhead Borough in 1916 was equal to 105 per 1000, and compares very favourably with that of other towns.

Tabular Statements.—In the appendix to this Report are tabular statements of the year's mortality within the Borough,

classified according to the diseases, ages and localities, a weekly register of meteorological results, &c.

Table I. shows the deaths registered in the whole Borough during 1916, arranged with reference to the age at which death occurred in each case. They are disposed in four sub-tables—the deaths in the townships of Birkenhead and Claughton in the first, deaths in Tranmere (exclusive of the Union premises) and Oxtan in the second, the deaths in the incorporated portion of Higher Bebington in the third, and the deaths in the Union Hospital and Workhouse in the fourth. The deaths of infants are entered up in three columns—those under one year, those of one year and under two years, and those turned two years and under five. Then follow the deaths of children and young persons, those turned five years and under twenty; and of adults those turned twenty and under forty, and those turned forty and under sixty. In the last two columns are the deaths of old people, those turned sixty and under eighty, and those of eighty and upwards. Reference to this table will show that, of the gross local mortality for 1916, the deaths of infants under one year of age accounted for 407, those over one year but under five years of age 202, children and young persons 115, adults 636, old people sixty years of age and upwards 674.

The relative proportion of deaths in 1916 among the infants, children and young persons, adults and old people, to the whole number of deaths, in certain sub-divisions of the borough, in the premises controlled by the Guardians of the Poor, and in the entire incorporated area, is readily shown in tabular form, thus:—

Percentage of Deaths at certain ages to Total Deaths.	Under 1 Year	Age between														85 years and upwards.
		1-2	2-3	3-4	4-5	5-10	10-15	15-20	20-25	25-35	35-45	45-55	55-65	65-75	75-85	
Birkenhead and Claughton	13.86	3.49	1.67	1.03	0.68	1.47	0.83	1.13	0.68	2.45	3.88	5.55	5.26	5.94	4.22	0.93
Tranmere & Oxtan	5.06	1.17	0.63	0.24	0.49	0.49	0.39	0.29	0.49	1.32	2.50	2.35	3.73	4.76	2.99	0.54
Bebington	0.19	0.04	..	0.04	..	0.09	0.04	..	..	0.04	0.09	0.19	0.24	0.34	0.34	0.14
Union Hospital and W'house	0.88	0.09	0.24	0.04	..	0.14	0.04	0.68	0.29	1.27	2.31	1.96	2.90	3.73	2.50	0.29
Birkenhead Borough	20.00	4.81	2.55	1.37	1.17	2.21	1.32	2.11	1.47	5.11	8.80	10.07	12.14	14.79	10.07	1.91

In this respect the local mortality compares favourably with the mortality in most great cities and boroughs. The percentages taken out for Bebington have little significance, the number of deaths being so small.

The following Table shows the Mortality of the different Wards:—

1916			Estimated Population at Midsummer 1916.	Deaths from All Causes		Deaths from Zymotic Diseases		Death rate per annum.	Infantile Death Rates per 1000 Living	No. of Deaths under 1 year	
				M.	F.	M.	F.				
Cleveland	Ward	..	25872	210	158	18	21	14.2	3.9	101	
Claughton	"	..	8728	39	46	1	2	9.7	1.3	12	
Grange	"	..	28654	201	179	25	21	13.2	3.5	101	
Argyle	"	..	16451	118	130	7	20	15.0	4.1	68	
Oxton	"	..	5221	17	24	..	2	7.8	0.1	1	
Egerton	"	..	18746	84	103	6	4	9.9	1.4	28	
Clifton	"	..	26076	126	115	18	22	9.2	1.6	42	
Mersey	"	..	9000	49	42	7	7	10.1	3.5	32	
Bebington	"	..	3874	13	25	..	1	9.5	1.0	4	
Union Hospital		..	..	220	135	4	10	..	..	18	
Birkenhead Borough			..	142622	1077	957	86	110	14.2	2.8	407

The Registrar General states that the factor for correcting the general death rate for Birkenhead for the intercensal period, 1912—1921, is 1.0324.

Table II. is a Weekly Condensed Register of Meteorological Results.

The Classification of Death Causes.—The causes of death, as they appear in Table I. in the appendix, are systematically classified according to the principles laid down by the late Dr. W. Farr, the nosology being that adopted by the Registrar-General until within the last few years, which experience has shown to be well suited for statistical purposes. The death causes are arranged under classes and orders, the latter corresponding to the families of Natural History. Genera, or what in diseases would be varieties, are not distinguished. All death causes are thus conveniently classified under 140 heads, some of which however, include diseases very distinct from one another.

At the beginning of this Table are the totals of deaths from all causes, and on the next line the totals of deaths from specified causes. The deaths which it is necessary to refer to unspecified causes are not only those ascribed in legal phraseology, to "visitation of God" or "natural causes," but those which, with almost equal vagueness, are classified as due to "tumour," "coma," etc. The deaths from specified causes are then divided into six classes. Class I. (the zymotic) embraces all diseases, either epidemic, endemic or contagious, which are induced by some specific body, or by want of, or by the bad quality of food. The diseases coming under Class II. (constitutional or cachetic) appear to be due to a bad habit of body, and possibly may sometimes be hereditary. Class III. takes in diseases the effects of which are manifest in disturbing or obliterating the function of particular organs or systems. Class IV. includes the conditions tending to produce death which are the incidental results of the formative, reproductive and nutritive processes. Class V. groups together all deaths which are the evident and direct result of physical or chemical forces. Class VI. Ill-defined Diseases.

Deaths from Zymotic Diseases. The deaths from zymotic diseases include 55 by what have been termed the chief zymotics (certain diseases belonging to the miasmatic order), viz., measles 28, scarlatina 5, diphtheria 10, membranous croup 5, fevers 5, and puerperal septicæmia 2. The remaining 141 were entered to what have been called minor zymotics (diseases less prevalent, less fatal, or less obviously zymotic in character), viz., whooping cough 30, erysipelas 3, influenza 25, diarrhœa 70, syphilis 8, and other zymotic diseases 5.

Relative Fatality of Chief Zymotic Diseases.

The following table shows at a glance the relative fatality of the chief zymotic diseases for the year on the corrected estimate of population.

Year	Deaths from Zymotic Disease							Death rate per 1000 living.						
	Smallpox	Measles	Scarlatina	Diphtheria	Whooping Cough	Typhoid Fever	Diarrhoea	Smallpox	Measles	Scarlatina	Diphtheria	Whooping Cough	Typhoid Fever	Diarrhoea
1911	...	23	5	21	31	8	194	...	0.17	0.03	0.15	0.23	0.06	1.47
1912	...	52	10	17	49	5	33	...	0.38	0.07	0.12	0.36	0.03	0.24
1913	...	8	4	20	41	1	100	...	0.05	0.02	0.14	0.30	0.007	0.73
1914	..	67	6	16	40	4	48	...	0.48	0.04	0.11	0.35	0.02	0.34
1915	..	7	4	16	42	1	92	...	0.04	0.02	0.11	0.29	0.007	0.65
1916	...	28	5	10	30	5	70	...	0.19	0.03	0.07	0.21	0.03	0.49

Vaccination.—Mr. S. R. Carter, Clerk to the Board of Guardians of the Birkenhead Poor Law Union, has kindly supplied me with the following *latest completed* information relative to vaccination in the Borough, viz. :—

From 1st January, 1915, to 31st December, 1915.

No. of Births	...	...	...	...	...	...	3878
Successfully Vaccinated	...	...	...	...	...	...	3053
Insusceptible	...	...	...	...	...	...	19
Had Smallpox	...	...	...	...	...	...	—
Number in respect of whom Statutory Declarations of conscientious objection have been received	..	...	...	...	...	...	403
Died Unvaccinated	...	...	...	...	...	...	303
Postponed by Medical Certificate	...	...	...	...	...	...	28
Removed to Districts the Vaccination Officers of which were duly notified	...	...	...	...	...	...	29
Removed to places unknown or which cannot be reached	...	...	...	...	...	...	42
In Abeyance, up to 31st December, 1916	...	...	...	...	...	...	1

From 1st October, 1915, to 30th September, 1916.

Successful Primary Vaccination :—

Under 1 year of age	..	1181
One year and upwards	..	27

1208

„ Re-vaccinations 8

**REPORT ON THE WORK OF THE TUBERCULOSIS
DISPENSARY,
6 DUNCAN STREET,
During the year 1916.**

Dr. Banks, the Tuberculosis Officer, is at present serving with His Majesty's Forces, and during his absence Dr. Fountain Browne is acting as locum tenens.

I am happy to say that cordial relations have continued to exist with the medical practitioners of the Borough, and also with the various agencies dealing with the sick poor.

The extent of the work carried out is indicated in the tables given below.

**STATISTICS AS TO NOTIFICATION OF TUBERCULOSIS (all forms)
during 1916.**

Total Notifications ...	...	...	668
Primary Notifications ...	...	...	471
Duplicates ...	...	...	197

The Notifications were as follows:

Pulmonary ...	...	...	...	...	328
Brain ...	...	...	...	22	
Glands ...	...	...	...	49	
Bones and Joints ...	...	...	...	34	
Peritoneum ...	...	...	...	29	
Skin (Lupus) ...	...	...	...	2	
Larynx (Primary) ...	...	...	...	2	
Bladder ...	...	...	...	1	
Kidney ...	...	...	...	1	
Testes ...	...	...	...	1	
General ...	...	...	...	2	
Total Non-Pulmonary ..	...	...	...	143	

471

PULMONARY TUBERCULOSIS.

Cases in the Borough December 31st, 1915 ...	516
Cases notified during 1916... ..	328

844

*Died during 1916	194
Removed from Borough	55
Not traceable	22
Subsequently found not suffering... ..	11
	282

Corrected total of known cases of Pulmonary
Tuberculosis living in the Borough,

December, 31st, 1916	562
-----------------------------	-----

*This number differs from that in the Registrar-General's return on which death-rates are calculated, the latter containing a few transferable deaths from other districts.

INVESTIGATIONS INTO SOURCES OF INFECTION.

Of the 471 cases notified it was possible to secure information on this point in 417 cases.

Cases in which the diagnosis was subsequently found to be incorrect have been omitted.

	Pulmonary	Brain	Glands	Bones & Joints	Peritoneum	Skin (Lupus)	Primary Larynx	Bladder	Kidney	General	Testes
Known to have associated with a person suffering from the disease at home	76	6	7	5	5	0	0	0	0	0	0
Known to have associated with a person suffering from the disease at work	6	0	0	0	0	0	0	0	0	0	0
Family history of Tuberculosis, but patient not actually in contact	46	3	8	3	7	0	0	0	1	0	0
No family history of Tuberculosis, and no contact with any known case	157	17	29	21	12	2	2	1	0	2	1

INCIDENCE OF TUBERCULOSIS ACCORDING TO THE NUMBER OF
ROOMS OCCUPIED BY THE FAMILIES.

The investigations detailed below refer to 410 households, at the time of the nurse's first visit.

No. in Family	No. Occupying									
	1 room	2 rooms	3 rooms	4 rooms	5 rooms	6 rooms	7 rooms	8 rooms	9 rooms	10 rooms
1	6	6	...	...	...	...	...	...	...	...
2	1	6	4	6	6	1	2	...	...	...
3	2	5	6	19	22	5	3	3	...	...
4	1	8	4	18	33	6	7	3	...	...
5	1	7	13	17	24	1	9	...	...	1
6	...	3	8	18	19	2	2	1	...	2
7	...	...	3	10	15	4	...	...	...	...
8	...	...	2	6	12	2	6	...	2	1
9	..	...	4	3	3	4	1	...	2	...
10	...	...	...	2	6	2	...	2	...	...
11	...	...	...	2	1	...	...	...	...	...
12	...	...	...	...	1	...	3	...	...	...
13	...	...	...	...	..	...	...	...	...	...

Preventive Work.

The most important part of the preventive work is the home visitation, whereby the patient and his relatives are instructed in the precautions which should be taken to prevent the spread of the disease, and encouraged to adopt the modes of life best calculated to preserve good health. The Visitors are, on the whole, well received, and the results of their constant supervision over many of the poorer homes have been gratifying.

Number of visits paid by Nurse Jones	...	144
" " " Nurse Gibson (Jan. to July 10)	...	1032
" " " Nurse Bradshaw (Aug. 1 to Dec. 31)	...	1058
Cases of neglect referred to S.P.C.C.	...	1
Sanitary defects notified to the Medical Officer of Health's Department	...	8
No. of houses where disinfection was carried out after death or removal	...	231

Handkerchiefs and Spitting Flasks.

To encourage patients to take precautions with infectious sputum, spitting flasks are provided free of charge. During the year 136 flasks were given. Arrangements were made for supplying patients with Japanese paper handkerchiefs at a charge of ninepence halfpenny per hundred, the cost price; the object of this is to encourage the patients to use the handkerchiefs in the manner explained to them at the Dispensary. Many patients availed themselves of the arrangements.

Educational Work.

The personal instructions of the health visitor regarding the prevention of the spread of Consumption are supplemented by the distribution of pamphlets and pictures. During the year the Dispensary published a simple pamphlet compiled by the Tuberculosis Officer, entitled "Advice to Consumptives and Others," and this is distributed widely among the patients.

Other Dispensary Work.

Examination of "Contacts."

In view of the fact that Tuberculosis can only be cured when discovered in a moderately early stage of its progress, efforts are made to detect early cases of Tuberculosis occurring in those who have lived in close contact with notified cases of Consumption, and who have thus run the risk of infection. During the year 83 such persons, suffering from suspicious ill-health were medically examined either at the Dispensary or in their own homes, and among them 19 cases of Tuberculosis were found (Pulmonary 18, Non-Pulmonary 1). Incidentally it may be mentioned that in the course of these investigations other unsuspected illnesses and defects were found and the patients were referred to the appropriate places for treatment.

Co-operation with Medical Practitioners.

The Dispensary co-operates with the Practitioners of the Borough concerning diagnosis (including routine observations of doubtful cases as regards weight and temperature variations); also in securing continuity of treatment by acting as intermediary between the various Sanatoria and the practitioners.

Total number of consultations between Tuberculosis Officer and Practitioners for various purposes during 1916, 202.

Laboratory Work.

The Dispensary undertakes free of charge the microscopic examination of sputum and fluids suspected to contain Tubercle Bacilli, in order to assist Medical Practitioners in diagnosis. During the year 403 specimens have been examined, of which 77 were from patients attending the Dispensary, and 224 were sent by Medical Practitioners and 102 by the Army Authorities. 3 cases were inoculated with Von-Perquet Serum and found positive.

Army Cases.

During the year 115 cases were examined for the Army Authorities, and amongst them 22 cases of Pulmonary Tuberculosis were found,

Treatment

General Treatment is not undertaken, the Dispensary treatment being limited to the application of special methods (*e.g.* Tuberculin) carried on by the Tuberculosis Officer in co-operation with the medical practitioner providing the general treatment of the case. During the year, 3 patients received injections of Tuberculin. Tuberculin is proving a useful aid in the treatment of Tuberculosis, and good results have been obtained in a considerable number of the cases where patients have attended regularly and constantly.

Total Number of Visits to Dispensary.

During the year 501 patients paid 1524 visits to the Dispensary. Of these patients, 332 had not been to the Dispensary before; the remaining 169 had attended during the previous year, and 115 were Army cases.

Provision of Garden Shelters.

The open-air treatment of Consumption can be carried on at home where there is sufficient garden or back-yard to allow of the erection of a simple open-air sleeping shelter. Unfortunately in large towns very few of the houses afford convenience for this. The Corporation has arranged to supply such shelters to suitable patients, at a small rent, and at the end of 1916 two shelters had been provided and were in constant use.

The Corkhill Fund.

Under the will of the late Mr. John Lloyd Corkhill, of Oxton, a sum of money was provided for the assistance of persons suffering from Consumption. An arrangement has been made by which the Trustees, while retaining in every respect their position as a private body, make use of the facilities provided by the Dispensary for carrying on work among tuberculous patients. Persons applying for help from the Corkhill Charity are passed through the Dispensary for classification, and the Trustees are largely guided by the Tuberculosis Officer's recommendations. This charity is doing a very excellent work in the Borough. Applications for assistance may be made to Mr. J. Carlisle, c/o Mr. Edgar Hosking, 34 Castle Street, Liverpool.

LEASOWE SANATORIUM FOR SURGICAL TUBERCULOSIS IN CHILDREN.

Early in 1914 the Birkenhead Corporation decided to arrange for Birkenhead children to be admitted to the Leasowe Sanatorium, and subsequently the Birkenhead Insurance Committee offered to co-operate in the matter. As a result, 12 beds have been available since August 31st, 1914, and the cases admitted are classified below. Since "Surgical Tuberculosis" is so amenable to cure, under proper conditions, it is believed that the arrangements made will have a far-reaching effect in decreasing the number of deaths or deformities from this cause.

The following table gives the localisation of the disease in the cases treated :—

Tuberculosis of Spine ..	...	...	...	...	5
" " Hip ..	...	...	...	...	4
" " Knee ..	...	...	...	...	5
" " Elbow ..	...	...	...	...	2
" " Metatarsal ..	...	...	...	...	0
" " Tibia ..	...	...	...	...	0
" " Femur ..	...	...	...	...	1
" " Malar ..	...	...	...	...	0
" " Glands ..	...	...	...	...	1
" " Ankle ..	...	...	...	...	0
					18
Total ..	...	...	...	...	18
Discharged ..	...	...	...	...	6

December 31st, 1916, the number remaining in ... 12

The six cases discharged were as follows :—one case of Hip, cured ; one case of Elbow, cured ; two cases of Knee, cured ; one case of Glands, disease extending ; one case of Femur, transferred to Cheshire County, family residing out of Borough.

National Health Insurance.

The Tuberculosis Officer is the Medical Adviser to the Birkenhead Health Insurance Committee, and Sanatorium Benefit is administered through the Dispensary.

Notifications and National Health Insurance.

The 471 notified cases (all forms of Tuberculosis) are classified as regards National Health Insurance as follows :—

	Pulmonary	Non-Pulmonary	Total.
Insured men	106	14	120
Insured women	28	5	33
Dependents	101	91	192
Non-insured class	53	23	76
No particulars obtainable	41	9	50
Total	329	142	471

Insured Persons and the Dispensary.

Statistics were kept throughout the year of the position as regards National Health Insurance of all patients attending the Dispensary for all purposes. The 332 persons who paid their first visits to the Dispensary during the year were classified as follows :—

Insured persons	175
Dependents	119
Non-insured class	38
Total	332

Treatment provided by the Insurance Committee.

The following statistics refer to the work of the Birkenhead Insurance Committee which was transacted through the Dispensary, and refer to the period January 1st to December 31st, 1916, inclusive,

APPLICANTS FOR SANATORIUM BENEFIT, 1916.

	Number of Applicants	Rejected on other grounds than health	Examined	Recommended for treatment	Received treatment	
					Pulmonary	Non-Pulmonary
Men ...	34	1	34	33	33	...
Women	22	0	22	22	22	...
Total ...	56	1	56	55	55	...
Military Cases not included above ...	9	0	5	8	6	3

Out of 65 male applicants, 61 were examined, and 5 were military cases.

TREATMENT GIVEN.*

	Men	Women	Total
Sanatorium	17	13	30
Hospital	1	...	1
Dispensary	10	...	10
Domiciliary	128	48	176

*N.B.—This table refers to cases remaining under treatment on December 31st, 1915, as well as those whose first application were received during 1916. Many of the cases received more than one kind of treatment, and appear under different headings in the Table. Refer also to the section of the work of the Dispensary, under the heading of "Treatment." Domiciliary treatment was supplemented by the provision of extra nourishment in necessitous cases.

Results of Treatment.

The following figures must be construed with great care and hasty conclusions avoided. It must be distinctly borne in mind that they cannot be used to compare the value of one kind of treatment with another, because they refer to entirely different classes of cases, and different degrees of disease.

1916	Sanatorium		Hospital		Military Cases		
	Men	Women	Men	Women	Sana- torium	Hospital Cases Pul- monary	Non-pu- monary
Discharged (including those transferred from one form of treatment to another :—							
(a) fit for work	9	9	...	...	4	...	1
(b) improved	4	1	...	...	...	...	1
(c) without improvement	...	...	1	...	...	...	...
(d) worse	...	...	...	...	...	...	...
Discontinued for other than medical reasons	...	...	...	...	...	...	...
Died	3	1	...	...	...	1	...
Total cases in which treatment concluded	16	11	1	...	4	1	2
Still under treatment	1	2	...	...	2	...	1
TOTAL TREATED	17	13	1	...	6	1	3

DOMICILIARY TREATMENT.

1916	Men	Women
Completed Domiciliary Treatment: -		
(a) Fit for work	9	10
(b) Recommended for other forms of treatment	10	5
Discontinued for other than medical reasons	9	5
Died	33	7
Total treatment concluded	61	27
Still under treatment	67	21
	128	48

County Borough of Birkenhead.

PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1912.

Summary of notifications during the period from 3rd January, 1916, to the end of the week ending Dec, 30th, 1916.

Age Periods	Number of Notifications on Form A .. 424														Number of Notifications on Form B .. 6				Number of Notifications on Form C.. 82	
	Primary Notifications														Total notifications (i.e., including cases previously notified by other doctors)				Poor Law Institutions	Sanatoria
	Upwards														Under 5	5 to 10	10 to 15	Total		
	0 to 1	1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 and upwards	Total								
Pulmonary—Males ..	3	3	8	16	13	6	42	47	27	8	6	179	258	..	2	..	2	3	17	18
“ Females ..	1	5	10	10	21	13	25	17	16	4	..	123	156	..	2	..	2	3	8	29
Non-Pulmonary—Males ..	4	26	16	8	1	3	4	1	1	..	..	64	76	..	1	..	1	1	1	5
“ Females ..	11	13	7	13	4	3	7	..	1	..	..	59	63	..	1	..	1	1	..	4
Soldiers and Sailors notified not included in above.																				
Pulmonary—Males ..	..	..	..	..	..	2	3	2	5	..	..	12	18	..	..	..	..	..	..	4
Non-Pulmonary—Males ..	..	..	..	..	..	1	1	..	..	..	..	2	3	..	..	..	..	..	..	..

BIRKENHEAD.—Tuberculosis of the Lung (including Phthisis) and other forms of Tuberculosis.

Year.	Population at Midsummer	Number of Deaths.											
		Total.		Tuberculosis of the Lung (including Phthisis)				Other Forms of Tuberculosis					
		Deaths	Death Rate	Males (all ages)	Rate per 1000	Females (all ages)	Rate per 1000	Males (all ages)	Rate per 1000	Females (all ages)	Rate per 1000	Children (under 5)	Rate per 1000
1911	131577	160	1·21	98	0·74	62	0·47	31	0·23	20	0·15	36	0·27
1912	133521	150	1·12	80	0·59	70	0·52	34	0·25	23	0·17	35	0·26
1913	135740	168	1·23	104	0·76	64	0·47	32	0·23	27	0·19	39	0·28
1914	137996	141 ^b	1·02	75	0·54	66	0·47	23	0·16	23	0·16	27	0·19
1915	140291	174 ^a	1·23	105	0·74	68	0·48	44	0·31	23	0·16	42	0·29
1916	142622	177 ^a	1·24	104	0·72	73	0·51	36	0·25	25	0·17	44	0·30

* This includes transferable deaths from other places.

The average Phthisis Death Rate for the last 10 years is 1.14 per 1000, equal to 153 deaths per year.

Inquests.—The number of inquests held during 1916 was 127, thus 6·2 per cent. of the sum of the deaths in the Borough formed the subject of official enquiries. There was one death due to overlaying during the year.

Deaths not Certified.—Not all the death causes which are classified represent diseases or symptoms observed and certified by medical men in attendance during the last illness, or verdicts following official investigation. A significant proportion of the death causes are entered in the register on the doubtful testimony of deceased persons' relatives or friends, or fellow lodgers. The registrars have, therefore, been required to mark in the returns furnished, every death not certified by a registered practitioner, or made the subject of a coroner's inquest. In 1916, out of the 2,034 deaths registered, 3 were marked "not certified," that is 0·14 per cent. The causes of the 3 deaths were entered in accordance with the statements of persons giving information to the registrars as follows:—

Infantile Debility ...	...	...	...	...	1
Pernicious Anæmia ...	...	...	...	...	1
Chronic Bronchial Asthma ...	...	...	...	...	1

though how such conclusions were arrived at does not appear. In my opinion such deaths ought not to be registered without a Coroner's certificate.

The proportion of uncertified deaths to the sum of the deaths was as already stated, 0·14 per cent. as compared with 0·13 per cent. in 1915.

Illegitimacy.—Statistics relating to illegitimacy are important, not merely on account of the bearing which such a subject has upon the social life of the community, but also with a view ultimately of showing to some extent the influence which illegitimacy exerts upon the "chances of life" of infants, as it is well known that the death-rate of illegitimate children is considerably greater than that of those born in wedlock. I have thought it desirable, therefore, to continue these statistics in this report, as the subject is one of some interest.

The following table gives the total number of legitimate and illegitimate births, with the rates per 1000 of births and per 1000 living, and statistics relative to the deaths of such children under one year of age.

Illegitimate Births and Deaths, 1916.

Registrar's Sub-District	Estimated Population 1916.	BIRTHS		ILLEGITIMATE BIRTHS		Total deaths of children under one year of age	Deaths of illegitimate children under one year of age	Percentage of deaths of illegitimates to total deaths under one year of age
		Legitimate	Illegitimate	to 1000 living	to 1000 births			
Birkenhead ..	70977	2150	106	1.4	49.3	270	24	8.1
Tranmere, Oxtow, Cloughton, and Bebington and Workhouse ..	71645	1569	60	0.8	38.2	137	15	10.9
Total ..	142622	3719	166	1.1	41.6	407	39	9.5

*37 births have since been transferred to other places. Hence the difference in total as given on unrevised number.

HOUSING OF THE WORKING CLASSES ACTS 1890 to 1909.

During the twelve months ending 31st December, 1916, a large amount of work was carried out by the Department under the provisions of the Housing of the Working Classes Acts, 1890 to 1909, and the Regulations made by the Local Government Board dated 2nd September, 1910, the particulars of which are as follows, viz. :—

The number of dwelling houses inspected for the purposes of Section 17 of the Act of 1909, and the Regulations made by the Local Government Board during 1916 ... 317

The number of dwelling-houses, which on inspection, were considered to be in a state so dangerous or injurious to health as to be unfit for human habitation ... —

During the year no representations were actually made to the Committee, but several reports upon certain blocks of property were in course of preparation for

its consideration, but were held over on account of the outbreak of war	
The number of dwelling-houses dealt with and made fit for human habitation under Sections 14 and 15 of the Act of 1909	73
The number of dwelling-houses inspected under Section 17 of the Act of 1909, and the Housing Regulations 1910, and the defects found therein remedied under the provisions of the Public Health Act, 1875, and the houses put into a proper and satisfactory condition	200
The number of closing orders made	—
The number of dwelling-houses, the defects of which were remedied without the making of closing orders	3
The number of dwelling houses which, after the making of closing orders, were put into a fit state for human habitation	—
The number of demolition orders made	—
The number of dwelling houses demolished	12

I think the year's record must be considered a satisfactory one, under present circumstances.

I am, Gentlemen,

Your obedient servant,

R. SYDNEY MARSDEN,

Medical Officer of Health.

PUBLIC HEALTH DEPARTMENT,
TOWN HALL, BIRKENHEAD.

24th March, 1917.

THE INFECTIOUS DISEASES HOSPITAL,
TOLLEMACHE ROAD.

Report for the Year 1916.

HOSPITAL VISITING SUB-COMMITTEE.

MR. ALDERMAN E. G. MASON, J.P., Chairman.

MR. ALDERMAN THOMAS SHAW.

MR. ALDERMAN MICHAEL BYRNE.

MR. COUNCILLOR ROBERT FRAME.

MR. COUNCILLOR W. W. KELLY.

MR. COUNCILLOR D. R. ROWLANDS.

MEDICAL OFFICER.

DR. R. SYDNEY MARSDEN.

EXTRA SURGEON.

DR. H. H. ROBINSON.

MATRON.

MISS EMILY YEOMANS.

There has been no addition to the number of beds in the hospital during the year. The full Staff consists of the Matron, 17 nurses, 19 female servants, an engineer, 2 porters and 2 gardeners.

The total number of patients treated in the hospital during the year (January 1st to December 31st) was 260; of these 250 were admitted during the year, and 10 remained in hospital from 1915. Out of those admitted 8 died, giving a death-rate of 3.11 per cent., a low percentage.

The following table gives a summary of the cases treated in the hospital during the year 1916, along with the results obtained.

DISEASES	M.	F.	Re-covered		Died	
			M.	F.	M.	F.
Scarlet Fever—remaining ..	5	5	5	5	..	..
admitted ..	93	78	93	77	..	1
Typhoid ..	3	1	..	..	..	..
Diphtheria ..	20	33	16	30	4	3
Chicken Pox ..	1	1	1	1	..	..
German Measles ..	13	..	13	..	..	..
Measles ..	4	..	4	..	..	..
Erysipelas ..	1	..	1	..	..	..
Neuralgia ..	..	1	..	1	..	..
Cerebro-Spinal Meningitis,...	1	..	1	..	..	..

Military and Naval Cases Treated.

Out of the 250 cases admitted during the year, 35 were soldiers, viz: 16 with Scarlatina, 13 with German Measles, 4 with Measles, 1 with Erysipelas, and 1 with Diphtheria.

There was also a case of Scarlatina from the Navy.

The new smallpox hospital, which is in course of erection at Thingwall, was expected to have been ready by the end of 1915, but owing to the outbreak of the war the work is not being proceeded with at present.

By special agreement with the Corporation of Wallasey, small-pox cases from this Borough are now sent to the Wallasey Small-pox Hospital.

THE E. P. SMITH MEMORIAL CONVALESCENT FUND.

FOR PATIENTS WHO HAVE BEEN TREATED IN THE FEVER
HOSPITAL.

Particulars relating to this fund were given in my Report for 1903.

There were no suitable cases to receive benefit by the fund during the year 1916.

APPENDIX.

- 1—Vital Statistics of Whole District during 1916 and previous years.
- 2—Causes of and Ages at Death during 1916.
- 3—Cases of Infectious Diseases notified during 1916.
- 4—Infantile Mortality during the year 1916.
- 5—Return of Deaths of Soldiers and Sailors—1916.

TABLE I.—Deaths Registered in the County Borough of Birkenhead during the year ending December 31st, 1916, classified according to age.

TABLE II.—Weekly Condensed Register of Meteorological Results for 1916.

Vital Statistics of Whole District during 1916 and previous Years.

Year	Population estimated to Middle of each Year	Births		TOTAL DEATHS REGISTERED IN THE DISTRICT		TRANSFERABLE DEATHS		NETT DEATHS BELONGING TO THE DISTRICT		
		Un-corrected Number.	Nett.	Number	Rate	of Non-residents registered in the District	of Residents not registered in the District	Under 1 year of age		At all ages
								Number	Rate per 1,000 Net Births	
1911	131577	3748	3732	284	15.6	29	82	509	136	2107
1912	133521	3793	3774	28.2	14.3	36	80	371	98	1964
1913	135740	3931	3907	28.7	14.5	46	106	458	117	2032
1914	137906	3790	3772	27.3	15.3	85	126	462	122	2153
1915	140291	3864	3844	27.4	15.8	138	104	469	122	2193
1916	142622	3880	3848	26.9	14.4	150	117	407	105	2034

Total Population at all ages - 130,794

Number of inhabited houses - 24,343

Average number of persons per house 5.3

Area of District in acres
(exclusive of area covered by water) } 3,850

Total families or separate occupiers 26,887

At Census, 1911.

Causes of, and Ages at Death during year 1916.

CAUSES OF DEATH.	NET DEATHS AT THE SUBJOINED AGES OF RESIDENTS, WHETHER OCCURRING WITHIN OR WITHOUT THE DISTRICT.										DEATHS IN OR BELONGING TO LOCALITIES AT ALL AGES.						TOTAL DEATHS IN PUBLIC INSTITU- TIONS IN THE DISTRICT
	All ages	Under 1 and year	1 and 2 under	2 and 5 under	5 and 15 under	15 and 25 under	25 and 45 under	45 and 65 under	65 and up- wards	Whole Borough	Bir- ken- head	Tran- mere	Clau- ghton	Oxton	Beb- ing- ton.	Work house	
All causes { Certified ... Uncertified ...	2031 3	407 1	97 1	104	72	73	283	452	543	2031 3	996 3	516 3	85	41	38	355	215
Chicken-pox ...	5					1	3	1		5	2					3	
Enteric Fever ...	28	7	6	12	3					28	12	15				1	
Small-pox ...	5				4	1				5	3	3					
Measle ...	30	14	11	4	1					30	19	9			1	1	
Scarlet fever ...	15	2	4	8	3					15	10	5					
Whooping-cough ...	25	2			2	1	4	5	11	25	6	15	2	2			
Diphtheria and Membranous Croup ...	3	1						1	1	3	1	1				1	
Influenza ...																	
Erysipelas ...	13	6					2	3	2	13	3	4				6	
Cerebro-spinal Fever ...	177	1	1		10	32	85	38	10	177	79	39	1	1	1	56	16
Other Zymotic Diseases ...	25	7	8	5	3	1	1			25	21	2	1				3
Phthisis (Pulmonary Tuberculosis) ...	36	7	4	13	5	2	4			36	17	10				9	3
Tuberculous Meningitis ...	5				1		2			5	2					2	
Other tuberculous diseases ...	140						16	72	51	140	49	45	8	7	7	24	5
Rheumatic Fever, Rheumatism ...	138	14	3	2			4	39	76	138	67	36	3	3	4	25	11
Cancer, malignant disease ...	112	39	17	15	6	1	7	10	17	112	71	15	9	1	1	16	20
Bronchitis ...	132	10	12	7	5	10	40	31	17	132	68	38	3	4	2	17	6
Pneumonia (all other forms) ...	19	1		1	1	1	3	7	6	19	9	6	2			2	
Other diseases of Respiratory organs ...	126	90	14	9	1	1	3	3	5	126	92	23	2	1		7	8
Diarrhoea and Enteritis ...	13			1	2	6	3	1		13	8	3	1			1	10
Appendicitis and Typhilitis ...																	
Alcoholism ...	3							2	1	3	2	1					
Cirrhosis of Liver ...	55		2	1	1	3	9	27	12	55	25	11	3	2	1	13	3
Nephritis and Bright's Disease ...	2						2			2						2	
Puerperal Fever ...																	
Other accidents and diseases of Preg- nancy and Parturition ...	10					2	8			10	5	3	1			1	3
Congenital Debility & Malformation, including Premature Birth ...	163	156	4	3				16		163	108	41	7		1	6	11
Violent Deaths, excluding Suicide ...	59	3	2	9	5	2	9		13	59	37	10	3	1	1	7	33
Suicides ...	2						1	1		2	1						1
Brain Disease ...	111	5	2	6	7		8	35	48	111	42	33	6	3	5	22	8
Heart Disease ...	172			1	3	4	27	76	61	172	71	46	12	3	4	36	21
Other Diseases ...	410	44	8	6	9	6	42	82	213	410	166	105	20	13	10	96	48
	2034	407	98	104	72	73	283	452	545	2034	996	519	85	41	38	355	215

Cases of Infectious Disease notified during the year 1916.

Notifiable Disease.	Number of Cases notified.								Total Cases notified in each Locality (e.g. Parish or Ward) of the District.								Total Cases remov'd to Hospit'l		
	At all Ages.	Under 1 year	1 to 5 years.	5 to 15 years.	15 to 25 years.	25 to 45 years.	45 to 65 years. upw'ds	Argyle	Glenelg	Oxton	Culliton	Kegerton	Mersey	Bebington	Workhouse				
															In- patients and out- patients	Cases from outside Boro'gh			
Measles and German Measles	1773	5	81	705	879	66	35	2	147	250	449	22	119	317	264	137	65	3	17
Smallpox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria (including Membranous Croup)	96	...	...	38	44	10	4	...	7	14	21	2	6	25	14	3	4	...	53
Erysipelas	91	4	5	3	8	8	31	...	14	17	15	2	9	19	9	3	1	2	1
Scarlet Fever	199	1	43	120	19	19	16	...	15	38	34	3	14	54	23	13	4	1	171
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever	16	...	...	...	1	6	7	2	...	4	2	1	...	1	1	1	...	1	4
Relapsing Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Continued Fever	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...
Puerperal Fever	4	...	...	...	...	1	3	...	2	...	...	...	...	...	...	...	...	...	...
Plague	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cerebro-Spinal Fever	2	...	...	...	...	2	...	...	...	...	...	...	...	1	...	1	...	...	1
Acute Polyomyelitis	2	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
Pulmonary Tuberculosis	310	...	3	10	49	52	134	56	59	67	51	3	8	61	33	11	4	5	8
Other forms of Tuberculosis	126	...	13	42	46	11	12	2	19	22	29	1	7	18	24	4	2	...	...
Ophthalmia Neonatorum	64	...	64	...	...	...	...	...	6	19	9	...	2	13	6	5	2	1	...
Totals	2683	5	166	845	1142	175	242	93	270	431	611	34	166	509	375	178	82	13	247

Infantile Mortality during the year 1916.

CAUSE OF DEATH.										
All Causes:—										
Certified										
Uncertified										
Under 1 week	1-2 weeks	2-3 weeks	3-4 weeks	Total under 1 month	1-3 mos.	3-6 mos.	6-9 mos.	9-12 mos.	Total Deaths under 1-yr	
79	20	17	9	125	61	79	76	66	407	..
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MILITARY AND NAVAL CASES.

The deaths of 43 soldiers and 6 sailors were registered in the Borough during the year 1916, of which 41 occurred in Institutions.

The following are the particulars respecting the deaths, viz :—

Age	Cause of Death	Branch of Service
29	Fractured Skull ...	Military
23	Meningitis ...	"
35	Rheumatism ..	"
34	Pneumonia ...	"
21	Phthisis ...	"
28	Pneumonia ...	"
23	Brain Disease ...	"
18	Pneumonia ...	"
30	Shrapnel Wounds ...	"
38	Pneumonia ...	"
32	Murder ..	"
23	Pneumonia ...	"
24	Pneumonia ...	"
29	Tuberculosis ...	"
19	Pneumonia ...	"
20	Pneumonia ...	"
26	Gunshot ...	"
35	Phthisis ...	"
19	Phthisis ...	"
42	Gunshot ...	"
26	Appendicitis ..	"
35	Gunshot ...	"
22	Gunshot ...	"
25	Gunshot ...	"
24	Septicæmia ...	"
29	Shrapnel Wounds ...	"
17	Gunshot ...	"
19	Gunshot ...	"
27	Gunshot ...	"
22	Shell Wound ...	"
41	Pneumonia ...	"
23	Gunshot ...	"
18	Gunshot ...	"
24	Gunshot ...	"

Location of Service

Cause of Death

Military

Gunshot

Gunshot

Battle Wound

Gunshot

Gunshot

Gunshot

Gunshot

Gunshot

Gunshot

Gunshot

Gunshot

Gunshot

Gunshot

Gunshot

Gunshot

Gunshot

Naval

Accidental Gunshot

Accidental Gunshot

Accidental Gunshot

Accidental Gunshot

Accidental Gunshot

Accidental Gunshot

Accidental Gunshot

Accidental Gunshot

Age	Cause of Death	Branch of Service
28	Gunshot ...	Military
29	Gunshot ...	"
25	Bullet Wound ..	"
28	Gunshot ...	"
20	Gunshot ...	"
19	Phthisis ..	"
30	Shell Wound ...	"
22	Phthisis ...	"
21	Shell Wound ...	"
26	Accidental Crushes ...	Naval
18	Drowning ...	"
32	Suicide—Cut Throat ...	"
32	Accidental Fall ...	"
41	Accidental Fall ...	"
24	Accidental Fall ...	"

1878		1879		1880		1881		1882		1883		1884		1885		1886		1887		1888		1889		1890		1891		1892		1893		1894		1895		1896		1897		1898		1899		1900		1901		1902		1903		1904		1905		1906		1907		1908		1909		1910		1911		1912		1913		1914		1915		1916		1917		1918		1919		1920		1921		1922		1923		1924		1925		1926		1927		1928		1929		1930		1931		1932		1933		1934		1935		1936		1937		1938		1939		1940		1941		1942		1943		1944		1945		1946		1947		1948		1949		1950		1951		1952		1953		1954		1955		1956		1957		1958		1959		1960		1961		1962		1963		1964		1965		1966		1967		1968		1969		1970		1971		1972		1973		1974		1975		1976		1977		1978		1979		1980		1981		1982		1983		1984		1985		1986		1987		1988		1989		1990		1991		1992		1993		1994		1995		1996		1997		1998		1999		2000		2001		2002		2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		2020		2021		2022		2023		2024		2025		2026		2027		2028		2029		2030		2031		2032		2033		2034		2035		2036		2037		2038		2039		2040		2041		2042		2043		2044		2045		2046		2047		2048		2049		2050		2051		2052		2053		2054		2055		2056		2057		2058		2059		2060		2061		2062		2063		2064		2065		2066		2067		2068		2069		2070		2071		2072		2073		2074		2075		2076		2077		2078		2079		2080		2081		2082		2083		2084		2085		2086		2087		2088		2089		2090		2091		2092		2093		2094		2095		2096		2097		2098		2099		2100		2101		2102		2103		2104		2105		2106		2107		2108		2109		2110		2111		2112		2113		2114		2115		2116		2117		2118		2119		2120		2121		2122		2123		2124		2125		2126		2127		2128		2129		2130		2131		2132		2133		2134		2135		2136		2137		2138		2139		2140		2141		2142		2143		2144		2145		2146		2147		2148		2149		2150		2151		2152		2153		2154		2155		2156		2157		2158		2159		2160		2161		2162		2163		2164		2165		2166		2167		2168		2169		2170		2171		2172		2173		2174		2175		2176		2177		2178		2179		2180		2181		2182		2183		2184		2185		2186		2187		2188		2189		2190		2191		2192		2193		2194		2195		2196		2197		2198		2199		2200		2201		2202		2203		2204		2205		2206		2207		2208		2209		2210		2211		2212		2213		2214		2215		2216		2217		2218		2219		2220		2221		2222		2223		2224		2225		2226		2227		2228		2229		2230		2231		2232		2233		2234		2235		2236		2237		2238		2239		2240		2241		2242		2243		2244		2245		2246		2247		2248		2249		2250		2251		2252		2253		2254		2255		2256		2257		2258		2259		2260		2261		2262		2263		2264		2265		2266		2267		2268		2269		2270		2271		2272		2273		2274		2275		2276		2277		2278		2279		2280		2281		2282		2283		2284		2285		2286		2287		2288		2289		2290		2291		2292		2293		2294		2295		2296		2297		2298		2299		2300		2301		2302		2303		2304		2305		2306		2307		2308		2309		2310		2311		2312		2313		2314		2315		2316		2317		2318		2319		2320		2321		2322		2323		2324		2325		2326		2327		2328		2329		2330		2331		2332		2333	
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