[Report 1914] / Medical Officer of Health, Warrington County Borough.

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COUNTY BOROUGH OF WARRINGTON.

ANNUAL REPORT

OF THE

Medical Officer of Health

ON THE

SANITARY CONDITION OF WARRINGTON,

WITH

TABULAR RETURNS

OF THE

SICKNESS AND MORTALITY DURING THE YEAR 1914,

ALSO

THE REPORT OF THE INSPECTOR OF NUISANCES.

WARRINGTON:
PRINTED BY MACKIE AND CO. LTD.

County Borough of Warrington.

1914-15.

HEALTH COMMITTEE.

Mayor:

MR. ALDERMAN PETER PEACOCK.

Chairman:

MR. ALDERMAN JAMES EVANS, J.P.

Deputy-Chairman:

MR. ALDERMAN BURTON, J.P.

MR. ALDERMAN TINNION, J.P.
,, COUNCILLOR ARCHER
,, ,, BROADHURST
,, ,, DICKENSON
COUNCILLOR DR. FOX
MR. COUNCILLOR HAWTHORN
COUNCILLOR DR. JOSEPH, J.P.
MR. COUNCILLOR LASHFORD.
COUNCILLOR DR. McKEE.
MR. COUNCILLOR SHAW.
,, ,, WILKINSON, J.P.
,, ,, WILSON.

Town Clerk:

J. LYON WHITTLE, ESQ.

OFFICIALS

OF THE

Public Health Department

Medical Officer of Health, Medical Superintendent of the Corporation Hospitals, and Medical Adviser to the Education Committee and Local Insurance Committee:

G. W. N. JOSEPH, M.D., D.P.H.

Assistant Medical Officer of Health:

JOHN LUMB, M.B., B.S., B.Hy., D.P.H.

Chief Inspector of Nuisances and Inspector under the Food and Drugs Act:

° WALTER T. FLOOD.

Assistant Sanitary Inspectors:

‡ ° JOHN STEVENS.
‡ ° JAMES SNAILHAM.
‡ ° THOMAS FRANCE.
° JOHN COOK.

Clerks: WILLIAM LAWLESS. FRED COTTERILL.
S. F. REYNOLDS. S. MAKIN.

Inspectors of Midwives and Health Visitors:

† MISS EDWARDS. † MISS SULLIVAN.
† MISS REDFERN.

Tuberculosis Nurse:

‡ MISS PROBERT.

School Nurses:

° x MISS PHILLIPS. x MISS DAVEY.

Superintendent of Nurses, Isolation Hospitals:

x MISS SUMNER.

° Holds the Certificate of the Sanitary Institute.
‡ ,, Meat Inspector's Certificates.
† ,, the Certificate of the Central Midwives Board.
x ,, Nursing Certificate.

CONTENTS.

To the Chairman and Members of the
Health Committee.

Gentlemen,—

I beg to submit to you my second Annual Report on the sanitary condition of the Borough, namely, that for the year 1914.

VITAL STATISTICS.—The birth-rate (29.7) for Warrington is the same as last year, and is considerably higher than that for England and Wales as a whole or than the average for the 97 great towns.

At the same time there is a considerable reduction in the infantile death-rate from 131 per 1,000 births last year to 111 for 1914. This, it will be seen, is lower than the average for the 97 great towns, and is the second lowest on record for the Borough.

The question of infantile mortality is referred to again on pages 9, 32 and 77.

The general death-rate for the year was 17.5, a figure slightly greater than the corresponding rate for the previous year.

The actual death-rate for the Borough is 16.2 for the same period, but this has to be multiplied by a certain factor in order to arrive at the corrected death-rate, as is explained on page 25.

The following table gives the general and infantile death-rates for the Borough and the 97 great towns of England and Wales during the years 1913 and 1914:—

		General Death Rate.	Infantile Death Rate.
Warrington	1913	17·2	131
	1914	**17·5**	**111**
97 Great Towns	1913	14·7	117
	1914	**15·0**	**114**

In the table on page 31 a list of the causes of and ages at death will be found. From this it is clear that the slight rise in death-rate is not to be attributed to any one cause, but is spread fairly generally over all.

A table on page 21 compares some of the principal vital statistics for Warrington, with the average for the year in different parts of the country. Although this Borough compares somewhat unfavourably with the rest of the country, it will be observed that

in some rates, especially infantile mortality rate, there is an improvement over last year.

However, comparing our rates with the other Lancashire County Boroughs, we find that out of 17 towns only one having so high a birth-rate has lower general and infantile death-rate. (See page 22.)

UNCERTIFIED DEATHS.

Attention was drawn in my Report last year to the question of uncertified deaths in this Borough. There is some improvement in the figures for 1914, but they are still very unfavourable compared with the rest of the country.

These figures are shown on page 21, and the causes to which these deaths are attributed are given on page 27.

INFECTIOUS DISEASES.

THE SCARLET FEVER EPIDEMIC.

The chief feature to be noted in the year under report is the epidemic of scarlet fever, which has been in evidence continuously throughout the year.

During the year 1913 the incidence of this disease was high throughout the country, and it will be seen from the table on page 51 that Warrington escaped comparatively lightly compared with other Lancashire towns at that time.

The number of cases of scarlet fever increased during the autumn of 1913, and never really diminished all through the winter, so we were quite prepared for a fairly large epidemic during the spring and summer. In my opinion the excessively mild winter of 1913 had something to do with the continuance of this epidemic up to the spring time.

There has been no large epidemic in this town since 1904, and so a large susceptible population has grown up who readily became victims when exposed to the infection.

The epidemic was extremely mild, and this had an important bearing on the spread of the disease:—(a) in many instances owing to the mildness of the attack parents have not known the child was ill and have never sought medical advice, whilst in other cases

having suspected the cause they have thought it of no consequence, as the child did not seem, in their opinion, ill enough to be isolated. It was quite a common thing to hear mothers say they thought "the child just had a touch of the fever"; (b) in addition showing the extreme mildness in certain instances, a series of cases have even been missed by general practitioners in the town and allowed to run about or attend school until noticed to be "peeling" by our inspectors or the teachers.

There have only been 24 deaths out of 1133 cases, a case mortality of 2.1, which is lower than we have had for more than ten years.

It is also interesting to observe that the attack-rate per 1,000 persons living was lower than in the epidemic of 1904. (See page 54).

The epidemic started in Whitecross Ward in August, 1913, and spread throughout the town. No special cause could be assigned, although careful inquiries were made into every case.

Bewsey Ward, which has practically no slums, and where there is plenty of work at good wages, probably had a larger number of cases than any ward. Here it is essentially due to the carelessness of parents.

Undoubtedly one great cause of the amount of infectious disease seems to be the utter indifference of a certain class of mother. This applies not only to scarlet fever but also to diphtheria, measles and whooping cough.

Even after they have been told by the medical man in attendance that the case is infectious, they take no precautions whatever to prevent other children from coming in contact with the case, even in those homes in which they have enough accommodation to enable them to do so.

As a rule the child is kept in the kitchen, and neighbours allowed to come in to look at the case, often carrying babies in their arms.

I cannot help thinking that prosecution of the offending parent in every instance where a child suffering from infectious disease was exposed to the public danger would have very materially reduced the number of sufferers from scarlet fever during the year.

Attention may here be called to one of the difficulties in

dealing with infectious disease in this Borough, and one which increases in importance each year.

We have a system of close co-operation between the Health and Education Departments whereby our inspectors inquire into every case of sore throat or illness suspected to be infectious occurring among the school children within the Borough and coming to the knowledge of the teachers. No case of this kind can be re-admitted to school until certified free from infection, either by the medical man in charge of the case or the Medical Officer of Health.

But this does not apply to certain children resident outside the Borough and attending our schools.

Infectious disease occurring in their homes is notified to other health authorities and does not come to our notice except in isolated instances. It is therefore quite possible for children from infected homes to be attending schools within the Borough without our knowledge. At the same time, of course, our inspectors have no power to follow these children up in their homes in case of suspected disease, and owing to lack of staff and the area involved rural authorities are unable to exercise close supervision in this matter.

OTHER INFECTIOUS DISEASES.

Although the death-rate from enteric fever is still high, the actual number of cases of the disease occurring in the town has diminished each year since 1909.

A table comparing the prevalence of sickness and deaths from infectious diseases is given on page 50.

On page 50 certain figures relating to cases of non-notifiable infectious disease (i.e., measles, &c.), so far as they have come to our notice, are given.

OPHTHALMIA NEONATORUM.

This disease is a very contagious and severe form of inflammation of the eyes in new-born children, due to the germ that causes one of the forms of venereal disease.

A very large proportion of the blindness contracted in childhood is due to the neglect of proper precautions against the disease.

The Local Government Board has made regulations under Sect. 130, Public Health Act, 1875, adding opthalmia neonatorum to the list of diseases compulsorily notifiable.

These regulations, which came into force on April 1st, 1914, require medical practitioners and midwives to notify to the Medical Officer of Health all cases of this disease, which commence in babies within 21 days from the date of their birth.

During the year 18 such cases (occurring among the 2,225 living births) were notified in this Borough, and were visited and re-visited by the health visitors in order to see that the parents obtained adequate medical treatment. (In six of these cases the mother was attended in her confinement by a medical man, in 12 by a midwife). Details are given on page 81, and it will be seen that the majority of the cases were mild, and cleared up without any severe after-effects.

We are only aware of a bacteriological examination being made to verify the diagnosis in one instance. We are, however, at all times quite prepared to do this work free in our Bacteriological Laboratory at the request of the doctor in charge of the case.

PLACES OF AMUSEMENT.

In preventing the spread of infectious disease special visits have been paid during the year to the different places of entertainment in the Borough. In consequence of the attention of the proprietors having been called by the Health Department to certain conditions, considerable improvement in sanitary details has been effected.

INFANTILE MORTALITY.

The infantile mortality rate (i.e., number of deaths of children under one year of age per 1,000 births) shows a reduction over last year.

Details of the main points to be observed in the statistics of deaths of infants and children under five years of age are given on

page — and following pages. Mention is there made of the work at the Mothers' and Babies' Welcomes in the town, which are an important adjunct of the public health service.

In a special report issued by the Local Government Board in July, 1914, a comparison is made between the average rates of infantile mortality for each County Borough in Lancashire in 1902-4 and in 1911-13.

It is there shown that Southport is the only one out of the 17 County Boroughs that has a greater reduction in the death-rate during that period than Warrington.

Again in the table on page 22 it will be seen that during 1914 the death-rate in this town among infants compares very favourably with that in the other County Boroughs of Lancashire, which county holds the unenviable record of having the highest rate in the country.

The provision of a Maternity Centre and a centre for Infant Consultations is essential, and I will here give a few details bearing on the question.

The consideration of this matter was postponed owing to the War, as it is bound up with the question of extension of the school clinic.

MATERNITY CENTRE.

On studying the list of causes of death in infants given on page 32 one is struck by the large number attributed to congenital malformations, premature birth, atrophy, debility and marasmus (in fact, 86 out of 249—34 per cent.)

Further, the number of stillbirths in the Borough of Warrington of which we have been notified for the three years, 1911-12-13, averages 79, and for 1914 is 94. On looking through the list of causes* as far as can be ascertained it is evident how very many are preventable if only the mother can have advice early enough.

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* Some of the cause of stillbirths in the Borough, as shown from particulars collected by the Health Visitors :—

Contracted pelvis.
Difficult labour.
Illness during pregnancy.
Premature birth.
Hæmorrhage during pregnancy.
Poor economic conditions, etc.

Among the figures we have collected seven mothers who have had stillborn children during this year have had more than five stillbirths each previously, and one of them has had as many as ten stillborn children.

It should be possible for every pregnant woman, however poor, to be able to obtain advice and treatment when needed. By this means not only will the health of the mother be improved, but a large number of the stillbirths and premature births may be avoided, whilst the health of those children who are born alive will be greatly benefited.

One of the greatest causes of the large numbers of premature and stillbirths is ignorance on the part of the mothers—ignorance of the fact that they need medical treatment.

A great many of these mothers are extremely anxious to do what is best for themselves to ensure the birth of a healthy child, but they have no means of knowing what they should do. What they need is instruction in simple hygienic facts quite apart from ordinary medical advice. This, I feel sure, would show great results not only in the saving of lives but in the improvement in the health of the survivors.

The Health Visitors are doing a lot of good work in the homes of these people, but a great advance would be made if we had a centre where the women could attend and receive instruction from a Medical Officer.

We have in addition to recognise the fact that at present there is nowhere for an emergency case of midwifery to go in the Borough but to the Workhouse. This has been even more evident since the beginning of the War.

I would suggest the provision of a few beds, probably three at first would be quite enough, looked after by a trained midwife, into which any urgent case could be sent by the doctor in charge.

A limit according to scale of income would have to be fixed for any cases receiving free treatment, though urgent cases reported by a doctor would, of course, not be refused.

Our Maternity Centre then would

(1) co-ordinate the whole of the work of our Health Visitors;

(2) be a centre for giving advice and instruction to pregnant women;

(3) make provision for any urgent emergency cases of confinement brought to the notice of doctors in the town;

(4) be a centre of instruction for the midwives of the Borough.

INFANT CONSULTATIONS.

Certain of the defects found in the children at the Routine Medical Inspection during school life are found to have had their origin during the pre-school age. A great many of these might have been remedied if the attention of the parents had been called to them at the outset. Our Health Visitors in the past have done valuable work by following up infants from birth until 12 months of age, and giving advice to the parents on the best methods of rearing their little ones. During the past year a further advance has been made by tackling the cases of children between the ages of twelve months and the date of their beginning to attend school and thus coming under the supervision of the School Medical Officer.

Still more can be done, however. The Baby Welcomes, of which there are two at present in the town, carried on by voluntary lady helpers assisted by members of our staff, have done really excellent work. The beneficial results to the infantile mortality rate of the town would be still further enhanced if some system of medical inspection were inaugurated. All defects in these children requiring treatment would then be pointed out to the parents and records kept which would be attached to the school schedule when the child reached school age.

Here, again, as in the case of a Maternity Centre treatment which is the province of the General Medical Practitioners of the town would not be aimed at, but valuable instruction and advice could be given to those mothers who are willing to avail themselves of it.

In this scheme the old Baby Welcomes would not be superseded but included. New quarters would be provided, and the ladies who at present are giving so much valuable time and service to this work would be asked to help, as before.

The annual expense of both the Infant Consultation and Maternity Centre would be small, and the Local Government Board have promised annual grants towards it amounting to half the expenditure.

THE SEWAGE QUESTION.

"However carefully closets on the conservancy system are emptied and cleansed, the conditions associated with them in urban communities are a menace to the public health, and especially the health of children; and the Board would urge that wherever a sufficient sewer and water supply are available fresh water closets supplied with flushing cisterns should be substituted for existing closets on the conservancy system and provided in all new buildings. In the best administered districts conservancy closets and ashpits have given place to fresh water closets and movable ash-bins with covers."

The above is an extract from a circular issued by the Local Government Board to Local Authorities recently with reference to the prevention of infantile mortality.

There can be no doubt that statistics throughout the country go to show the beneficial effects on the health of the community of the conversion from conservancy methods to the water carriage system of dealing with excreta.

Before conversion on anything like a large scale can take place the question of re-sewering the Borough must receive attention.

We must admit this will be an expensive matter, but sooner or later it has to be faced, and every year only adds to the initial cost that will be necessary. And it must not be forgotten that a considerable expense in connection with the collection and treatment of pail contents will be saved. Once satisfactory arrangements are provided then all new buildings can have water closets installed where needed instead of the present objectionable pail closets, which will only have to be converted in the near future.

One great difficulty in the case of Warrington is that parts of the town are so low-lying that sufficient "fall" cannot be obtained for the sewage without pumping. Moreover, no scheme should be adopted that permits the pouring of crude sewage into the Mersey as at present obtains. All sewage must first be adequately treated. The best method for the treatment of sewage is a controversial

subject, and which method is most suitable for this Borough to adopt will need careful consideration. A sub-committee of the Health Committee has been formed to confer with a sub-committee of the Paving and Sewerage Committee on the whole subject, but the time is hardly opportune for discussing the matter.

TUBERCULOSIS.

The systematic efforts of the Health Committee towards the prevention and cure of this disease were continued during the year under report.

As in the preceding years an attempt has been made to secure a non-tuberculous milk supply for the Borough. Samples of milk have been systematically taken from the various sources of supply and submitted to bacteriological examination (see page 71). The further powers obtained by the Tuberculosis Order of 1913, were alluded to in my last Annual Report. The Order was amended in June, 1914, but I am sorry to say was suspended entirely in August, 1914. We are back again, therefore, to the old state of affairs, and the sooner this is remedied the better.

All cases of Tuberculosis occurring within the Borough are now compulsorily notifiable to the Medical Officer of Health, and on page 41 a table will be found showing the actual notifications of the different forms of the disease at the different age periods received during the year 1914.

Immediately following this table is another showing what parts of the body were affected in the " non-pulmonary " cases.

From these tables it will be observed that a total number of 375 notifications were received as against 367 in the previous year. This increase may be accounted for partly by the fact that compulsory notification was only in force for eleven months of the year 1913.

Some interesting figures are given on pages 44-46 showing the incidence of tuberculosis in the different trades in the Borough for the three years 1912, 1913, and 1914.

The rates given are comparative and not actual, as they are worked out for each year on the number of persons occupied in the different industries according to the Census of 1911.

No deductions have been drawn, but it opens up a large field of inquiry into certain conditions of labour that can only be accomplished when our new tuberculosis scheme is in full working order.

Within our knowledge the number of persons suffering from pulmonary tuberculosis living in Warrington on the 31st December, 1914, was 339; from others forms of the disease 222.

With regard to the prevention of this disease, attention must here be drawn to the question of indiscriminate spitting in the streets and public places. Consumption is spread far more from person to person through the sputum than through meat and milk, therefore the control of spitting would help more in preventing the spread of tuberculosis than any other one factor. Sputum is a form of excrement, and habitual spitting is mainly necessitated by chronic respiratory diseases, while the most common infection distributed by it is undoubtedly tuberculosis; other diseases, such as pneumonia and cerebro-spinal meningitis, can be similarly spread.

Patients known to be suffering from phthisis are now instructed to use special flasks, &c., but without a bacteriological examination no one of us is in a position to say that his expectoration is not infectious. Recent investigations made in Liverpool and Birmingham showed that 5 per cent. to 7 per cent. of the specimens of sputum found on the public streets contained tubercle bacilli in a virulent form.

The beds at Sankey Sanatorium have been kept in full use during the year, both insured and uninsured patients receiving treatment there.

On pages 61-66 an account is given of the work in that institution.

All the cases that have been treated in the Sanatorium from its opening in August, 1910, up to December 31st, 1914, have been carefully followed up, and the tables given on pages 64-66 will, I think, at least show the economic value of this form of treatment for pulmonary tuberculosis.

Leaving out of account any personal benefit to the individual, it will be seen that only 3 out of 224 (— 1.3 per cent.) were able to work before admission, whereas 71 (—31.6 per cent.) have been

able to follow their employment regularly ever since. Eight of these cases are at present serving in the Army.

The full scheme for dealing with tuberculosis in this Borough involves the enlargement of the Sanatorium so as to accommodate 50 patients (these patients comprising both early and advanced cases) and the opening of a Tuberculosis Dispensary on land behind Garven House, where the examination and treatment of cases who are residing at home can be carried out.

An Assistant Medical Officer of Health is to be appointed who shall reside at Sankey Sanatorium and carry out the routine work at the Sanatorium and at the Dispensary under the supervision of the Medical Officer of Health.

The Borough have to provide a Smallpox Hospital in lieu of Sankey Sanatorium, according to the requirements of the Local Government Board.

The completion of this scheme has been greatly hampered by the War, but it is to be hoped that the work will be at once proceeded with. However much these extensions were needed in the past they are still more necessary to-day.

The country is likely to be flooded with cases of tuberculosis after this War, as it was after the South African campaign, but, of course, to a much greater extent, and it behoves us to be prepared for dealing with them.

The visiting of cases of tuberculosis at their homes with a view to controlling the spread of infection, has been continued as in previous years, the time of one inspector being occupied in this work. A resumé of the routine carried out, together with the number of visits paid, will be found on page 48.

It is abundantly clear, however, that much must be done to improve the housing and social conditions of the people if this disease is to be stamped out. No multiplication of Sanatoria alone is going to rid the country of tuberculous disease. As soon as a person is discharged cured or improved from one of these establishments he is liable to contract the malady again or relapse as soon as he returns to the conditions under which it attacked him before.

The Local Sanitary Authority is each year performing much valuable work in getting rid of slum property and in improving the dwellings of the working classes. Still a great deal requires to

be done, not only in this, but also in raising the morals of the people in order to enable them to take advantage of better and healthier surroundings, and when we take into consideration that something like 50,000 persons die in England and Wales every year from tuberculosis alone, it is seen that ultimate success will be worth any effort, financial or otherwise, that can be made to attain it.

BACTERIOLOGICAL LABORATORY.

The large increase in the work of this department is seen on page 67.

PUBLIC HEALTH ADMINISTRATION IN THE SCHOOLS OF THE BOROUGH.

A special report has been issued dealing with this branch of our work.

CO-OPERATION BETWEEN CIVIL AND MILITARY SANITARY SERVICES.

There has been close co-operation with the Military Authorities since the outbreak of the War.

When necessary, quarters for the use of troops have been inspected and advice tendered.

Each week a return of the cases of infectious disease occurring in the district has been forwarded to the Medical Officer in charge at the Barracks.

When a case of infectious disease has occurred in the home of any member of His Majesty's Forces the Commanding Officer has been at once notified of the occurrence, and again when in our opinion the home was free from infection. This enabled the Military Authorities to prevent the man returning home on leave during the infectious period, whilst at the same time in case of any illness of the man the Medical Officer was fully aware of the home conditions.

In any case where infectious disease occurred in the home of a man engaged in military or naval service whilst on leave, the man was quarantined with the consent of his Commanding Officer in a non-infected dwelling until considered free from infection before being allowed to re-join.

That these arrangements worked satisfactorily is shown by the fact that although 89 cases were thus dealt with, in no instance has a case of infection been reported to us as having been carried by a man on his return to his regiment.

On the other hand, we have cases on record where infection has been brought into the town by men on furlough.

The Health Department have, whenever necessary, disinfected military clothing and bedding in order to prevent disease or destroy vermin.

As usual, close watch has been kept over the foodstuffs in the Borough, and a return of all the firms preparing such goods for the use of the Military was furnished to the Local Government Board at their request.

Arrangements have been made for the Health Visitors or other officers of the department to receive the weekly allowance from the Post Office for women in any instances where it may be thought inadvisable for them to attend personally either on account of illness or the risk of spreading disease.

APPOINTMENTS AND CHANGES IN THE STAFF.

The changes in the staff during the year were numerous.

Dr. John Lumb, assistant medical officer of health, resigned late in the year, having obtained a commission in the Royal Army Medical Corps for the duration of the War.

Dr. A. R. M. McIlraith, assistant medical officer of health for Beverley, Yorkshire, was appointed to fill the vacancy early in 1915.

A whole-time school dentist, Mr. W. Hutchison, late assistant school dentist for Birmingham, was also appointed about the same time, owing to the increase of work in this department.

Shortly after the outbreak of War two of our clerks, F. Cotterill and S. F. Reynolds, volunteered for military service, and are now serving in the Royal Field Artillery and King's Royal Rifles respectively.

Mr. Knowles, one of our inspectors, obtained the appointment of District Inspector, Northampton, and his place was filled by Mr. Thomas France, of Leigh, in September.

Mr. Monks, another inspector, was appointed Inspector to the Leigh Rural District Council, and was suceeded by Mr. Cook, of Darwen Health Department.

Owing to the increase of the work in the school clinic, Miss Davey was appointed as Nurse, to work with Nurse Phillips.

The vacancies in the Health Visitors' Staff were filled by Miss Redfern and Miss Sullivan, in place of Mrs. Allcock and Miss Howard, and the appointment of Lady Inspector for Tuberculosis work was given to Miss Probert.

Sidney Makin was appointed Junior Clerk, and Nurse Box is temporarily assisting in the clerical work until the return of the two clerks who have joined the Army.

I am, Gentlemen,

Your Obedient Servant,

G. W. N. JOSEPH.

SECTION I.

Vital Statistics.

SUMMARY.

Population (estimated to middle of 1914) ...	74,909
Population at Census, 1911	72,166
Area of Borough (acres)	3,115
Density of population (*i.e.* number of persons per acre)	24
Number of houses in occupation (middle of year)	14,792
Number of houses not in occupation do. ...	183
Number of houses built during the year ...	58
Estimated average number of persons per house	5
Number of births (males, 1,119; females, 1,106)	2,225
Birth-rate per 1,000 living	29·7
Number of deaths (652 males, 567 females) ...	1,219
Death-rate per 1,000 living	16·2
Death-rate per 1,000 living corrected for age and sex distribution	17·5
Excess of registered Births over Deaths ...	1,006
Number of Marriages	610
Marriage-rate per 1,000 living	8·1
Phthisis Death-rate per 1,000 living... ...	1·72
Death-rate per 1,000 population from other forms of Tuberculosis	·44
Death-rate from all forms of Tuberculosis, including phthisis	2·16
Death-rate from diseases of respiratory organs other than Tuberculosis	2·72
Infantile Mortality-rate (*i.e.* the number of deaths of children under one year per 1,000 births)	111

Comparison of the Birth Rate, the General, Zymotic, Infantile and other Death Rates of Warrington, with those for England and Wales for the year 1914. The figures for Warrington for the year 1913 are also given.

	Annual Rate per 1,000 living.											Annual Death Rate per 1 000 births.		Annual Death Rate per 1,000 living		Percentage of Total Deaths.			
	Births.	Total Deaths.		Deaths from								Diarrhœa and Enteritis (under 2 years).	Total under 1 year.	Aged 1 to 65 years	Aged 65 years and upwards.	Deaths in Public Institutions	Certified Causes.	Inquest Cases.	Uncertified Causes.
		Crude.	Standardized.	Enteric Fever.	Smallpox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria.	Violence.									
England and Wales ..	23·8	14·0	13·7	0·05	0·00	0·24	0·08	0·21	0·15	0·58		20·41	105	7·8	82·5	22·2	91·5	7·3	1·2
97 Grt. Towns (including London)	**25·0**	**14·7**	**15·0**	**0·04**	**0·00**	**0·21**	**0·07**	**0 18**	**0·16**	**0·55**		**26·09**	**114**	**8·6**	**86.1**	**28·8**	**91·4**	**7·8**	**0·8**
145 Smaller Towns ..	23·9	12·9	13·1	0·05	0·00	0·	0·07	0·18	0·16	0·55		19·84	104	7·1	82·2	15·3	92·3	6·3	1·4
England and Wales less the 242 towns	22·2	13·4	12·4	0·05	0·00	0·12	0·06	0·17	0·14	0·65		12.64	93	7·0	79.4	15·3	91·4	6·9	1·7
London	24·3	14·4	14·4	0·03	—	0 31	0·07	0·20	0·16	0·59		27·64	104	8·4	83·8	45·7	89·6	10 3	0·1
Warrington, 1914	**29·7**	**16·2**	**17·5**	**0·10**	**0·00**	**0·41**	**0·32**	**0·34**	**0·16**	**0·56**		**25·5**	**111**	**10·3**	**99·8**	**24·3**	**91·4**	**5·3**	**3·2**
Warrington, 1913	**29·7**	**15 9**	**17·2**	**0 12**	**0·00**	**0·32**	**0·09**	**0·32**	**0·12**	**0·63**		**27·2**	**131**	**9·6**	**92·08**	**22·4**	**90·5**	**4·7**	**4·8**

The POPULATION estimated to the middle of 1914 is 74,909.

The following is an interesting table showing how the principal vital statistics for Warrington compare with those in other large Lancashire towns:—

	Population.	Birth Rate.	Crude Death Rate.	Infantile Death Rate.
England and Wales ...	—	23·8	14·0	105
Barrow-in-Furness ...	65,324	29·9	14·2	107
Blackburn	134,015	20·9	14·6	111
Blackpool	61,141	15·4	14·7	114
Bolton	184,026	22·1	14·5	119
Bootle	72,298	31·2	16·2	122
Burnley	109,131	23·8	16·1	157
Bury	59,165	19·7	15·8	123
Liverpool	763,926	30·2	19·4	139
Manchester	731,830	25·8	16·7	126
Oldham	150,055	23·1	17·6	137
Preston	118,118	23·8	15·6	142
Rochdale	93,517	19·8	15·9	127
St. Helens	99,601	33·3	16·8	137
Salford	233,970	26·6	16·5	125
Southport	71,163	14·2	13·8	95
Warrington ...	**74,909**	**29·7**	**16·2**	**111**
Wigan	90,842	29·7	17·4	140

RETURN SHOWING THE NUMBER OF DWELLING-HOUSES AND LOCK-UP SHOPS OCCUPIED AND UNOCCUPIED ON JULY 15TH, 1914:—

	Occupied.		Unoccupied.	
Ward.	Houses.	Lock-up.	Houses.	Lock-up.
Town Hall ...	952	161 ...	8	5
Whitecross ...	1,863	16 ...	6	1
Bewsey ...	1,002	10 ...	12	—
Orford ...	1,940	12 ...	87*	—
St. John's ...	2,070	33 ...	15	—
Fairfield ...	2,074	16 ...	16	2
Howley ...	1,309	58 ...	14	4
St. Austin's ...	1,298	90 ...	10	2
Latchford ...	2,284	33 ...	15	2
	14,792	429	183	16

* 74 of these houses are in Orford Barracks.

The following table goes to show the rapid diminution in the number of unoccupied houses in the Borough during recent years:—

	1911.	1912.	1913.	1914.
Town Hall	34	23	15	8
Whitecross	33	15	13	6
Bewsey	58	52	20	12
Orford	99	73	17	87*
St. John's	65	53	30	15
Fairfield	124	85	18	16
Howley	76	48	19	14
St. Austin's	46	47	23	10
Latchford	68	64	14	15
	603	460	169	183

* 74 of these houses are in Orford Barracks.

NEW HOUSES.—The seriousness of the position is still further aggravated by a diminution in the number of houses built. This is brought out in the next table, which gives the number of new houses certified as fit for occupation during the past five years in the different wards of the town.

Year ...	1910.	1911	1912.	1913.	1914.
Town Hall	—	—	—	—	—
Whitecross	2	—	—	—	—
Bewsey	27	—	—	—	—
Orford	—	114	21	4	—
St. John's	—	2	—	—	—
Fairfield	107	33	33	25	20
Howley	9	21	—	4	—
St. Austin's	5	25	2	11	5
Latchford	52	26	43	43	33
Total	202	221	99	87	58

MARRIAGES.—There were 610 marriages during the year, the marriage-rate per 1,000 population being 8·1. In 1913 there were 679 marriages, giving a marriage-rate of 9·1.

BIRTHS.—There were 2,225 births (1,119 males, 1,106 females). The figures give a birth-rate of 29·7 as against 29·7 for 1913. The average for the ten years 1904 to 1913 was 31·3 per 1,000.

The birth-rate in England and Wales for the year 1914 was 23·8 per 1,000 of the population, as against 23·9 for 1913. The average for the ten years 1904 to 1913 was 25·9 per 1,000.

DEATHS.—1,217 deaths were registered as occurring in the Borough during 1914. Of these 288 occurred in public institutions, as follows:—

In the Infirmary	58	288
In the Workhouse	194	
In the Fever Hospital	36	

Included in the total 1,217, there were 51 deaths of persons who were non-residents in the Borough, 44 of whom died in local public institutions.

Ten deaths, occurring in the Workhouse, one death in the Fever Hospital, and one death at the Infirmary, accredited to Warrington, were those of vagrants belonging, so far as is known, to no particular locality.

Fifty-three deaths have been reported to me as having occurred outside the district, but as belonging to Warrington. These deaths occurred in the following Institutions and Districts:—

	No. of Deaths.		No. of Deaths.
Winwick Asylum ...	5	Liverpool	2
Sankey Sanatorium ...	11	Sankey	2
Manchester Infirmary ...	2	Penketh	1
Manchester Ear Hospital	1	Woolston	1
Manchester (Ancoats) Hospital	1	Burtonwood	1
Children's Hospital, Pendleton	1	Walton Inferior ... Poulton	2 1
Liverpool Infirmary ...	2	Bolton	1
Liverpool City Hospital ...	1	Cronton	1
Liverpool (Fazakerley Hospital	1	Rhyl ... ... St. Helens	1 1
Rainhill Asylum	9	Ashington	1
Haydock Lodge	2	Widnes	2

Deducting the deaths of the 51 non-residents from, and adding the deaths of the 53 residents dying outside the Borough to the registered number 1,217, we get a figure 1,219, which represents the actual number to be credited to Warrington. The crude death-rate calculated on this figure is 16·2.

Now it is known that the death-rate is higher amongst males than amongst females and also that it is relatively low amongst young adults as compared with the very young and the aged. It would therefore be misleading as a test of the relative healthiness of various districts to compare together the rates for populations differently constituted as to age and sex distribution unless some corrections were made allowing for these differences. For

instance a population consisting chiefly of young adults and with a specially large proportion of females is, on account of this age and sex distribution, under specially favourable circumstances for having a low death-rate ; and, even if its death rate is lower than that of another population which contains a smaller proportion of young adults and of females, it does not therefore follow that its general health is better than that of the latter population.

In order to make allowance for differences in the age and sex distribution of the various populations, the Registrar-General has devised a means for obtaining comparable rates. Warrington is somewhat favourably constituted as regards the age and sex of its inhabitants and therefore the actual death-rate (16·2) has to be multiplied by a factor 1·0861 in order to get the corrected death-rate 17·5. This corrected rate is chiefly for use when comparing the local rate with that of other towns (it should of course be at the same time ascertained that the rates for the other towns are also corrected in a similar way). When comparing the present local rate with that of previous years the net or crude death-rate for the Borough should be used, as the corrected rate has not been given in years previous to 1909.

AGES OF MORTALITY.

The following table shows the numbers of deaths (distinguishing males and females) at different age periods :—

	Males.	Females.	Total.
0—3 months	67	64	131
3 6 ,, ...	21	28	49
6—12 ,, ...	42	27	69
Totals under 1 year ...	130	119	249
Over 1 and under 2	56	40	96
,, 2 ,, 3	20	23	43
,, 3 ,, 4	9	7	16
,, 4 ,, 5	13	7	20
Totals 1 to 5 years ...	98	77	175
Over 5 and under 10... ...	23	17	40
,, 10 ,, 15... ...	8	15	23
,, 15 ,, 25... ...	40	31	71
,, 25 ,, 35... ...	45	30	75
,, 35 ,, 45... ...	53	36	89
,, 45 ,, 55... ...	75	50	125
,, 55 ,, 65... ...	72	65	137
,, 65 ,, 75... ...	73	67	140
,, 75 ,, 85... ...	32	50	82
Over 85	3	10	13
Totals at ages over 5 ...	424	371	795

DEATH-RATES FOR THE INFECTIOUS DISEASES.—The death-rates for the chief infectious diseases are given on page 21, and it will be seen that the rates for the Borough, except in the case of Diphtheria, are somewhat in excess of the average for the 97 great towns.

The DEATH-RATE for the DISEASES OF THE RESPIRATORY ORGANS other than those of tuberculous origin was 2·7 per 1,000 population. The figures for preceding years are given below :—

1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.
3·2	2·4	3·0	2·3	3·1	2·9	2·9	3·45	2·1	2·6	2·39	2·6

DEATHS FROM TUBERCULOSIS.—There were 129 deaths from Tuberculosis of the Lungs, giving a death-rate of 1·72. The deaths from other forms of Tuberculosis numbered 33, giving a death-rate of ·44. A further report on this disease is given on page 37.

VENEREAL DISEASE.—Though only few deaths are ascribed to this disease, it must not be forgotten that a great many diseases ultimately resulting in death may in the first place be due to Syphilis. The actual prevalence of Venereal diseases in the Borough cannot be determined, but from the Pauper "sickness returns" furnished to us fortnightly, it would appear that in this class of the community, at any rate, there is not much evidence of these diseases. Whether or not the findings of the Royal Commission on the subject at present sitting will result in the notification of these diseases to Health Authorities remains to be seen.

DEATHS FROM CANCER.

Males.		Females.	
Larynx	2	Throat	1
Neck	1	Stomach	4
Tongue	3	Intestines	7
Throat	2	Rectum	1
Œsophagus	3	Liver	2
Stomach	7	Uterus	3
Intestines	4	Breast	4
Rectum	4	Ovary	1
Liver	5		
Lungs	1		
Pelvis	1		
Prostate	2		
Tibia	1		
	36		23

Total 59.

UNCERTIFIED DEATHS.

Attention has been called in the opening letter of this report (page 6) to this question of uncertified deaths in the Borough.

Cause of Death as given by the Registrar.	All ages.	Under 1 year	1 to 5	5 to 15	15 to 25	25 to 65	65 and upwards
Convulsions...	10	8	1	1	...	...	...
Heart Failure	20	...	...	1	2	10	7
Debility from Birth ...	2	2	...	...	...	...	...
Acute Gastro-Enteritis ...	1		...	1	...	...	...
Marasmus	1	...	...	1	...	..	...
Epilepsy	1	...	...	...	...	1	...
Apoplectic Seizure... ..	1	...	...	1	..	...	...
A Fit	1	1	..	...	...	...	...
Bronchitis	1	...	...	...	...	1	...
Premature Birth	1	1	...	...	...	...	...
Totals	39	12	1	5	2	12	7

LIST OF CASES ON WHICH AN INQUEST HAS BEEN HELD.

ACCIDENTS by falls	10	
,, burns	1	
,, scalds	4	
,, drowning	15	
,, poison (misadventure)	1	
,, run over by cart	4	
,, run over by motor vehicle	6	
,, crushed by railway wagon	1	
,, machinery in works	1	
		—43
DEATHS from Heart Failure	2	
,, Gangrene of Intestine	1	
,, Pneumonia...	3	
,, Prematurity	1	
,, Pernicious Anæmia	1	
,, Chronic Heart Disease	1	
,, Septicæmia...	1	
,, Status Lymphaticus	1	
		—11

LIST OF CASES ON WHICH AN INQUEST HAS BEEN HELD—*cont.*

SUICIDE by cut throat	...	...	...	...	...	2	
,, hanging	...	...	...	...	...	1	
,, poisoning	...	...	...	...	...	3	
,, drowning	...	...	...	...	...	5	
							—11
Total	...	...	...	...			65

TABLE TO SHOW THE VITAL RATES FOR THE DIFFERENT WARDS OF THE TOWN.

WARD.	Estimated Population in Middle of 1914.	Persons per House at Census 1911.	Birth Rate per 1,000 living.	Death Rate per 1,000 living.	Infantile Death Rate per 1,000 births.	Death Rate from the Seven Chief Epidemic Diseases	Pulmonary Tuberculosis Death Rate per 1,000 living.
TOWN HALL	4,664	4·3	17·6	21·0	146	1·2	2·5
WHITECROSS ..	10,060	5·4	33·9	14·2	93	1·2	1·1
BEWSEY	5,410	5·4	36·9	19·0	157	2·7	2·9
ORFORD	10,670	5·5	29·6	15·9	104	2·3	2·06
ST. JOHN'S	10,557	5·1	32·3	16·7	128	3·03	1·6
FAIRFIELD.....	9,747	4·7	29·8	14·05	89	2·6	1·1
HOWLEY	6,545	5·0	32·0	19·4	161	3·5	2·7
ST. AUSTIN'S ..	6,360	4·9	23·7	16·03	139	·9	1·8
LATCHFORD	10,734	4·7	27·1	13·8	55	·9	·7
WHOLE BOROUGH	74,909	5·05	29·7	16·2	111	2·1	1·7

STATISTICAL TABLES

OF

BIRTHS, DEATHS, AND DISEASES,

FOR THE

COUNTY BOROUGH OF WARRINGTON

(AS SUPPLIED TO THE LOCAL GOVERNMENT BOARD).

TABLE I.

FOR WHOLE DISTRICT.

Year.	Population estimated to Middle of each Year.	Births.			Total Deaths Registered in the District.		Transferable Deaths.‡		Nett Deaths belonging to the District.			
		Uncorrected Number.	Nett.						Under One Year of age.		At all Ages.	
			No. †	Rate.	No. *	Rate.	of Non-residents registered in the District. †	of Residents not registered in the District. †	No. *	Rate per 1,000 Nett Births	No. *	Rate.
1	2	3	4	5	6	7	8	9	10	11	12	13
1909	73,008	2258		30·9	1274	17·4	52	12	292	129	1,234	16.9
1910	73,580	2225		33·8	1111	15·09	61	15	252	113	1,065	14·3
1911	72 375	2041	2036	28·1	1157	15·9	57	41	299	146	1,141	15·7
1912	73,158	2083	2071	28·3	1086	14·8	60	36	192	92	1,062	14·5
1913	74,065	2214	2204	29·7	1192	16·09	52	38	289	131	1,178	15·9
1914	**74,909**	**2227**	**2225**	**29·7**	**1217**	**16·2**	**51**	**53**	**249**	**111**	**1,219**	**16·2**

NOTES.—This Table is arranged to show the gross births and deaths in the district, and the births and deaths properly belonging to it with the corresponding rates. For years before 1911 some of the corrected rates probably will not be available. The rates should be calculated per 1000 of the estimated gross population. In a district in which large Public Institutions for the sick or infirm seriously affect the statistics, the rates in Columns 5 and 13 may be calculated on a nett population, obtained by deducting from the estimated gross population the average number of inmates not belonging to the district in such institutions.

* In Column 6 are to be included the whole of the deaths registered during the year as having actually occurred within the district.

In Column 12 is to be entered the number in Column 6, corrected by subtraction of the number in Column 8 and by addition of the number in Column 9. Deaths in Column 10 are to be similarly corrected by subtraction of the deaths under 1, included in the number given in Column 8 and by addition of the deaths under 1 included in the number given in Column 9.

† The Medical Officer of Health will be able from the returns made to him by the local Registrar of Deaths as well as from the quarterly lists furnished by the Registrar-General to fill in Column 8 in accordance with the rule in the next paragraph below. The Registrar-General, either directly or through the County Medical Officer of Health, will supply the Medical Officer of Health with the particulars of deaths to be entered in Column 9; and all such deaths must be included in this Column, unless an error is detected, and its correction has been accepted by the Registrar-General. For Column 4 the Registrar-General will furnish to the Medical Officer of Health, a Statement of the Number of births needing to be added to or subtracted from the total supplied by the local Registrar.

‡ "Transferable Deaths" are deaths of persons who, having a fixed or usual residence in England or Wales, die in a district other than that in which they resided. The deaths of persons without fixed or usual residence, *e.g.*, casuals, must not be included in Columns 8 or 9, except in certain instances under 3 (*b*) below. The Medical Officer of Health will state in Column 8 the number of transferable deaths of "non-residents" which are to be deducted, and will state in Column 9 the number of deaths of "residents" registered outside the district which are to be added in calculating the nett death-rate of his district.

COUNTY BOROUGH OF WARRINGTON.

TABLE II.—Cases of Infectious Disease notified during the Year 1914.

NOTIFIABLE DISEASE.	Number of Cases notified.								Total Cases notified in each Locality (*e.g.* Parish or Ward) of the District.									Total Cases removed to Hospital.
	At all Ages	At Ages—Years.							Town Hall.	Whitecross.	Bewsey.	Orford.	St. John's.	Fairfield.	Howley.	St. Austin's.	Latchford.	
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 45.	45 to 65.	65 and upwards.										
Smallpox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cholera (C) Plague (P)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diphtheria (including Membranous Croup)	127	1	39	69	18	..	..	..	9	22	13	14	9	25	11	15	9	118
Erysipelas	62	..	1	2	9	28	17	5	5	7	7	14	10	6	5	2	6	..
Scarlet Fever	1133	12	284	746	68	23	..	..	58	182	143	209	93	138	98	76	136	660
Typhus Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Enteric Fever	27	..	2	8	6	10	1	..	2	1	3	..	6	6	2	2	5	24
Relapsing Fever Continued Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Puerperal Fever	10	..	..	..	1	9	..	..	2	2	2	..	..	1	..	2	1	..
Cerebro-Spinal Meningitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ophthalmia Neonatorum	18	18	..	..	..	..	..	..	1	2	4	6	2	1	1	1	..	..
Pulmonary Tuberculosis	247	2	3	35	42	101	55	9	18	39	20	29	38	25	32	21	25	..
Other forms of Tuberculosis	128	6	26	55	25	12	3	1	9	20	13	17	19	17	15	5	13	..
Totals	1752	39	355	915	169	183	76	15	104	275	205	289	177	219	164	124	195	802

Isolation Hospital: Warrington Borough Hospital, Aikin Street (Whitecross Ward).
Warrington Corporation Sanatorium: Sankey, near Warrington.

TABLE III.—COUNTY BOROUGH OF WARRINGTON.

CAUSES OF, AND AGES AT, DEATH DURING YEAR 1914.

Causes of Death.	Nett Deaths at the Subjoined Ages of "Residents" whether occurring within or without the District.									Total Deaths whether of "Residents" or "Non-Residents" in Institutions in the District
	All Ages.	Under 1 year.	1 and under 2.	2 and under 5.	5 and under 15.	15 and under 25.	25 and under 45.	45 and under 65.	65 and upwards.	
All causes { Certified	1180	236	96	78	59	69	162	252	228	287
All causes { Uncertified	39	13	..	1	4	2	2	10	7	1
Enteric Fever	8	..	..	..	1	2	3	2	..	7
Small Pox	..	..	..	..	..	..	..	..	..	..
Measles	31	4	16	11	..	..	..	..	..	1
Scarlet Fever	24	..	3	7	13	1	..	..	..	18
Whooping Cough	26	11	6	7	2	..	..	..	..	2
Diphtheria and Croup	12	..	3	5	3	1	..	..	..	10
Influenza	17	..	..	1	1	1	2	6	6	..
Erysipelas	1	1	..	..	..	..	..	..	..	..
Phthisis (Pulmonary Tuberculosis)	129	6	4	..	9	29	47	29	5	42
Tuberculous Meningitis	13	2	2	7	1	1	..	..	..	1
Other Tuberculous Diseases	20	4	2	5	5	..	3	1	..	4
Cancer, Malignant Disease	59	..	..	..	..	..	9	34	16	13
Rheumatic Fever	1	..	..	..	..	..	1	..	..	..
Meningitis	21	11	4	4	2	..	..	..	..	..
Organic Heart Disease	34	..	..	..	3	2	8	14	7	1
Bronchitis	96	20	6	3	..	1	5	28	33	6
Pnuemonia (all forms)	103	22	19	17	4	3	13	18	7	13
Other Diseases of Respiratory organs	5	..	..	..	..	..	..	4	1	1
Diarrhœa and Enteritis	59	45	12	1	..	..	..	1	..	3
Appendicitis and Typhlitis	6	..	..	..	..	1	3	2	..	5
Cirrhosis of Liver	7	..	..	..	..	..	4	2	1	4
Alcoholism	2	..	..	..	..	..	..	1	1	1
Nephritis and Bright's Disease	25	..	..	..	1	1	8	12	3	7
Puerperal Fever	4	..	..	..	..	..	4	..	..	3
Other Accidents and diseases of Pregnancy and Parturition	6	..	..	..	..	2	4	..	..	..
Congenital Debility and Malformation, including Premature Birth	87	86	1	..	..	..	..	..	..	6
Violent Deaths, excluding Suicide	42	1	5	2	8	3	10	9	4	24
Suicides	11	..	..	..	..	3	6	2	..	2
Other Defined Diseases	334	23	13	7	10	18	33	86	144	113
Diseases ill-defined or unknown	36	13	..	2	..	2	1	11	7	1
Totals	1219	249	96	79	63	71	164	262	235	288

TABLE IV.—COUNTY BOROUGH OF WARRINGTON.

INFANTILE MORTALITY DURING THE YEAR 1914.

Deaths from stated causes in various Ages under One Year of Age.

CAUSES OF DEATH.	Under 1 Week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 1 Month.	1-3 Months.	3-6 Months.	6-9 Months.	9-12 Months.	Total Deaths under 1 Year.
All Causes:										
Certified	47	5	11	17	80	44	48	26	38	236
Uncertified	5	..	..	3	8	2	1	2	..	13
Smallpox	..	..	..	..	..	..	..	..	..	..
Chickenpox	..	..	..	..	..	..	..	..	..	..
Measles	..	..	..	..	..	..	1	1	2	4
Scarlet Fever	..	..	..	..	..	..	..	..	..	..
Whooping Cough	..	..	..	1	1	1	2	1	6	11
Diphtheria and Croup	..	..	..	..	..	..	..	..	..	..
Erysipelas	..	..	..	..	..	..	1	..	..	1
Tuberculous Meningitis	..	..	..	..	..	..	2	..	..	2
Abdominal Tuberculosis	..	..	..	..	..	..	..	..	1	1
Other Tuberculous Diseases	..	..	..	..	..	..	2	5	2	9
Meningitis (not Tuberculous)	1	..	..	..	1	2	3	3	2	11
Convulsions	2	..	1	2	5	4	2	..	..	11
Laryngitis	..	..	..	..	..	..	..	1	..	1
Bronchitis	..	..	..	2	2	8	5	5	..	20
Pneumonia (all forms)	1	..	..	2	3	2	4	8	5	22
Diarrhœa	..	..		1	1	6	12	1	15	35
Enteritis	..	..	1	..	1	2	4	1	2	10
Gastritis	..	..	..	..	..	..	1	1	..	2
Syphilis	..	..	..	1	1	1	..	..	..	2
Rickets	..	..	..	..	..	..	..	..	2	2
Suffocation, overlying	..	..	..	..	..	..	..	..	..	..
Injury at Birth	..	..	..	..	..	..	..	..	..	..
Atelectasis	..	1	..	..	1	..	..	..	..	1
Congenital Malformations	..	1	1	..	2	1	2	..	..	5
Premature Birth	32	2	2	6	42	3	1	..	..	46
Atrophy, Debility, Marasmus	15	..	4	1	20	12	2	1	..	35
Other Causes	1	1	2	4	8	4	5	..	1	18
	52	5	11	20	88	46	49	28	38	249

Births in the year	Legitimate	2,173
	Illegitimate	52
Deaths in the year	Legitimate Infants	236
	Illegitimate Infants	13

MEMORANDA AS TO CIRCUMSTANCES LIKELY TO INFLUENCE THE PUBLIC HEALTH OF WARRINGTON.

Situation.—On the northern and southern banks of River Mersey, about midway between Manchester and Liverpool: the southern municipal boundary, the Ship Canal, also constitutes the dividing line between Lancashire and Cheshire at this point. Also on the main road between the Midlands and parts of Lancashire (including coal and iron districts). It is consequently continually passed through by tramps and persons in search of employment. It is generally low lying and in a depression formed by valley of Mersey, most of town being to the north of that river. The parts of it nearest to the river, and almost the whole of the Latchford Ward on the south are on alluvial land (part of the old river bed). The site of the rest of the town, which rises towards the centre, is on a formation of the upper levels of the New Red Sandstone, covered to varying depths with a glacial deposit of boulder clay, and in two spots, one in Sankey Street and the other in Bewsey Street, there also exist gravel beds.

Streets and Buildings.—In the older and central portion, comprising chiefly Town Hall, Howley, and St. John's Wards (*vide* Ward Rates), are narrow streets and back courts and alleys containing insanitary dwellings, now gradually disappearing partly through street widening, partly through the work of the Health Committee. Shops and offices are largely supplanting residences in the middle of the town. Around this is an area of streets of small houses called into existence by the industrial development of last 50 years: 40 per cent. of the houses in the borough contain four rooms or less.

Suburbs can hardly be said to exist within the confines of the Borough, though in two directions, at any rate, south and east of the centre, the town acquires a more suburban character. Contiguous to these parts, but outside the borough, are two populous and growing districts, Stockton Heath, Latchford and Grappenhall to the south, in the Runcorn Rural District, and Padgate to the east, in the Warrington Rural District. Under the latter Sanitary Authority is also an increasing population just outside the western boundary at Sankey Bridges. A great number of the inhabitants of these districts have their employment within the borough, and many of the children come to school inside the town.

Communication by railway is particularly good, rendering easy access to neighbouring towns, and, indeed, to all parts of the country. Electric tramways have now been running 13 years, and there are already signs that they will lead to new suburban districts, though it remains to be seen how they will help us in the housing difficulty by reducing the overcrowding in the worst parts of the town.

Sex Distribution of Population.—At the census there were shewn to be 36,341 males, and 35,825 females, the excess of males being mainly owing to industrial conditions.

Occupations.—An almost entirely industrial community: the staple trades being the manufacture of iron in many various branches, and tanning, but a remarkable number of other businesses exist, *e.g.*, soap-making, velvet-cutting, glass-making, and file-cutting; there is only one cotton mill. The result of this variety of trades is an almost continuous prosperity; places where there is only one main means of livelihood are much more liable to periods of distress.

Disposal of Refuse and Drainage.—According to the latest return there are now

(1) Water Closets in	Dwelling-houses ...	1,238
	Schools	547
	Factories and Workshop	329
	Offices, Shops, &c. ...	272
	Picture Palaces	10
	Theatres	23
	Public Institutions ...	209
	Railway Stations ...	23
	Public Conveniences ...	24
	Total ...	2,675
(2) Pail Closets		15,000 approximately.

I am indebted to the courtesy of Mr. Andrew M. Ker, the Borough Surveyor, for the following account of the drainage of Warrington:

"In the year 1849 the then Robert Rawlinson (who afterwards received the title of Sir R. Rawlinson, C.B., and became Chief Engineering Inspector of the Local Government Board) was engaged by the Corporation of Warrington to report upon a scheme of drainage for the town.

"This report was adopted, and with certain modifications was carried out. It dealt with a town area of 1,744 acres and a then suburban area of 171 acres; the present acreage of Warrington is 3,115. The major portion is built upon, and has, according to the last census, a population of 72,166, and the whole of the population is provided with sewerage arrangements. There are very few water closets in the town, the excreta being dealt with on a dry conservancy system known as the pail system, but the sewers receive a large volume of water from the large manufacturing industries of the town. The main outfall sewers are of egg-shaped brick sewers varying from 4ft. by 3ft. and 3ft. 6in. by 2ft. 6in. to 3ft. by 2ft ; the secondary sewers are of circular stoneware pipes varying in size from 30in. to 9in. The whole is on the gravitating system excepting the Latchford, Padgate and Orford districts of the town, from which the sewage gravitates to Shone's Pneumatic Ejectors, and is lifted by them to the main outfall sewers. This has enabled the sewers in the three districts to be laid with gradients ensuring good velocities in the flow of the sewage. All the sewers gravitate to and empty into the tidal portion of the River Mersey and into Sankey Brook, its tributary. [The latter is already highly polluted with organic and chemical matter when it reaches the Borough Boundary, and it cannot be said that the contribution of Warrington to the contamination of this stream is other than trifling, compared with the vast volume of sewage poured into it before it gets to the town.—Note by Medical Officer.] There are seven outfalls into the River discharging in various parts of the town. The sewers are provided with storm overflows discharging also into the tidal portion of the River. Particular attention is paid to the flushing of the sewers to prevent any deposit that might occur in certain low-lying districts of the town."

Household Refuse is collected weekly from the bins with which each house is provided, and is dealt with in the destructors at the Central Depôt at Howley and at the Longford Depôt.

The Scavenging of the Streets, Passages and Common Courts and Yards is in some instances hindered by want of proper paving; there is, however, fair improvement to be recorded in the paving of Streets and Passages. Street refuse is still tipped on waste ground.

The following table, as supplied by the Borough Surveyor, shows the number of Streets and Passages still remaining unpaved in the Borough, together with the number that were dealt with during the year 1914. In this list are included all Unpaved Streets, and it must be borne in mind that many of them are only short extensions of existing streets, and some have footpaths but no carriageways.

(A.)—NUMBER OF STREETS AND PASSAGES UNPAVED AND PARTLY PAVED WITHIN THE BOROUGH, 1914.

WARD.	Streets.		Passages.	TOTAL.
	Unpaved.	Partly unpaved.	Unpaved.	
Town Hall	—	—	—	—
Whitecross	3	1	12	16
Bewsey	6	4	6	16
Orford	12	5	26	43
St. John's	1	—	6	7
Fairfield	13	3	39	55
Howley	4	4	11	19
St. Austin's	6	2	21	29
Latchford	21	10	61	92
Totals	66	29	182	277

NUMBER OF STREETS AND PASSAGES PAVED during the year 1914:—2 Streets and 28 Passages. Total length, 7 fur. 48 yds. Valued £3,619 16s. 2d.

Water Supply—

(1) For domestic purposes from deep wells in the red sandstone at Winwick and Delph.

(2) For trade purposes, from a reservoir at Appleton, on the south side of the town, fed by brooks bringing water from farm lands.

The Public Institutions for the reception of cases of illness are three in number.

(1) The Warrington Infirmary, containing since the recent extension accommodation for about 100 patients, is in the main a surgical hospital, especially for accidents. It has a large out-patient department and a medical officer attends at their homes the great majority of the sick persons in the town who are not able to afford to pay a private attendant, and are not in clubs or in receipt of parish relief.

(2) The Workhouse Hospital, containing 194 beds, is of recent construction, and designed on model lines.

(3) The Borough Isolation Hospital, in Aikin Street, provides the requisite accommodation for 88 patients. No charge has been made to patients for many years. The diseases which are treated here are Scarlet Fever, Enteric Fever, and Diphtheria. Cases are admitted into Aikin Street Hospital from the Newton Urban District and the Warrington Rural District, when circumstances permit; it is also a Hospital for the Port Sanitary Authority of Manchester, on which Warrington is represented, and in such capacity takes in patients landed from the Ship Canal within the limits of the Borough.

A Sanatorium of 22 beds at Sankey is at present being used for the treatment of Pulmonary Tuberculosis, both insured and non-insured, occurring in the Borough.

As auxiliary to the above ought to be mentioned the Warrington District Nursing Association, which has six nurses who carry on an invaluable work among the sick poor.

Schools.—With regard to the Public Elementary Schools see Report on School Hygiene.

The only provision for higher education is that afforded at the ancient Boteler Grammar School, and the Technical School.

There are also a few private schools carried on in ordinary dwelling houses.

TUBERCULOSIS.

PULMONARY TUBERCULOSIS.—Cases of this disease are visited at their homes with a view to controlling the spread of the infection, the whole of the time of one inspector being occupied in this work. The following is the routine employed, unless special instructions are received from the doctor in charge of the case. The number of visits, etc., will be found on page 48.

On receipt of a primary notification the home of the patient is visited and inquiries are made as to

the occupation of patient;
history since first symptom of the disease;
sleeping accommodation of the patient;
previous cases in family or house;
number of occupants;
their ages, occupations, and if attending school or not.

The house is inspected as to cleanliness, and sanitary defects are dealt with as soon as possible.

INSTRUCTION.—The patient is advised to have a bedroom for his own use. If this is impracticable owing to the number of occupants in the house, he is urged at least to have a bed to himself.

(In several cases where the family have been in poor circumstances beds have been provided by the Guild of Help. The Health Authority have made arrangements for storing this bedding when not in use.)

The infectiousness of the sputum is explained to the patient and those in charge of the patient, and they are advised to be careful with it. Sputum cups, flasks, and disinfectant are supplied free from the Health Department. If a patient objects to using a cup he is instructed to use rags or paper for the reception of the sputum, and afterwards to destroy it by burning it in the fire.

The advantages of sunlight and fresh air are explained, and the patient advised to sleep with the bedroom windows open top and bottom.

The use of damp dusters to avoid raising dust is also advised.

The patients are assisted in making application for Sanatorium benefit under the Insurance Act, and when in poor circumstances advised to apply for assistance from charitable organizations and the poor-law.

Where the patient is poor and the home conditions bad, or if he is living in a common lodging-house, he is persuaded to go to the Union Hospital.

CONTACTS WITH PULMONARY TUBERCULOSIS.—Whilst making inquiries and re-visiting cases the other people living in the house are noted, and if any of them have coughs or are in delicate health they are advised to consult their doctor, or to attend the Health Office for examination.

Several cases which have taken this advice have been notified as suffering from the disease.

This work will be considerably facilitated when the new Tuberculosis Dispensary is opened.

A register of school children who have been in contact with cases of pulmonary tuberculosis has been introduced, and these children are inspected regularly by the School Medical Officer, any suspicious case then being referred for a further examination.

The number of persons living in direct contact with cases of pulmonary tuberculosis are given in table on page 43.

COMMON LODGING-HOUSE CASES.—A large number of the Poor Law cases which are notified inhabit common Lodging-houses. These cases are usually removed to the Union Hospital, but as soon as they make a little improvement they obtain their discharge and return to those houses where they must be a source of danger to their fellow lodgers, until they are unable to work and have again to be removed to the hospital.

The keepers of common Lodging-houses will not take in a person whom they know to be suffering from consumption, because of the annoyance of having the necessary disinfection carried out, with the result that these cases travel from one Lodging-house to another.

Often they attend the Health Office to try if arrangements can be made with some of the keepers to take them in. If they are ill and unfit for work they are invariably persuaded to return to the hospital.

Re-visits.—If the homes are clean and the patients have a bedroom for their own use, a visit is paid once every three months.

If the home conditions are unsatisfactory, more frequent visits are paid.

The object of these visits is to enquire if the instructions previously given are carried out, to report the patient's progress, and to enquire about the health of the persons living in the same house.

Disinfection and Cleansing.—When a death occurs, the clothing and bedding used by the patient are removed and disinfected in the steam disinfector, whilst the house is sprayed with formalin. The walls of the rooms occupied by the patient are stripped of all paper and cleansed. If the walls and ceiling of the remaining part of the house are soiled, notice is served for the whole house to be stripped and cleansed.

259 houses have been disinfected, and portions of 91 houses stripped and cleansed as precautionary measures in preventing the spread of this disease.

Disinfection of the house and bedding also takes place when a patient is admitted to the Union Hospital or to the Sanatorium, or moves to another address.

FACILITIES FOR EXAMINATION OF SPUTUM, etc.—The Corporation have provided their own Bacteriological Laboratory and from this outfits are supplied without any charge whatever to the Medical Practitioners in the town to enable them to submit specimens of sputum in doubtful cases. These specimens can be sent to the laboratory and examined free in order to facilitate the diagnosis of pulmonary tuberculosis.

274 such specimens were examined during the year, compared with 70 in 1912, and it is gratifying to see that more use is now made of the facilities afforded.

OTHER TUBERCULAR DISEASES.—Enquiries are made similarly to those for pulmonary tuberculosis. The patients are advised to have a bed for their own use. That the wounds (if any) should be kept covered, and if there is any discharge from the wounds, to destroy the dressings by burning. In the majority of cases where there is discharge the wounds are dressed daily either at the Infirmary or by the District Nurses.

During 1914 the following notifications of cases of tuberculosis were received :—

PULMONARY TUBERCULOSIS.

Primary Notifications.—	Form A by Private Practitioners ...	162
	Form A by Poor Law Doctors	56
	Form A by Hospitals and Sanatoria	15
	Form B School Medical Officer ...	14
	Total ...	247
	Duplicate Notifications ...	43

NON-PULMONARY TUBERCULOSIS.

Primary Notifications.—Form A by Private Practitioners ...	52
Form A by Poor Law Doctors	24
Form A by Hospitals.....	50
Form B School Medical Officer.....	2
Total ...	128
Duplicate Notifications ...	22

These were divided up as follows :—

PULMONARY TUBERCULOSIS.

	Males.	Females.	Total.
Insured (Adults.)	114	25	139
Non-Insured (Adults.)	33	43	76
School Children	12	17	29
Children under school age ...	2	1	3

NON-PULMONARY TUBERCULOSIS.

	Males.	Females.	Total.
Insured (Adults.)	22	5	27
Non-Insured (Adults.)	4	7	11
School Children	25	33	58
Children under school age	19	13	32

The incidence of the Disease in the different wards of the town is shown on page 42. This incidence has been worked out per 1,000 of the population in the particular ward, and comparison is made with the year 1913.

From this it is evident that Howley Ward has the greatest incidence. Mention must, however, be made of the fact that there are in this ward more Common Lodging Houses (14) than in any other ward in the town. The actual number of cases notified from these lodging houses during the year 1914 was 12.

The incidence of pulmonary tuberculosis amongst members of different trades and occupations in the Borough have been worked out on the total number of persons employed in these separate callings as obtained from the census figures of 1911.

Although these cannot be considered as the actual incidence of the disease, they are comparative for the three years 1912, 1913 and 1914, and are extremely interesting.

Much valuable work can be done in enquiring into all the conditions of labour set forth, but it is impossible to attempt this branch of our work until our staff is increased according to our complete tuberculosis scheme which was submitted to you in 1913.

The ages of the persons affected and the form of disease is shown as follows :—

	At all ages.	Under 1	1 to 5	5 to 15	15 to 25	25 to 45	45 to 65	65 upwards.
Pulmonary Tuberculosis.								
Males	161	1	1	15	25	61	53	5
Females	86	...	1	19	17	38	7	4
Other Forms.								
Males	70	3	16	28	10	9	3	1
Females	58	4	9	34	8	2	1	...
Total ...	375							

In the notified cases of the non-pulmonary forms of the disease the parts of the body attacked are shown below :—

Affected Parts.	ADULTS.			CHILDREN.		
	Insured.	Non-Insured.	Total.	School Age.	Under School Age.	Total.
Glands	5	2	7	29	15	44
Pleura	2	—	2	—	—	—
Skin	3	3	6	4	2	6
Larynx	3	—	3	—	—	—
Abscesses	2	1	3	1	1	2
Intestines	—	—	—	2	5	7
Peritoneum	1	—	1	5	3	8
Brain	—	3	3	2	2	4
Knee	2	—	2	3	—	3
Hip Joint	1	—	1	4	—	4
Spine	1	—	1	3	—	3
Femur	1	—	1	1	—	1
Phalanges	—	1	1	—	1	1
Ankle	1	—	1	1	—	1
Ribs and Metacarpus ...	3	1	4	1	—	1
Carpus	2	—	2	1	—	1
Shoulder	—	—	—	—	1	1
Abdominal Glands ...	—	—	—	1	2	3
Total	27	11	38	58	32	90

TABLE SHOWING NUMBER OF CASES OF PULMONARY TUBERCULOSIS NOTIFIED IN THE VARIOUS WARDS OF THE BOROUGH DURING THE YEARS 1913 AND 1914.

WARDS.	Male Population Census 1911.	Female Population Census 1911.	YEAR, 1913.					YEAR, 1914.				
			MALES.		FEMALES.		Total Rate both Male and Female.	MALES.		FEMALES.		Total Rate both Male and Female.
			No. of Cases.	Rate per 1,000.	No. of Cases.	Rate per 1,000.		No. of Cases.	Rate per 1,000.	No. of Cases.	Rate per 1,000.	
TOWN HALL	2,326	2,330	8	3·43	6	2·57	3·00	11	4·72	7	3·00	3·86
WHITECROSS	5,124	4,879	20	3·90	14	2·86	3·39	21	4·09	18	3·68	3·88
BEWSEY	2,739	2,511	10	3·65	9	3·58	3·42	12	4·38	8	3·18	3·78
ORFORD	5,025	4,720	18	3·57	13	2·73	3·18	17	3·38	12	2·54	2·96
ST. JOHN'S	5,330	5,283	23	4·31	6	1·13	2·70	28	5·25	10	1·89	3·57
FAIRFIELD	4,259	4,709	9	2·11	8	1·69	1·89	16	3·75	9	1·89	2·82
HOWLEY	3,436	3,246	20	5·82	10	3·08	4·48	21	6·11	11	3·38	4·74
ST. AUSTIN'S	3,110	3,123	9	2·89	9	2·88	2·88	16	5·14	5	1·59	3·36
LATCHFORD	4,992	5,024	6	1·20	7	1·39	1·29	19	3·80	6	1·19	2·49
TOTALS	36,341	35,825	123	3·38	82	2·28	2·83	161	4·51	86	2·48	3·49

In the following Table will be found the number of cases of pulmonary tuberculosis which were living in the Borough on the 31st December, 1914, and also the year of notification of the same. In addition the number of known contacts with these cases is given. The approximate number of insured persons in Warrington at this time was 27,600.

ADULTS.						CHILDREN.						CONTACTS.			
Year notified.	Insured.		Non-insured.		Total Adults.	School age.		Under School age.		Total children.	Total living.	School children.	Under School age.	Adults.	Total contacts.
	Males	Females	Males	Females		Males	Females	Males	Females						
1906	2	1	..	1	4	..	..	..	..	..	4	284	109	594	987
1907	2	..	1	..	3	1	..	..	..	1	4				
1908	3	..	..	3	6	1	..	..	..	1	7				
1909	6	2	..	5	13	..	..	..	..	..	13				
1910	6	1	..	8	15	..	..	..	..	..	15				
1911	10	3	6	9	28	3	..	..	..	3	31				
1912	20	4	6	15	45	3	8	..	..	11	56				
1913	28	3	3	15	49	9	15	1	..	25	74				
1914	59	15	16	21	111	10	10	3	1	24	135	163	84	375	622
TOTALS	136	29	32	77	274	27	33	4	1	65	339	447	193	969	1,609

TABLE SHOWING OCCUPATIONAL INCIDENCE OF CASES OF PULMONARY TUBERCULOSIS

NOTIFIED IN THE BOROUGH DURING THE YEARS 1912, 1913, 1914, WITH RATE PER 1,000 WORKERS CALCULATED ON THE 1911 CENSUS RETURN.

MALES.

Occupations.	No. of Workers, Census Return 1911.	1912.		1913.		1914.		Average Rate for the 3 years.
		No. of Cases.	Rate per 1,000.	No. of Cases.	Rate per 1,000.	No. of Cases	Rate per 1,000.	
Iron and Steel Manufactures.								
Iron Puddlers	2263	3	1·32	5	2·20	...	3·09	2·20
Iron Rollers		...		...		3		
Forge Labourers ...	2478	15	7·26	20	8·07	26	10·47	8·58
Forge Warehousemen ...		1		...		...		
Oilers and Greasers ...		2		...		...		
Fitters	543	2	3·68	5	9·20	2	9·20	7·36
Iron Turners		...		...		3		
Blacksmith Strikers ...	272	1	3·67	2	7·31	1	3·67	4·88
Foundry Labourers ...	542	3	5·53	5	9·22	...	...	4·91
Wireworkers, &c.								
Wiredrawers	3354	1	3·25	...	3·87	4	3·28	3·46
Wireworks Labourers ...		4		2		5		
Wireworkers		3		8		1		
Galvanizers		2		3		1		
Wire Nail Makers ...		1		...		...		
Tool Makers, &c.								
Tool Makers	4922	...	0·40	1	0·60	1	0·81	0·60
Filecutters		1		1		2		
Iron Pipe-Fitting Makers		1		1		1		
Gas Stove Makers, &c.								
Enamellers	542	1	5·53	...	5·53	1	5·53	5·53
Iron Grid Makers ...		2		...		...		
Moulders		...		3		2		
Iron Grinders	946	...	1·06	1	4·22	...	4·22	3·16
Gas Stove Makers ...		1		3		2		
Gas Stove Painters ...		...		...		1		
Electric Platers		...		...		1		
Building Trades.								
Bricklayers	366	2	8·19	1	5·46	...	5·46	6·37
Builders' Labourers ...		1		1		2		
Clerk of Works	407	...	2·45	...	2·45	1	12·28	5·72
Joiners		1		1		4		
Wood Carvers	140	...	...	...	...	1	7·14	2·38
House Painters	299	2	6·68	1	3·35	2	6·68	5·57
Stone Masons	18	...	...	...	55·55	1	55·55	36·70
Stone Sculptors ...		...		1		...		
Waterworks Labourers...	195	1	5·12	...	...	1	5·12	3·41
Plumbers' Labourers ...	131	...	...	...	...	1	7·63	2·54
Printers, &c.								
Printers	189	...	...	...	10·56	1	5·28	5·28
Printers' Labourers ...		...		1		...		
Engravers		...		1		...		
Bookbinders	24	1	41·66	1	41·66	...	...	27·77
Newsagents	61	...	...	...	...	1	16·39	5·46

TABLE SHOWING OCCUPATIONAL INCIDENCE OF CASES OF PULMONARY TUBERCULOSIS—MALES—*cont.*

OCCUPATIONS.	No. of Workers, Census Return 1911.	1912.		1913.		1914.		Average Rate for the 3 years.
		No. of Cases.	Rate per 1,000.	No. of Cases.	Rate per 1,000.	No. of Cases.	Rate per 1,000.	
SOAPWORKS WORKERS.								
Soap Boilers	813	1	1·22	...	...	...	...	0·61
Soapworks Labourers ...	638	2	3·12	...	...	1	1·56	1·59
Cement Works Labourers	133	1	7·51	...	...	...	...	2·50
Brewery Labourers ...	341	1	2·93	4	11·73	2	5·86	6·84
Music Teachers	123	...	...	...	...	1	8·13	2·71
LEATHER AND SKIN WORKERS.								
Tannery Labourers ...	771	2	2·59	...	...	...	...	0·86
Tanners	748	3	4·01	...	...	...	...	1·33
Saddlers	16	...	...	...	...	2	125·00	41·66
Shoe Repairers	160	1	6·25	...	...	1	6·25	4·16
Cabinetmakers	120	1	8·33	...	8·33	...	...	5·55
Upholsterers		...		1		...		
Cab Drivers	41	...	...	...	...	2	48·78	16·29
Grooms	50	...	...	1	20 00	1	20·00	13·33
Taxi-cab Drivers	19	1	5·26	...	...	...	...	1·75
Carters	653	...	1·53	2	3·06	3	7·65	4·08
Van Drivers		1		...		2		
Railway Shunters... ...	970	1	2·06	...	1·03	1	5·15	2·74
Railway Signalmen ...		...		...		1		
Railway Brakesmen ...		...		...		2		
Railway Goods Porters ...		...		..		1		
Locomotive Firemen ...		1		...		...		
Railway Signal Fitters ...		...		1		...		
Solicitors	8	...	...	1	125·00	...	...	41·66
Clerks	661	4	6·41	2	3 02	5	7·56	5·66
Seedsmen	56	...	...	1	17·84	...	...	5·94
Tailors	101	...	...	1	99·00	1	99·00	66·00
Shop Assistants	250	2	7 99	1	3 99	2	7·99	6·65
Greengrocers	150	...	13·33	...	6·66	1	22·66	15·55
Hawkers		2		1		3		
Fishmongers	*216	...	...	...	...	2	9·26	3·08
Butchers	186	...	...	1	5·37	...	...	1·79
Hamper Makers	350	1	2·88	...	...	4	11·42	4·76
Brush Makers	31	1	32·25	1	32·25	...	...	21·50
Paviors	58	...	17·24	...	...	1	17·24	11·49
Paviors' Labourers ...		1		...		...		
Chemical Works Labourers	248	1	4·03	1	4·03	...	...	2·68
Coal Heavers	...	...	...	1	...	1	...	...
Wharf, &c., Labourers ...	83	...	...	...	...	3	35·14	‡11·71
Window Cleaners	†	...	...	...	...	2	...	...
Chimney Sweeps	...	1	...	1	...	...	...	...
Gardeners	56	1	17·58	...	...	...	...	5·86
Hairdressers	81	...	...	...	...	1	12·34	4·11
Ex-Policemen	102	1	9·80	...	...	...	...	3 26
Ex-Soldiers	433	4	11·54	...	...	...	...	...
Army Bandsmen		1		...	...	...	...	3·84
Drapery Travellers ...	73	1	13·69	...	...	...	...	4·56
Kinematograph Operators	‡168	1	5·95	...	...	...	...	1·98
Seamen	101	1	9·90	1	9·90	...	...	6·60
Tram Conductors	195	...	...	1	5·12	...	5·12	3·42
Gas Inspectors		...		...		1		

* These figures are for "Other dealers in food," no definite figures being given for Fishmongers.

† Numbers not specified in Census Return.

‡ Figures for Electricians.

TABLE SHOWING OCCUPATIONAL INCIDENCE OF CASES OF PULMONARY TUBERCULOSIS—MALES—*cont.*

OCCUPATIONS.	No of Workers, Census Return 1911.	1912.		1913.		1914.		Average Rate for the 3 years.
		No. of Cases.	Rate per 1,000.	No. of Cases.	Rate per 1,000.	No. of Cases.	Rate per 1,000.	
Commercial Travellers ...	*..	...	...	1	...	...	...	...
Medicine Dispensers ...	26	...	...	...	...	1	38·46	12·82
Corporation Scavengers ...	58	...	...	...	...	2	34·48	11·49
Farm Labourers	111	1	9·00	2	18·01	1	9·00	12·00
General Labourers ...	*...	2	...	6	...	5	...	...
Casual Labourers	*...	3	...	4	...	4	...	...
School Children	6828	3	0·42	10	1·46	13	1·90	1·26
Under School Age... ...	*...	2	...	5	...	1	...	...
Trades Unknown	...	...	...	...	...	5	...	...
Cases which have been in Workhouse some years	...	3	...	4	...	7	...	...
TOTALS ...	...	105	...	123	...	161	...	...
FEMALES.								
Household	†11775	82	2·71	30	2·54	42	3·56	2·93
Domestic Servants ...	1144	6	5·24	3	2·62	5	4·37	4·27
Charwomen	196	2	10·20	1	5·10	...	...	5·10
Tannery Skin Workers ...	13	...	...	1	7·68	...	...	2·56
Marine Store Workers ...	19	...	...	2	105·26	2	105·26	70·16
Velvet Cutters	641	8	12·48	2	3·11	3	4·68	6·75
Cotton Weavers	896	6	6·69	5	5·58	5	5·58	5·95
Cotton Spinners	244	...	...	1	4·08	...	...	1·96
Wire Weavers	252	2	7·93	1	3·96	...	...	3·96
Dressmakers	575	...	...	1	1·73	...	...	0·57
Milliners	113	...	...	1	8·85	...	...	2·95
Pinafore Machinists ...	111	2	18·01	...	...	...	...	6·00
Bookbinders	31	...	...	...	...	3	96·77	32·25
Rubber Workers	*...	1	...	...	...	...	...	...
Soap Workers	276	...	...	1	3·62	...	...	1·20
Nurses	85	1	11·76	...	...	...	...	3·92
Hawkers	55	1	18·11	...	...	...	.	6·03
Paper Embossers	204	...	...	...	...	2	9·80	3·26
Beer Bottlers	36	...	...	...	...	1	27·77	9·26
Shop Assistants	177	1	5·64	1	5·64	1	5·64	5·64
Typists	145	...	...	...	...	2	13·79	4·59
Gas Stove Fuel Makers ...	22	...	...	...	...	1	45·45	15·15
Baby Carriage Painters ...	*...	...	...	1	...	...	...	...
Trades Unknown	*...	...	...	1	...	4	...	...
Cases in Workhouse for some time	*...	2	...	7	...	2	...	...
School Children	6978	19	2·72	21	3·00	12	1·71	2·47
Under School Age ...	*...	4	...	2	...	1	...	...
TOTALS ...	...	87	...	82	...	86	...	...

* Figures not given for these trades in Census Returns.

† These figures are arrived at by deducting the number of known scholars from table in Census Return—"others including scholars and students."

DEATHS FROM TUBERCULOSIS DURING 1914.

PULMONARY.

Number of notified cases which were certified on the death return as having died from pulmonary tuberculosis	118
Number of deaths which were not notified	11
Total deaths	129
Number of notified cases of pulmonary tuberculosis which have died, but were certified on the death return as having died from other causes	8

NON-PULMONARY.

Number of notified cases which were certified on the death return as having died from non-pulmonary tuberculosis	22
Number of deaths which were not notified	11
Total deaths	33
Number of notified cases of non-pulmonary tuberculosis which have died, but were certified on the death return as having died from other causes ...	2

Although the Dispensary for the examination of tuberculosis cases has not yet been opened, a large amount of the work has been carried on in the premises of the Health Department during the year, as is evidenced from the following figures. In addition, 29 patients have been visited in their own homes by the Medical Officer of Health.

NOTIFIED CASES OF PULMONARY TUBERCULOSIS which have attended at the Health Office for examination during the year 1914 :—

	Males.	Females.	Totals.	No. of Examinations
Insured cases	82	25	107	140
Non-insured cases ...	15	24	39	64
School children ...	16	27	43	125
Totals ...	113	76	189	329

NUMBER OF SCHOOL CHILDREN SUFFERING FROM TUBERCULOSIS who have attended the Health Office and been examined by the Assistant Medical Officer of Health during the year 1914 :—

	Number of Cases.	Number of Examinations.
Pulmonary Tuberculosis ...	12	77
Ditto (doubtful)	9	75
Glands	10	61
Knee joints	1	2
Spine	1	3
Skin	3	4
Foot	2	5
	38	227

SUMMARY.

Cases attended Health Office	236
Cases examined at their own homes ...	29
Total	265

No. of Examinations.
556

As part of our scheme for treating and preventing the spread of this disease in the Borough, we have Institutional treatment which is carried out at our Sanatorium at Sankey. The details of the work in this Institution are given on pages 61 to 66.

The following is a summary of the work carried out by the Tuberculosis Inspector :—

PULMONARY TUBERCULOSIS.

Number of visits paid to the homes of patients after receipt of primary notifications, for the purpose of making the necessary enquiries and giving instructions, &c.	238
Number of re-visits paid to the homes of patients for the purpose of ascertaining if instructions previously given are carried out; the condition of the homes, and progress of patient, &c. ...	1150
Number of visits for the purpose of arranging for patient's admission to the Sanatorium	120
Carried forward	1508

Brought forward	1580
Number of visits to arrange for disinfection and cleaning of the homes after death, removals to institutions, or when patients have changed their address	131
Number of visits to ascertain if the walls of the rooms occupied by patients have been stripped and cleaned in accordance with the notice served ...	155
Number of visits paid to the homes of insured persons who make application for Sanatorium benefit, for the purpose of assisting in making application and arranging for their examination by the Medical Officer of Health	115
Total visits to Pulmonary cases ...	1909

NON-PULMONARY TUBERCULOSIS.

Number of visits paid to the homes of patients after receipt of primary notifications	121
Number of re-visits paid for the purpose of ascertaining the patient's progress and home conditions ...	389
Total visits to Non-Pulmonary cases ...	510

SECTION II.

INFECTIOUS DISEASES.

Measles, Whooping Cough and Scarlet Fever were prevalent during the whole year.

The following are the numbers of cases notified and deaths recorded from the various notifiable infectious diseases:—

Disease	Cases notified in 1914.	Deaths registered in 1914.
Smallpox	—	—
Scarlet Fever	1133	24
Diphtheria and Membranous Croup	127	12
Enteric or Typhoid Fever	27	8
Puerperal Fever	10	4
Cholera	—	—
Erysipelas	62	1
Plague	—	—
Phthisis	247	129
Other forms of Tuberculosis	128	33
Cerebro-Spinal Meningitis	—	—
Poliomyelitis	—	—
Ophthalmia Neonatorum	18	—
	1752	211

Measures of disinfection have been carried out not only in all cases of notifiable diseases, but also in several instances of Measles. The premises, bedding, &c., are also disinfected after deaths from Phthisis and Puerperal Fever.

The following cases of non-notifiable infectious diseases have come to our notice and been dealt with during the year:—

Measles	628
Whooping Cough	283
Chickenpox	283
Mumps	182
	1376

The number of visits to homes with reference to these cases are given on page 84 and the mortality rates on page 21.

It is to be remembered that these do not represent by any means the total number of cases of these four infectious diseases which have occurred in the Borough, but only those of which we have become aware.

A comparison is here given of the number of notifications of the various notifiable diseases in England and Wales as a whole and in the different County Boroughs of Lancashire.

NOTIFICATION OF INFECTIOUS DISEASE AND ATTACK.

Rates per 1,000 of the population for 1913, in England and Wales and in the County Boroughs in the County of Lancaster.

	Estimated Population in the middle of 1912.	Smallpox.		Scarlet Fever.		Diphtheria.		Enteric Fever.		Puerperal Fever.		Erysipelas.	
		Cases.	Rate.	Cases.	Rate.	Cases.	Rate.	Cases.	Rate.	Cases.	Rate.	Cases.	Rate.
England and Wales ...	—	90	0·00	130626	3·57	50850	1·39	8117	0·22	1989	0·05	23114	0·63
Barrow-in-Furness ...	64589	—	—	232	3·59	175	2·71	3	0·05	4	0·06	69	1·07
Blackburn	133560	—	—	268	2·01	80	0·60	31	0·23	8	0·06	91	0·68
Blackpool	59831	—	—	104	1·74	45	0·75	16	0·27	6	0·10	24	0·40
Bolton	182524	—	—	209	1·15	124	0·68	56	0·31	4	0·02	71	0 39
Bootle	71153	—	—	151	2·12	39	0·55	12	0·17	3	0·04	37	0·52
Burnley	108012	—	—	206	1·91	178	1·65	20	0·19	6	0·06	175	1·62
Bury	59106	—	—	299	5 06	68	1·15	8	0·14	6	0·10	28	0·47
Liverpool	752021	3	0·00	2228	2 96	1030	1·37	122	0·16	52	0·07	767	1·02
Manchester	723531	1	0·00	3901	5 39	732	1·01	327	0·45	134	0·19	437	0·60
Oldham	148839	8	0·05	938	6 30	93	0·62	14	0·09	11	0·07	121	0 81
Preston	117631	—	—	777	6·61	280	2·38	47	0·40	7	0 06	108	0·92
Rochdale	92529	—	—	576	6 23	62	0·67	14	0·15	7	0·08	68	0·73
St. Helens	98159	—	—	736	7·50	161	1·64	26	0 26	5	0·05	76	0·77
Salford	232734	4	0·02	1235	5·31	335	1·44	112	0·48	17	0 07	203	0·87
Southport	70444	—	—	89	1·26	40	0·57	4	0·06	2	0·03	35	0·50
Warrington	**73215**	—	—	**240**	**3·28**	**108**	**1·48**	**29**	**0·40**	**7**	**0·10**	**54**	**0·74**
Wigan	90042	—	—	73	0·81	34	0·38	97	1·08	6	0·07	57	0·63

SMALLPOX.—There have been no cases of this disease in the Borough since 1906. When the vaccination returns for the past 10 years are examined, however, there is cause for alarm in the ever-increasing non-vaccinated population which is growing up amongst us.

Warrington being situated on the main road between Manchester and Liverpool and on the main road north is a centre through which tramps are continually passing. We have to use special precautions with this class of the community, who are the chief inhabitants of the common lodging-houses in the Borough, as they are always likely to introduce infectious disease, including Smallpox. A large number of visits as shown on p. 86 are paid by the Inspectors. Under the bye-laws the Common Lodging-house Keepers are compelled to notify every suspicious case of illness occurring on their premises, and this has been willingly carried out by them.

VACCINATION RETURNS FOR THE COUNTY BOROUGH OF WARRINGTON.

	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Births	2268	2230	2260	2373	2336	2258	2226	2041	2111	2166	2238
Successfully vaccinated ..	2007	2040	2003	2117	2015	1890	1754	1470	1313	1287	1421
Insusceptible of vaccination	10	15	13	5	9	3	3	10	3	—	2
Died unvaccinated	221	212	214	201	196	165	177	192	115	156	168
Exemptions	**11**	**3**	**13**	**38**	**99**	**169**	**210**	**253**	**251**	**347**	**407**
Removed: Address unknown	19	5	7	12	17	13	50	73	35	50	5
Had Small-pox	—	—	—	—	—	—	—	—	—	—	—
Children born in other districts but vaccinated here	47	41	40	8	17	—	—	16	9	11	

Total number of Exemptions for the year 1914—**407.**

In the month of August, 1907, an amendment of the Vaccination Act, 1898, was passed allowing a Statutory declaration as to conscientious objection to be substituted for the certificate of justices. The immediate results of this altered legislation are to be seen by referring to the increased number of exemptions during the last 7 years. The future effects will doubtless be a severe epidemic of Smallpox.

SCARLET FEVER.—1,133 cases of Scarlet Fever have been notified during the year, 24 of which terminated fatally.

The mortality from the disease (·32 in 1914) has been slight and so mild have some of the attacks been that the rash has been overlooked and the first indication that the child was suffering from Scarlet Fever has been the peeling of the child's skin. Such cases as these are in great measure the cause of the continuation of the disease, for, however strict may be the isolation of pronounced cases, it will avail little in stamping out the disease so long as undetected mild cases are mixing with the general public, and in some instances attending school. An effort has been made to meet the difficulty by examining all children who have been absent from school on account of sore throat before allowing their return, and by this means several cases have been detected.

SCARLET FEVER.

AVERAGES FOR FIVE-YEAR PERIODS SINCE NOTIFICATION AND ISOLATION BEGAN, AND RATES FOR YEARS 1911, 1912, 1913 AND 1914.

	1881-85.	1886-90.	1891-95.	1896-1900.	1901-5.	1906-10.	1911.	1912.	1913.	1914.
Cases	168	126	306	179	364	243	111	144	240	1133
Deaths	20·6	25·2	36	11·4	15	11	4	10	7	24
Case Mortality %	15·6	7·6	11·3	6·8	3·2	4·1	3·6	6·9	2·9	2·1
Cases per 1,000 living	4·0	4·7	5·6	2·9	5·4	3·3	1·5	1·9	3·2	15·1
Deaths per 1,000 living	·5	·5	·6	·2	·2	14	·05	·13	·09	·32
Percentage Isolated	70	81	78	79	87	73	77	81	96	58

SCARLET FEVER IN WARRINGTON DURING 53 YEARS.

Year.	Population.	Cases of Scarlet Fever.	Deaths from Scarlet Fever.	Case Mortality per cent.	Cases per 1000 living.	Deaths per 1000 living.	Percentage Isolated in Hospital.
1862	26,726	—	—	—	—	—	—
1863	27,345	—	383	—	—	13·1	—
1864	27,964	—	45	—	—	1·6	—
1865	28,583	—	3	—	—	·1	—
1866	29,202	—	15	—	—	·5	—
1867	29,821	—	11	—	—	·3	—
1868	30,440	—	12	—	—	·3	—
1869	31,059	—	109	—	—	3·1	—
1870	31,678	—	20	—	—	·6	—
1871	32,297	—	12	—	—	·3	—
1872	33,227	—	9	—	—	·2	—
1873	34,157	—	34	—	—	·9	—
1874	35,087	—	25	—	—	·7	—
1875	36,017	—	53	—	—	1·4	—
1876	36,947	—	16	—	—	·4	—
1877	37,877	—	45	—	—	1·1	—
1878	38,807	—	104	—	—	2·8	—
1879	39,737	—	40	—	—	1·1	—
1880	40,667	65	12	8·4	1·3	·3	—
1881	41,632	362	22	6·0	8 7	·6	88
1882	42,600	306	50	16·3	7·2	1·2	66
1883	43,814	127	27	20·8	2·9	·5	72
1884	44,482	27	4	14·8	·7	·1	77
1885	45,408	20	—	—	·4	—	50
1886	46,343	10	—	—	·2	—	80
1887	47,264	74	1	1·3	1·6	·02	79
1888	47,464	660	77	11·8	13·9	1·6	79
1889	49,000	256	32	12·5	5·2	·7	84
1890	51,000	131	16	12·2	2·6	·3	83
1891	52,986	70	9	12·8	1·3	·2	71
1892	53,809	510	66	12	9·5	1·2	76
1893	54,661	364	43	12	6·7	·8	79
1894	55,504	354	45	12·7	6·4	·8	82
1895	56,366	235	17	7·2	4·2	·3	85
1896	57,219	114	10	6·9	2·0	·1	92
1897	60,877	47	3	6·2	·8	·04	80
1898	61,465	107	11	8·4	1·7	·1	80
1899	62,761	513	29	5·7	8·2	·5	64
1900	63,560	115	8	6·9	1·8	·1	80
1901	64,465	80	1	1·3	1·2	·001	88
1902	65,842	211	9	4·3	3·2	·1	91
1903	67,153	289	8	1·4	4·3	·1	95
1904	68,490	1,042	52	5·0	15·5	·7	87
1905	69,153	201	9	4·0	2·9	·1	77
1906	70,364	64	2	3·1	0·9	·02	78
1907	71,849	311	12	3·7	4·3	·16	77
1908	72,562	321	16	4·9	4·4	·22	72
1909	73,008	381	21	5·5	5 2	·28	56
1910	73,580	140	5	3·5	1·9	·06	82
1911	72,375	111	4	3·6	1·5	·05	77
1912	73,158	144	10	6·9	1·9	·13	81
1913	74,065	240	7	2·9	3·2	·09	96
1914	74,909	1133	24	2·1	15·1	·32	61

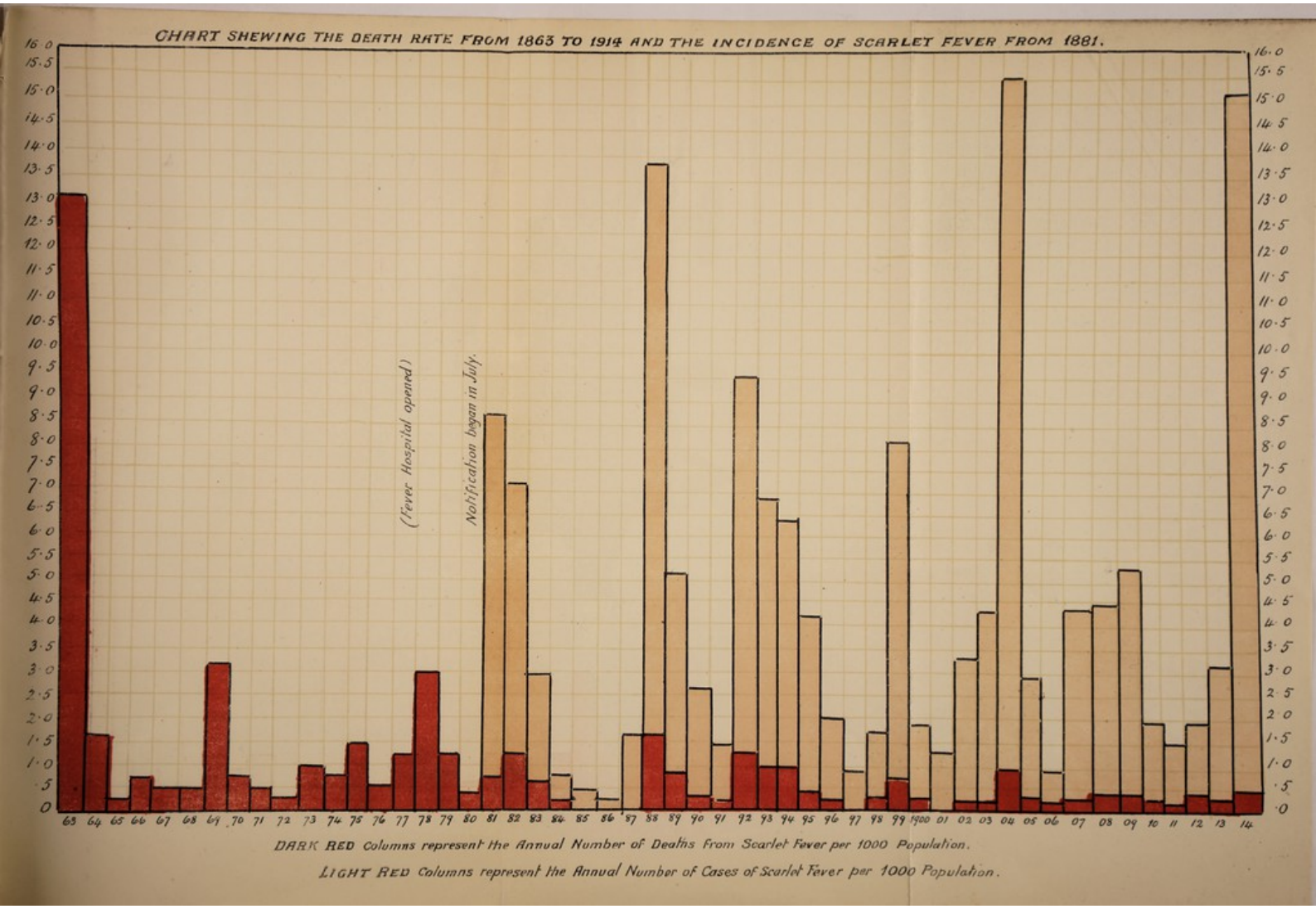


CHART SHEWING THE DEATH RATE FROM 1863 TO 1914 AND THE INCIDENCE OF SCARLET FEVER FROM 1881.
(Fever Hospital opened)
Notification began in July.
16·0 15·5 15·0 14·5 14·0 13·5 13·0 12·5 12·0 11·5 11·0 10·5 10·0 9·5 9·0 8·5 8·0 7·5 7·0 6·5 6·0 5·5 5·0 4·5 4·0 3·5 3·0 2·5 2·0 1·5 1·0 ·5 0
63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 1900 01 02 03 04 05 06 07 08 09 10 11 12 13 14
DARK RED Columns represent the Annual Number of Deaths from Scarlet Fever per 1000 Population.
LIGHT RED Columns represent the Annual Number of Cases of Scarlet Fever per 1000 Population.

DIPHTHERIA.—There were 127 cases of this disease notified during the year, 12 of which terminated fatally. There has been a gradual increase in the prevalence of this disease in most large towns during recent years.

On bacteriological examination in the Health Department Laboratory the number of cases definitely proved to have Diphtheria Bacilli present in their throats was as follows:—

Bacillus present	63
Bacillus absent	50
No swab submitted	13
Died. No swab submitted	1
	127

From these figures it is evident that only 63 cases can definitely be said to have been true diphtheria, but owing to the clinical signs or urgency of the symptoms in the other cases it was necessary that every precaution should be taken and the case dealt with.

As in connection with Scarlet Fever, so with Diphtheria, there are many instances of the disease which are looked upon as cases of simple sore throat and which escape detection. These undetected cases mix with the general public and even attend school, and thus the spread of the disease can easily be accounted for. The routine examination of children absent from school on account of "sore throat" before allowing their return has led to the discovery of several of these unsuspected cases.

Bacteriology now enables us to say in practically all instances whether or not any case of sore throat is one of Diphtheria, and whether or not any case of Diphtheria has ceased to be infectious. The only way, therefore, by which we can hope to control this disease is by the more extended and systematic use of the bacteriological laboratory both in connection with cases of "sore throat" and also as regards cases of Diphtheria before they are pronounced to be free from infection and allowed to mix with the public.

Infection continues to remain in the throats of certain diphtheria convalescents for prolonged periods, and it is impossible to detect such dangers to the public without a bacteriological examination of all diphtheria convalescents being undertaken.

These precautions are taken before patients who have suffered from the disease are sent out from the Isolation Hospital, but they are equally essential in all instances, whether the patient is treated in hospital or at home.

Persons who come into close contact with diphtheria patients may also have the infection of Diphtheria in their throats without showing any signs of illness. These "contacts" may carry the infection to others and swabbings should therefore be systematically taken from their throats and submitted to bacteriological examination, in order that the infection-carriers may be detected.

The following table illustrates the prevalence of Diphtheria during the past fifteen years.

	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.	1914.
No. of cases of Diphtheria notified	23	25	24	34	34	27	28	78	123	146	108	88	110	108	12
Death-rate for Diphtheria per 1,000 of population	20	·12	·09	·01	·05	·12	·12	·19	·22	·35	·09	·12	·15	·12	·1
No. of cases admitted to Hospital..	2	9	9	20	4	8	8	43	78	89	78	69	99	103	11

The following tables show in a striking manner how terribly fatal the diseases Measles and Whooping Cough are to children under five years of age. A great deal of this is undoubtedly to be accounted for by the carelessness due to the popular idea that these are merely childish ailments.

DEATHS FROM SCARLET FEVER, DIPHTHERIA, MEASLES, AND WHOOPING COUGH DURING PAST TWENTY-ONE YEARS.

YEAR.	SCARLET FEVER.		DIPHTHERIA AND MEMBRANOUS CROUP.		MEASLES.		WHOOPING COUGH.		
	Under 5 years.	5 years and over.	Under 5 years.	5 years and over.	Under 5 years.	5 years and over.	Under 5 years.	5 years and over.	
1894	35	10	4	1	17	...	37	1	
1895	13	4	5	...	7	4	9	1	
1896	7	3	2	...	162	1	44	4	
1897	2	1	1	2	52	...	28	...	
1898	4	7	4	2	27	1	19	...	
1899	21	8	6	2	68	1	33	1	
1900	5	3	12	1	5	...	20	3	
1901	1	...	8	...	62	3	46	3	
1902	6	3	5	1	10	1	15	...	
1903	3	5	10	1	94	3	30	...	
1904	37	15	24	2	33	3	81	5	
1905	3	6	3	4	64	2	5	11	
1906	1	1	4	5	29	4	33	...	
1907	9	3	10	4	52	6	10	1	
1908	8	8	13	3	26	...	58	2	
1909	11	10	18	8	93	9	8	...	
1910	5	...	2	5	10	1	18	...	
1911	4	...	7	2	11	2	32	...	
1912	6	4	7	4	81	3	8	...	
1913	4	3	9	—	20	4	24	...	
1914	10	14	8	4	31	—	24	2	
Totals for 21 years	195	108	162	51	954	48	582	34	616
Totals: all ages	305		213		1002				

TABLE FOR COMPARISON OF THE PREVALENCE OF SICKNESS AND DEATHS FROM INFECTIOUS DISEASES

(RATES CALCULATED PER 1,000 POPULATION).

YEAR.	Smallpox.		Erysipelas.		Diphtheria & Membranous Croup.		Scarlet Fever.		Enteric Fever.		Puerperal Fever.		Measles.		Whooping Cough.	
	Cases	Death Rate	Cases	Death Rate	Cases	Death Rate.	Cases	Death Rate.	Cases	Death Rate.	Cases	Death Rate.	Cases	Death Rate.	Cases.	Death rate.
1895...	—	—	44	·017	16	·086	235	·294	44	·208	5	·071	—	1·906	—	·175
1896..	1	—	26	—	8	·034	114	·170	35	·085	5	·085	—	1·101	—	·826
1897..	—	—	34	·033	8	·051	47	·051	41	·086	5	·051	—	·854	—	·455
1898...	—	—	20	016	9	·163	107	·147	41	·229	8	·049	—	·455	—	·302
1899...	—	—	44	—	22	·128	513	·449	149	·385	2	·016	—	1·099	—	·531
1900...	—	—	23	·015	23	·109	115	·109	62	219	5	·031	—	·078	—	·353
1901 .	1	·017	44	·015	25	·124	80	·017	33	·062	4	·077	—	1·008	—	·760
1902..	4	·015	40	·045	24	·091	211	·137	32	·091	10	·106	—	166	—	·227
1903...	86	·059	32	·014	34	·016	289	·119	22	·029	1	·014	—	1·518	—	·446
1904..	47	·058	79	·131	34	·058	1066	·759	20	·043	6	·028	—	·534	—	1·25
1905..	1	—	61	·028	27	·124	201	·131	15	·058	15	·144	—	·966	—	·231
1906...	1	—	68	09	28	·12	64	·02	43	·056	8	·02	—	·46	—	·468
1907...	—	—	21	·027	78	·19	311	·16	21	·083	9	·027	—	·807	—	·152
1908...	—	—	42	054	123	·22	321	22	33	·151	12	·041	—	·35	—	·82
1909...	—	—	54	—	146	·35	381	·28	54	·205	7	·068	—	1·39	—	·109
1910...	—	—	49	—	108	·09	140	·06	42	·12	18	·09	—	·14	—	·245
1911...	—	—	69	·04	88	·12	111	·05	41	·06	10	—	—	·17	—	442
1912..	—	—	61	·02	110	·15	144	·13	32	·12	12	·02	—	1·14	—	·10
1913..	—	—	54	·06	108	·12	240	·09	28	·12	7	·02	—	·32	—	·32
1914...	—	—	62	·001	127	·16	1133	·32	27	·10	10	·05	—	·41	—	·34

ANNUAL REPORT ON THE CORPORATION HOSPITALS.

AIKIN STREET ISOLATION HOSPITAL.

The diseases at present treated at this Isolation Hospital are Scarlet Fever, Diphtheria and Enteric Fever. No charge whatever has been made for many years to patients residing within the Borough. When circumstances permit cases from the Runcorn Rural and Warrington Rural Districts are admitted and treated for a sum of £2 10s. per week.

In addition six beds for cases of Enteric Fever have been set aside if needed for military purposes for the duration of the War.

Medical Practitioners are permitted to attend their own patients on notification to the Medical Superintendent.

It will be noticed what a large epidemic of Scarlet Fever we have had during the year, and the cost of administration has therefore been proportionally high. Our accommodation for such cases has been very severely taxed, and at times it has not been possible to admit all the cases of this disease that required isolation.

Seventeen cases were admitted as Laryngeal Diphtheria. Of these, one proved to be Laryngitis following measles, one was a case of Whooping Cough, and of the remaining fifteen the disease in the Windpipe was so severe in six instances as to necessitate recourse to the operation of tracheotomy of which three recovered.

Of the fifteen cases of Laryngeal Diphtheria, 3 died.

As in other institutions where children are being continually admitted, there is always the chance of a child admitted for one disease being at the time of admission in the incubation stage of another disease. In this way several cases developed chickenpox shortly after admission.

Prompt isolation of these cases in separate wards prevented the spread of infection.

Two patients admitted as Diphtheria proved to be suffering from Scarlet Fever.

Four patients admitted as Enteric Fever were proved to be suffering from other diseases, two from Broncho Pneumonia, one from acute Pneumonia, and one from Otitis Media and Meningitis.

The observation of doubtful cases and the isolation of mixed infection necessitate reserving of separate small Wards, and further accommodation in this respect would be of great service, especially in epidemics such as the present Scarlet Fever one.

During the year the Medical Officer of Health has carried out the treatment of the patients at the Hospital, except in a few instances when the parents have desired the family doctor to attend their children.

AIKIN STREET ISOLATION HOSPITAL.

		Recognized Accommodation.	
Wards.	Scarlet Fever	25 beds.	12 cots.
	Diphtheria	12 ,,	8 ,,
	Enteric Fever	12 ,,	8 ,,
	For special cases	5 ,,	4 ,,
Additional	Old Administrative Block will accommodate	16 beds.	
	The Hut will accommodate	3 ,,	

During the year it was found necessary to use the old Administrative Block.

The following table is a summary of the number of patients and of the diseases for which they were under treatment during 1914:—

	From the Borough.	From Warrington Rural District.	From Runcorn Rural District.	Total.
Remaining in hospital at the end of 1913 ...	56	—	—	56
Admitted during 1914:				
As Scarlet Fever ...	660	1	—	661
,, Enteric Fever ...	24	—	—	24
,,*Diphtheria ...	118	1	1	120
Under treatment during 1914	802	2	1	805
Deaths during 1914:				
Scarlet Fever ...	17	—	—	17
Enteric Fever ...	7	—	—	7
Diphtheria	10	—	—	10
Other causes ...	2	—	—	2
Totals	36	—	—	36
In hospital at end of 1914:				
Enteric Fever ...	2	—	—	2
Scarlet Fever ...	91	—	—	91
Diphtheria	8	—	—	8
	101	—	—	101

* The Diphtheria bacillis was present in 57 cases

SANKEY SANATORIUM.

The Hospital consists of the following :—

Administrative Block, consisting of Dining-room, Kitchen, and Six Bedrooms.

Large Pavilion of Two Wards, each containing Seven Beds.

Small Pavilion of Two Wards, each containing Four Beds.

Discharge Block.—Laundry and Steam Disinfector.

The Resident Staff is composed of a Charge Nurse, Two Assistant Nurses, Two Ward Maids, One Cook General, and a Lodgekeeper.

The Medical Officer of Health visits the Hospital and treats the cases.

The Sanatorium was originally built for the Isolation of cases of Smallpox, but as there have been no cases of this disease within the Borough since the year 1906, and as the buildings are especially well adapted for the Isolation and Treatment of cases of Pulmonary Tuberculosis, the Health Committee decided in the year 1910 to open the Sanatorium for the reception of these latter cases during the continued absence of Smallpox.

Cases are admitted in any stage of the disease—early, intermediate or advanced.

Early cases are treated in Wards separate from the more advanced cases, and every effort is made in these cases to check the disease and effect a cure. Suitable cases are given graduated exercise and are encouraged to do gardening work in the grounds. Treatment with Tuberculin is also given in some cases.

In the case of patients in the intermediate stage of the disease there is little chance of a complete cure, but a stay in the Sanatorium almost invariably improves their condition to a considerable extent and enables them on discharge to return to work for varying periods. The training received during their stay in the Sanatorium also renders them not only more able to fight against the disease and prolong their existence, but also to take such precautions on their discharge that they are not a danger to others.

The advanced cases are of course chiefly admitted with a view to their isolation and the prevention of the spread of the disease to others; at the same time these patients are enabled to spend the remaining months under far better conditions as regards their own comfort than would obtain at their homes.

As a large majority of the patients were in an advanced stage of the disease on admission, the possibility of many cures being obtained has of course been proportionately remote. The improvement in the condition of these hopeless cases and the prolonging of their lives has however been very marked.

During the year a total of 125 cases have received treatment at the Sanatorium.

This number was made up of males and females insured and uninsured, adults and children, as follow :—

	Males.	Females.
Non-insured adults	10	21
School children	6	7
Insured	66	15

A list of these cases is found on page 66A and a summary of the condition of the 103 cases who left the Sanatorium during the year, and of the 22 cases still in residence there at the end of the year is here shown :

SUMMARY OF THE 103 CASES WHICH HAVE LEFT THE SANATORIUM.

	Early Cases.		Medium Cases.		Advanced Cases.	
	Males.	Females.	Males.	Females.	Males.	Females.
Apparent arrest of disease	6	5	3	—	—	—
Great Improvement ...	10	4	11	3	2	1
Much improved ..	6	5	9	4	1	1
Disease in "statu quo" (much improved in general condition) ...	2	—	2	—	1	1
Left Sanatorium on own accord — disease advancing	1	—	—	—	1	—
Left Sanatorium of own accord — disease in "statu quo" ...	2	4	2	2	2	1
Died in Sanatorium ...	—	—	—	1	5	5
Totals	27	18	27	10	12	9

SUMMARY OF PROGRESS OF THE 22 CASES STILL RECEIVING TREATMENT IN THE SANATORIUM.

	Early Cases.		Medium Cases.		Advanced Cases.	
	Males.	Females	Males.	Females.	Males.	Females.
Disease apparently arrested	1	1	—	—	—	—
Improving	4	2	8	—	—	1
Disease slowly advancing...	1	—	—	—	1	—
Disease in "statu quo" ...	—	1	1	—	—	1
Totals	6	4	9	—	1	2

The cases after discharge from the Institution are kept under observation by the Inspector, and are asked from time to time to visit the Health Office for examination by the Medical Officer.

AVERAGE DURATION OF TREATMENT OF THE 103 CASES WHICH HAVE LEFT THE SANATORIUM.

	Weeks.	Days.
Average for all cases	13	2
,, ,, Early cases	10	3
,, ,, Medium cases ...	10	6
,, ,, Advanced cases ...	18	4
Longest stay—Early case	28	0
,, ,, Medium case ...	28	0
,, ,, Advanced case ...	99	6
Shortest stay—Early case	—	3
,, ,, Medium case ...	—	4
,, ,, Advanced case ...	—	4

Table showing number of weeks during which patients were unable to follow their employment or to attend school previous to admission to the Sanatorium :—

NUMBER OF CASES TREATED DURING 1914—125.

Under 1 week.	1 to 5 weeks.	5 to 10 weeks.	10 to 15 weeks.	15 to 20 weeks.	20 to 30 weeks.	30 to 40 weeks.	40 to 60 weeks.	60 to 70 weeks.	210 weeks.
3	19	44	26	6	15	3	4	4	1

N.B.—Only 3 out of 125—*i.e.*, 2·4%—were able to work before admission.

CONDITION ON DEC. 31st, 1914, OF THE CASES WHICH HAVE LEFT THE SANATORIUM.

	Males.	Females.
At work regularly since leaving	†30	6
Doing household duties	—	12
Left Sanatorium 2 weeks, fit for work (unable to get employment) ...	2	1
Not at work since leaving	7	—
Not at work during the past two months	5	—
At present in Union Hospital	2	—
Left the town	1	2
School Children—Attending school ...	3	2
,, ,, —Not attending school	2	3
Died since leaving the Sanatorium ...	*9	5
	61	31

† 5 of these cases are in the Army.
* 5 of these cases had under 5 weeks' treatment.

N.B.—51 out of 82 adults have worked regularly, or were fit for work, *i.e.*, 61·7 per cent. of those leaving, or 49·5 per cent. of the adults admitted.

The following figures and tables have been collected to show the results of treatment of Tubercular patients at Sankey Sanatorium from the date of its opening in August, 1910, up to the end of the year 1914. The whole of the cases have been followed up, and, where possible, kept under supervision during this period.

Altogether, 224 persons have been treated in the institution. Although at present we have 22 beds, it must be remembered that this has only been for the past 12 months, and the number has gradually been increased from 6 in the year 1910.

Summary of all Cases which have received Treatment in the Sanatorium from August 6th, 1910, to December 31st, 1914.

224 Persons have received treatment.
19 of these were admitted twice, and
3 were admitted three times.

	Males.	Females.	Total.
Non-Insured	40	46	86
Insured	93	24	117
Children, School Age when admitted	9	12	21
Totals ...	142	82	224

Condition of Cases on admission :—

	Males.	Females.	Total.
Early cases	55	38	93
Medium cases	51	20	71
Advanced cases... ...	36	24	60
Totals ...	142	82	224

Of these 224 persons, 138 are living, 86 are dead.

Table showing the number of Weeks during which patients were unable to follow their employment or to attend school previous to admission to Sanatorium :—

NUMBER OF CASES—224.

WEEKS.										
Under 1	1–5	5–10	10–15	15–20	20–30	30–40	40–60	60–80	100–150	Over 200
4	25	74	54	17	24	9	8	4	1	4

N.B.—3 out of 224 (= 1·3 per cent.) worked up to date of admission.

Table showing the number of Weeks' treatment the 224 cases received in the Sanatorium :—

NUMBER OF CASES LEFT THE SANATORIUM—202.

WEEKS.									
Under 1	1–2	2–3	3–4	4–5	5–6	6–7	7–8	8–10	
12	6	4	6	2	11	4	15	18	
10–12	13–16	16–18	18–20	20–30	30–40	40–50	50–60	60–70	70–80	80–100
39	25	5	9	24	14	3	1	2	1	1
		*1	*1	*6	*6	*3	*1	†1		
		†1		†1	†1					

NUMBER AT PRESENT RECEIVING TREATMENT—22.

WEEKS.									
Under 1	1–2	2–3	3–4	4–5	5–6	6–7	7–8	8–10	
1	1	5	2	—	1	1	4	1	
10–12	12–16	16–18	18–20	20–30	30–40	40–50	50–60	60–70	70–80	80–100
1	3	—	—	2	—	—	—	—	—	—
				*1						

* Admitted a second time.
† ,, third time.

CONDITION ON DEC. 31ST OF THE 138 LIVING CASES AS REGARDS CAPACITY FOR WORK.

	Males.	Females.
At work regular since leaving	*43	10
Fit for work, unable to get employment	2	1
Fit for work on leaving Sanatorium (left town)	1	—
Females carrying out their household duties	—	18
At work irregularly	†10	2
Not at work	10	3
Not yet commenced work, been in another Sanatorium	1	—
School Children—Attending school ...	4	4
,, ,, —Not attending school..	1	4
,, ,, —Left town	1	1
Still receiving treatment in the Sanatorium	14	8
	87	51

* 8 of these men are in the Army.
† 1 of these men is in the Army.

N.B.—71 out of 224 (= 31·6 per cent.) have worked regularly after discharge from the Institution, without taking into account children attending school, those fit for work but unable to obtain employment, and those who have left the town.

Table showing the number of Months since the 116 living cases left the Sanatorium :—

NUMBER OF CASES—116.

MONTHS.												
Under 1	1–2	2–3	3–4	4–5	5–6	6–8	8–10	10–12	12–18	18–24	24–30	30–40
7	5	11	7	3	4	14	8	12	16	8	13	8

Table showing the length of life of the 53 patients which died after leaving the Sanatorium :—

NUMBER OF CASES—53.

MONTHS.												
Under 1	1–2	2–3	3–4	4–5	5–6	6–8	8–10	10–12	12–18	18–24	24–30	30–40
3	8	3	5	5	3	6	3	2	9	3	1	2

Average length of life of the 53 cases from date of leaving the Sanatorium—8¼ months.

I would like to draw attention to the fact shown by the figures that although only 1·3 per cent. were able to work before admission 31·6 per cent. have worked regularly ever since their discharge. This I think, without taking into account any of the personal benefits received by the individual, illustrates the great economic value of Institutional treatment. These results are all the more striking when we remember that the cases are not picked or early cases, but consist of patients in all stages of the disease.

Cases of Pulmonary Tuberculosis which have received Treatment in Sankey Sanatorium during the Year 1914.

Initials.	No. on Register.	Sex.	Age.	Occupation.	Date of Admission.	State on Admission.	State as regards Working Capacity.	Date of Discharge.	State on Discharge.	State as regards Capacity on Discharge.	Increase in Weight.	Duration of Treatment.	Remarks.
M. T.	45	M	28	Forge Labourer	April 20th, 1912	Advanced both lungs	Off work 9 weeks	March 13th, 1914	Improved	Light work	...	99 weeks 6 days.	
G. B.	77	M	18	Enameller and Wire Weaver	December 30th, 1912	Advanced both lungs	Off work 60 weeks	March 13th, 1914	Great improvement	Not worked	+ 3lbs.	62 weeks 4 days.	Tubercular empyema.
E. G.	82	F	37	Household	December 2nd, 1913	Advanced both lungs	Off work 26 weeks	May 8th, 1914	Much improved	Not worked	— 4ozs.	22 weeks 3 days.	Previous treatment in Sanatorium, 25 weeks. Died at home 21/11/14.
A. T.	93	F	11	School	December 24th, 1913	Early case, one lung	Off work 8 weeks	April 21st, 1914	Great improvement	At School	+ 8½lbs.	16 weeks 6 days.	Previous treatment in Sanatorium, 20 weeks 1 day.
G. B.	104	M	51	Forge Labourer	July 8th, 1913	Slight one lung	Off work 29 weeks	January 30th, 1914	Great improvement	Worked regularly since	+ 23lbs.	28 weeks.	
W. C.	105	M	27	Wireworks Furnaceman	July 8th, 1913	Fairly advanced both lungs	Off work 30 weeks	January 20th, 1914	Improved	Worked regularly since	+ 9lbs.	28 weeks.	
L. H.	111	M	38	Galvanizer	July 26th, 1913	Advanced one lung	Off work 210 weeks	March 13th, 1914	In statu quo; general condition good	Light work	+ 9lbs.	32 weeks 6 days.	
A. M.	116	F	34	Household and Laundress	August 25th, 1913	Both lungs	Off work 12 weeks	Died May 28th, 1914				39 weeks.	Previous treatment in Sanatorium, 29 weeks 1 day.
L. A.	118	F	43	Household Duties	September 9th, 1913	Advanced case	Off work 12 weeks	February 20th, 1914	In statu quo; left own accord			23 weeks 3 days.	Died at home 12/3/14.
J. F.	122	M	38	Labourer	September 29th, 1913	Fairly advanced both lungs	Off work 4 weeks	January 19th, 1914	Great improvement	Worked regularly since	+ 21lbs.	16 weeks.	Previous treatment in Sanatorium, 33 weeks 4 days.
A. E.	124	M	7	School	October 3rd, 1913	Fairly advanced one lung	Off work 54 weeks	January 20th, 1914	Much improved		+ 5½lbs.	15 weeks 4 days.	
A. W.	125	F	22	Household Duties	October 14th, 1913	Slight case	Off work 8 weeks	January 24th, 1914	Great improvement		+ 23½lbs.	14 weeks 4 days.	Removed from town.
A. B.	129	F	12	School	October 25th, 1913	Slight case	Off work 5 weeks	January 17th, 1914	Much improved		+ 10½lbs.	12 weeks.	
J. M.	131	M	24	Forge Labourer	October 28th, 1913	Advanced one lung	Off work 44 weeks	February 2nd, 1914	In statu quo; general condition good	Worked since	+ 2½lbs.	13 weeks 6 days.	
J. C.	132	M	24	Wire Worker	November 3rd, 1913	Slight one lung	Off work 7 weeks	January 26th, 1914	Much improved	Commenced work at once	+ 15lbs.	9 weeks 1 day.	
E. N.	133	M	38	Wire Worker	November 18th, 1913	Fairly advanced one lung	Off work 9 weeks	March 7th, 1914	Much improved	Worked regularly since	+ 13½lbs.	15 weeks 4 days.	
F. O. D.	134	M	25	House Painter	November 11th, 1913	Advanced both lungs	Off work 6 weeks	Died January 15th, 1914				9 weeks 2 days.	
W. L.	135	M	49	Wire Worker	December 1st, 1913	Advanced one lung	Off work 52 weeks	February 20th, 1914	Disease advancing		+ 12½lbs.	11 weeks 4 days.	Died at home 21/6/14.
R. C.	136	M	24	Taxi Driver	December 2nd, 1913	Advanced one lung	Off work 6 weeks	March 20th, 1914	Great improvement	Worked since	+ 29½lbs.	15 weeks 3 days.	
C. H.	138	F	24	Household	December 8th, 1913	Advanced one lung	Off work 7 weeks	March 20th, 1914 (readmitted Nov. 19th, 1914. Still in Sanatorium).	Great improvement		+ 22½lbs.	14 weeks 4 days.	
E. O.	139	F	10	School	December 8th, 1913	Slight case	Off work 5 weeks	February 28th, 1914	Apparent cure	At School	+ 19½lbs.	11 weeks 5 days.	
R. B.	140	M	39	Brewery Labourer	December 13th, 1913	Fairly advanced one lung	Off work 3 weeks	March 7th, 1914	Apparent cure	Worked regularly since	+ 29lbs.	12 weeks.	
W. W.	142	M	39	Brewery Labourer	January 7th, 1914	Fairly advanced both lungs	Off work 24 weeks	April 10th, 1914	Great improvement	Worked since	+ 13½lbs.	11 weeks 6 days.	
R. G.	143	F	28	Household	January 19th, 1914	Fairly advanced both lungs	Off work 5 weeks	March 7th, 1914	Improved	Household duties	+ 7lbs.	6 weeks 5 days.	
J. L.	144	M	34	Shunter	January 21st, 1914	Fairly advanced one lung	Off work 6 weeks	March 1st, 1914	Much improved	Commenced work at once.	+ 5½lbs.	5 weeks 4 days.	Died at home 6/11/14.
J. B.	145	M	34	Labourer	January 21st, 1914	Fairly advanced one lung	Off work 7 weeks	April 16th, 1914	Great improvement	Worked since	+ 17½lbs.	11 weeks 2 days.	
A. J.	146	M	21	Forge Labourer	January 21st, 1914	Fairly advanced both lungs	Off work 16 weeks	January 28th, 1914	In statu quo; left own accord		+ 1lb.	7 days.	Died at home 1/5/14.
F. U.	147	M	8	School	January 21st, 1914	Slight both lungs	Off work 12 weeks	May 1st, 1914	Apparently cured	At school	+ 7½lbs.	14 weeks 2 days.	
M. T.	148	M	10	School	January 27th, 1914	Slight both lungs	Off work 6 weeks	July 1st, 1914	Much improvement	At school	+ 4lbs.	22 weeks.	
A. T.	149	F	20	Domestic Servant	January 27th, 1914	Advanced both lungs	Off work 52 weeks	August 11th, 1914	Great improvement	Household	+ 8½lbs.	28 weeks.	Previous treatment in Sanatorium, 23 weeks 3 days. Died at home 5/12/14.
W. G.	150	M	7	School	January 30th, 1914	Advanced one lung	Off work 14 weeks	May 1st, 1914	Much imposved	At School	+ 4lbs.	13 weeks.	
M. G.	151	M	22	Salt Hawker	February 10th, 1914	Advanced one lung	Off work 9 weeks	April 15th, 1914	Great improvement		+ 4lbs.	9 weeks 1 day.	Died at home 14/6/14.
T. B.	152	M	45	Labourer	February 23rd, 1914	Slight both lungs	Off work 12 weeks	June 12th, 1914	Disease in statu quo; much general improvement.	Worked since	+ 1lb.	15 weeks 4 days.	
J. B.	153	F	27	Carriage Painter	February 23rd, 1914	Fairly advanced both lungs	Off work 20 weeks	July 9th, 1914	Great improvement	Household duties	+ 7lbs.	19 weeks 3 days.	Previous treatment in Sanatorium, 12 weeks 1 day.
E. C.	154	F	16	Bookbinder	March 2nd, 1914	Slight one lung	Off work 6 weeks	May 22nd, 1914	Apparently cured	Worked regularly since	+ 23lbs.	11 weeks 4 days.	
A. F.	155	M	25	Joiner	March 9th, 1914	Slight one lung	Off work 19 weeks	May 8th, 1914	Apparently cured	Worked regularly since	+ 13lbs.	8 weeks 4 days.	
J. W. M.	156	M	52	Casual Labourer	March 9th, 1914	Fairly advanced one lung	Off work 18 weeks	May 29th, 1914	Great improvement	Worked regularly since	+ 16lbs.	11 weeks.	
S. O.	157	M	19	Boiler Maker Labourer	March 9th, 1914	Slight both lungs	Off work 10 weeks	June 25th, 1914	Disease slowly advancing; general condition much improved.		— 1½lbs.	15 weeks 3 days.	Died at home 1/10/14
J. L.	158	M	26	Iron Turner	March 16th, 1914	Slight both lungs	Off work 16 weeks	June 5th, 1914	Great improvement	Worked regularly since	+ 16lbs.	11 weeks 4 days.	
S. J.	159	M	25	Wiredrawer	March 16th, 1914	Slight one lung	Off work 14 weeks	June 5th, 1914	Improved		+ 3½lbs.	11 weeks 4 days.	Died at home 12/12/14.
H. C.	160	F	39	Charwoman	March 13th, 1914	Slight case	Off work 15 weeks	June 5th, 1914	Apparently cured	Worked regularly since	+ 19½lbs.	12 weeks.	
R. S.	161	M	25	Window Cleaner	March 16th, 1914	Slight one lung	Off work 2 weeks	April 9th, 1914	Improved	Worked regularly since	+ 16lbs.	3 weeks 3 days.	
W. F.	162	M	36	Saddler	March 23rd, 1914	Advanced one lung	Off work 6 weeks	April 10th, 1914	In statu quo; left without permission.		+ 3½lbs.	2 weeks 4 days.	Died at home 8/5/14.
A. C.	163	F	33	Bookbinder	March 23rd, 1914	Advanced both lungs	Off work 4 weeks	Died April 6th, 1914				2 weeks.	
E. J.	164	F	17	Velvet Cutter	April 9th, 1914	Advanced one lung	Off work 25 weeks	May 16th, 1914	In statu quo; left own request			5 weeks 2 days.	Previous treatment in Sanatorium, 31 weeks 6 days. Died at home 13/6/14.
W. H. L.	165	M	25	Wireworks Labourer	April 15th, 1914	Fairly advanced one lung	Off work 10 weeks	August 7th, 1914	Great general improvement		+ 1½lbs.	16 weeks 2 days.	Previous treatment in Sanatorium, 19 weeks 3 days. Died at home 14/12/14.
J. B.	166	M	39	Iron Worker and Crane Driver	April 15th, 1914	Fairly advanced both lungs	Off work 12 weeks	July 14th, 1914	Great improvement	Worked regularly since	+ 11½lbs.	12 weeks 6 days.	
H. B.	167	M	32	Wire Drawer	April 15th, 1914	Fairly advanced one lung	Off work 8 weeks	Died July 18th, 1914				13 weeks 3 days.	
A. F.	168	M	35	Wire Worker	April 16th, 1914	Slight both lungs	Off work 6 weeks	June 30th, 1914	Great improvement	Worked regularly since	+ 19½lbs.	10 weeks 5 days.	
J. O.	169	M	33	Gas Stove Fitter	April 16th, 1914	Slight one lung	Off work 3 weeks	July 9th, 1914	Apparently cured	Worked regularly since	+ 11lbs.	12 weeks.	
V. M. G.	170	F	25	Typist	April 23rd, 1914	Advanced both lungs	Off work 5 weeks	Died May 30th, 1914				5 weeks 2 days.	
J. K.	171	M	49	Brakesman	May 2nd, 1914	Slight one lung	Off work 10 weeks	June 26th, 1914	Apparently cured	Worked regularly since	+ 14½lbs.	7 weeks 6 days.	
A. B.	172	M	15	Moulder	May 2nd, 1914	Advanced one lung	Off work 22 weeks	July 24th, 1914	Great improvement	Worked regularly since	+ 21½lbs.	11 weeks 6 days.	
J. D.	173	M	20	Moulder	May 9th, 1914	Fairly advanced both lungs	Off work 9 weeks	July 31st, 1914	Much improved		+ 12lbs.	11 weeks 6 days.	
H. T.	174	F	45	Household	May 11th, 1914	Early case	Off work 6 weeks	May 15th, 1914	In statu quo; left own request			4 days.	
S. E. F.	175	F	43	Household	May 18th, 1914	Slight one lung	Off work 12 weeks	August 11th, 1914	Great improvement	Household duties	+ 13½lbs.	11 weeks 6 days.	
E. B.	176	F	36	Household	May 18th, 1914	Fairly advanced one lung	Off work 3 weeks	August 11th, 1914	Great improvement	Household duties	+ 11½lbs.	11 weeks 6 days.	
E. M. B.	177	F	24	Rubber Worker	May 28th, 1914	Fairly advanced both lungs	Off work 5 weeks	August 21st, 1914	Great improvement	Household duties	+ 7lbs.	12 weeks 1 day.	Previous treatment in Sanatorium, 21 weeks 2 days.
E. H.	178	F	25	Marine Store Worker	May 28th, 1914	Fairly advanced both lungs	Off work 6 weeks	August 21st, 1914	Great improvement	Worked regularly since	+ 12½lbs.	12 weeks 1 day.	Previous treatment in Sanatorium, 8 weeks.
A. L.	179	M	19	Labourer	May 30th, 1914	Fairly advanced both lungs	Off work 7 weeks	September 16th, 1914	Great improvement	Worked regularly since	+ 15lbs.	15 weeks 4 days.	
M. S.	180	F	25	Household	June 3rd, 1914	Slight one lung	Off work 3 weeks	June 10th, 1914	In statu quo; discharged own request			1 week.	
J. C.	181	M	42	Printer	June 6th, 1914	Slight both lungs	Off work 12 weeks	August 28th, 1914	Great improvement	Fit for work	+ 17lbs.	11 weeks 6 days.	
H. M.	182	M	27	Fitter	June 8th, 1914	Advanced one lung	Off work 6 weeks	September 16th, 1914	Much improved	Fit for work	+ 19½lbs.	13 weeks.	
E. F.	183	F	29	Household	June 10th, 1914	Advanced both lungs	Off work 12 weeks	Died July 13th, 1914				4 weeks 5 days.	
C. L.	184	M	41	Forge Labourer	June 12th, 1914	Slight one lung	Off work 9 weeks	July 22nd, 1914	Great improvement; left own request	Worked regularly since	+ 4½lbs	5 weeks 4 days.	
M. A.	185	F	34	Household	June 15th, 1914	Fairly advanced one lung	Off work 20 weeks	September 5th, 1914	In statu quo; left own request		+ 2½lbs.	11 weeks 5 days.	Died at home 5/10/14.

CASES OF PULMONARY TUBERCULOSIS WHICH HAVE RECEIVED TREATMENT IN SANKEY SANATORIUM DURING THE YEAR 1914—*continued.*

Initials.	No. on Register.	Sex.	Age.	Occupation.	Date of Admission.	State on Admission.	State as regards Working Capacity.	Date of Discharge.	State on Discharge.	State as regards Capacity on Discharge.	Increase in Weight.	Duration of Treatment.	Remarks.
H. M.	186	M	19	Forge Labourer ...	June 29th, 1914 ...	Slight one lung	Off work 2 weeks	August 9th, 1914 ...	Great improvement; left own request	Worked regularly since	+ 5½lbs.	5 weeks 6 days.	
J. B.	187	M	23	Solicitor's Clerk ...	June 29th, 1914 ...	Fairly advanced one lung	Off work 16 weeks	October 6th, 1914 ...	Great improvement	Fit for work	+ 15½lbs.	14 weeks 1 day.	
G. H.	188	M	47	Forge Labourer ...	July 6th, 1914 ...	Slight one lung	Off work 10 weeks	September 25th, 1914	Great improvement	Worked regularly since	+ 19lbs.	11 weeks 4 days.	
J. W. H.	189	M	42	Wire Worker	July 6th, 1914 ...	Slight one lung	Off work 30 weeks	September 25th, 1914	Great improvement	Worked regularly since	+ 13½lbs.	11 weeks 4 days.	
T. B.	190	M	15	Joiner	July 13th, 1914 ...	Advanced both lungs	Off work 12 weeks	Still in Sanatorium ...	Disease extending rapidly ...	... ...	...	25 weeks 4 days.	
F. S.	191	F	14½	Marine Store Worker...	July 15th, 1914 ...	Fairly advanced one lung	Off work 6 weeks	Died October 8th, 1914	... ...	... ...	...	12 weeks 1 day.	
J. W. C.	192	M	28	Wire Worker	July 17th, 1914 ...	Slight one lung	Off work 4 weeks	September 19th, 1914	Great improvement	Worked regularly since	+ 15½lbs.	9 weeks 1 day.	Previous treatment in Sanatorium, 12 weeks.
E. A.	193	F	38	Household	July 17th, 1914 ...	Fairly advanced both lungs ...	Off work 20 weeks	September 19th, 1914	Improved	Household duties ...	+ 16lbs.	9 weeks 1 day.	Previous treatment in Sanatorium, 14 weeks 6 days.
J. D.	194	M	33	Roller in Iron Mill ...	July 21st, 1914 ...	Advanced both lungs	Off work 13 weeks	Died September 25th, 1914	... ...	... ...	...	9 weeks 3 days.	
J. S.	195	M	38	Blacksmith's Striker ...	July 24th, 1914 ...	Slight one lung	Off work 7 weeks	September 22nd, 1914	Much improved; left own accord	Fit for work	+ 1½lbs.	8 weeks 4 days.	
T. C.	196	M	15½	Labourer, Caustic Department	July 24th, 1914 ...	Fairly advanced one lung	Off work 8 weeks	Died December 7th, 1914	... ...	... ...	...	19 weeks 4 days.	
T. G.	197	M	46	Wire Drawer	August 1st, 1914 ...	Fairly advanced one lung	Off work 24 weeks	November 2nd, 1914	In statu quo; general condition much improved	... ...	+ 8lbs.	11 weeks 4 days.	
F. M.	198	M	25	Wire Drawer	August 14th, 1914 ...	Advanced both lungs	Off work 21 weeks	August 19th, 1914 ...	In statu quo; left own request	... ...	...	5 days.	Died at home 29/9/14.
A. T.	199	M	42	Stores Clerk	August 14th, 1914 ...	Fairly advanced one lung	Off work 4 weeks	November 6th, 1914 ...	Apparently cured	Worked regularly since	+ 16½lbs.	12 weeks.	
M. N.	200	F	36	Household	August 14th, 1914 ...	Advanced both lungs	Off work 12 weeks	Died August 18th, 1914	... ...	... ...	...	4 days.	
A. A.	201	F	12	School	August 15th, 1914 ...	Slight both lungs	Off work 10 weeks	November 6th, 1914 ...	Much improved	... ...	+ 12lbs.	11 weeks 6 days.	
C. E.	202	F	25	Shop Assistant... ...	August 20th, 1914 ...	Slight both lungs	Off work 32 weeks	November 13th, 1914	Apparent cure	At work	+ 6½lbs.	12 weeks 1 day	
G. D.	203	M	22	Forge Labourer ...	August 21st, 1914 ...	Slight one lung	Off work 5 weeks	August 23rd, 1914 ...	In statu quo; left own accord	... ...	...	2 days.	
A. A. H.	204	F	26	Cotton Weaver... ...	August 22nd, 1914, re-admitted September 26th, 1914	Slight one lung	Off work 7 weeks	September 8th, 1914... November 6th, 1914...	Much improved	Household duties ... Household duties ...	+ 7½lbs. + 6½lbs.	2 weeks 3 days. 5 weeks 6 days.	
E. G.	205	F	38	Household	August 25th, 1914 ...	Slight one lung	Off work 6 weeks	September 19th, 1914	Much improved	Household duties ...	+ 7lbs.	3 weeks 4 days.	
L. S.	206	F	52	Housekeeper	August 25th, 1914 ...	Fairly advanced both lungs ...	Off work 5 weeks	December 15th, 1914	Great improvement	Fit for work	+ 15lbs.	11 weeks 5 days.	
T. B.	207	M	34	Wireworks Labourer ...	August 26th, 1914 ...	Slight one lung	Off work 4 weeks	October 13th, 1914 ...	Much improved; left own request	Worked regularly since	+ 10½lbs.	6 weeks 6 days.	
J. B.	208	M	54	Music Teacher ...	August 28th, 1914 ...	Advanced one lung...	Off work 10 weeks	Died September 21st, 1914	... ...	... ...	...	3 weeks 3 days.	
M. L.	209	F	38	Household and Charwoman	September 10th, 1914	Slight one lung	Off work 2 weeks	December 4th, 1914 ...	Apparently cured	Worked regularly since	+ 19lbs.	12 weeks 1 day.	
E. M.	210	M	39	Fitter	September 19th, 1914	Slight one lung	At work	November 13th, 1914	Great improvement	Worked regularly since	+ 14½lbs.	7 weeks 6 days.	
T. L.	211	M	51	Scavenger	September 19th, 1914	Slight one lung	Off work 5 weeks	Still in Sanatorium ...	Improving	... ...	+ 14lbs.	14 weeks 5 days.	
S. A. M.	212	F	35	Household	September 19th, 1914	Slight one lung	Off work 9 weeks	November 6th, 1914 ...	Much improved; left own request	Household duties ...	+ 7½lbs.	6 weeks 6 days.	Left the town.
W. Y.	213	M	44	Basket Maker	September 21st, 1914	Slight both lungs	Off work 12 weeks	December 11th, 1914	Great improvement	Worked regularly since	+ 15½lbs.	11 weeks 4 days.	
H. B.	214	M	54	File Cutter	September 24th, 1914	Fairly advanced one lung	Off work 9 weeks	September 28th, 1914	In statu quo; left own request	... ...	...	4 days.	
F. C.	215	M	11	School	September 24th, 1914	Slight both lungs	Off work 22 weeks	Still in Sanatorium ...	Great improvement	... ...	+ 4½lbs.	14 weeks 5 days.	
J. R.	216	M	29	Forge Labourer ...	September 25th, 1914	Slight one lung	Off work 5 weeks	December 16th, 1914	Apparently free from disease	Fit for work ...	+ 13½lbs.	11 weeks 5 days.	
L. G.	217	M	15	Moulder	September 26th, 1914	Fairly advanced one lung	Off work 9 weeks	December 18th, 1914	Great improvement	Fit for work	+ 14lbs.	11 weeks 6 days.	
J. H.	218	M	10	School	September 26th, 1914	Slight one lung	Off work 28 weeks	October 22nd, 1914 ...	Improved; left own accord ...	Not at school	+ 7½lbs.	3 weeks 5 days.	
M. H.	220	F	5	School	September 26th, 1914	Early case	Off work 6 weeks	November 6th, 1914 ...	Improved	Not at school	+ 6½lbs.	5 weeks 6 days.	
C. B.	221	F	17	Velvet Cutter	September 28th, 1914	Slight one lung	Off work 3 weeks	Still in Sanatorium ...	Apparent cure	... ...	+ 11lbs.	13 weeks 3 days.	
J. Y.	222	M	28	Tannery Labourer and Army	October 5th, 1914 ...	Slight one lung	Off work 4 weeks	October 8th, 1914 ...	In statu quo; left own request	... ...	...	3 days.	
T. M.	223	M	31	Forge Labourer ...	October 12th, 1914 ...	Slight one lung	Off work 72 weeks	November 20th, 1914	Much improved; left own request	Worked regularly since	+ 6½lbs.	5 weeks 4 days.	
J. A.	224	M	22½	Barber's Assistant ...	October 14th, 1914 ...	Slight one lung	At work	Still in Sanatorium ...	Much improved	... ...	+ 14½lbs.	11 weeks 1 day.	
F. D.	225	F	38	Household	October 16th, 1914 ...	Slight one lung	Off work 2 weeks	October 28th, 1914 ...	In statu quo; left own request	Household duties ...	+ 1lb.	1 week 5 days.	
E. B.	226	M	45	Stonemason	October 17th, 1914 ...	Fairly advanced both lungs ...	Off work 13 weeks	December 5th, 1914 ...	Improved	... ...	+ 5lbs.	7 weeks.	
T. R. H.	227	M	46	Clerk of Works ...	October 26th, 1914 ...	Slight one lung	Off work 5 weeks	Still in Sanatorium ...	Apparently cured	... ...	+ 18lbs.	9 weeks 3 days.	
L. R.	228	F	29	Paper Embosser ...	October 31st, 1914 ...	Fairly advanced one lung	Off work 20 weeks	November 6th, 1914 ...	In statu quo; left own request	... ...	+ 1½lbs.	7 days.	
E. W.	229	F	19½	Cotton Weaver ...	November 7th, 1914 ...	Advanced both lungs	Off work 3 weeks	Still in Sanatorium ...	Improving	... ...	+ 11lbs.	7 weeks 5 days.	
M. D.	230	F	14	Household	November 7th, 1914 ...	Slight case	Off work 4 weeks	Still in Sanatorium ...	... ...	... ...	+ 13lbs.	7 weeks 5 days.	
J. B.	231	M	26	Wiredrawer	November 9th, 1914 ...	Fairly advanced one lung	Off work 10 weeks	Still in Sanatorium ...	In statu quo	... ...	+ 1lb.	7 weeks 3 days.	
E. T.	232	F	21	Household	November 9th, 1914 ...	Slight one lung	Off work 4 weeks	November 28th, 1914	In statu quo; left own request	Household duties ...	+ 1lb.	2 weeks 5 days.	
A. H.	233	F	10	School	November 12th, 1914	Slight both lungs	Off school 66 weeks	Still in Sanatorium ...	Improving	... ...	+ 9½lbs.	7 weeks.	
J. C.	234	M	48	Forge Labourer ...	November 14th, 1914	Slight one lung	Off work 11 weeks	Still in Sanatorium ...	Improving	... ...	+ 9½lbs.	6 weeks 5 days.	
P. H.	236	M	53	Pavior	November 23rd, 1914	Slight both lungs	Off work 9 weeks	Still in Sanatorium ...	Improving	... ...	+ 13½lbs.	5 weeks 3 days.	
M. G.	237	M	32	Forge Labourer ...	November 23rd, 1914	Fairly advanced one lung	Off work 13 weeks	December 13th, 1914	In statu quo; left own request	... ...	+ 4lbs.	2 weeks 6 days.	
E. T.	238	F	10	School	December 4th, 1914 ...	Slight one lung	Off school 64 weeks	Still in Sanatorium ...	Improving	... ...	+ 8lbs.	3 weeks 6 days.	
J. M.	239	M	31	Forge Labourer ...	December 8th, 1914 ...	Slight one lung	Off work 9 weeks	Still in Sanatorium ...	Disease slowly advancing ...	... ...	— 3½lbs.	3 weeks 2 days.	
E. K.	240	F	23	Marine Store Worker ...	December 11th, 1914	Fairly advanced both lungs ...	Off work 2 weeks	Still in Sanatorium ...	In statu quo	... ...	— 1lb.	2 weeks 6 days.	
C. B.	241	M	53½	Basket Maker	December 12th, 1914	Slight one lung	Off work 9 weeks	Still in Sanatorium ...	Improving	... ...	+ 6lbs.	2 weeks 5 days.	
R. L.	242	M	22	Enameller	December 16th, 1914	Slight both lungs	Off work 56 weeks	Still in Sanatorium ...	Improving	... ...	+ 7½lbs.	2 week 1 day.	
J. G.	243	M	50	Corporation Ashman ...	December 16th, 1914	Slight one lung	Off work 15 weeks	Still in Sanatorium ...	Improving	... ...	+ 2½lbs.	2 weeks 1 day.	
M. B.	244	F	32	Household	December 17th, 1914	Slight one lung	Off work 6 weeks	Still in Sanatorium ...	In statu quo	... ...	+ 2lbs.	2 weeks.	
J. S.	245	M	49	Corporation Labourer...	December 28th, 1914	Fairly advanced one lung	Off work 12 weeks	Still in Sanatorium ...	Improving	... ...	+ 1lb.	3 days.	
H. H.	246	M	24½	Forge Labourer ...	December 21st, 1914	Slight one lung	Off work 7 weeks	Still in Sanatorium ...	Improving	... ...	+ 7½lbs.	1 week 3 days.	

It will be thus seen the results of treatment have been very satisfactory, especially as the majority of the cases have been well advanced in the disease on their admission. The chief difficulty, however, has been found in maintaining the improved condition of the patient after discharge from the Sanatorium.

At the time of writing this report a scheme for thoroughly dealing with the question of Tuberculosis in the Borough is under consideration. An enlarged Sanatorium at Sankey should in every way meet the needs of the Borough, and the experience obtained by treating cases there during the last three years shows that the site and surroundings of the Sanatorium are quite favourable for this purpose.

WORK IN THE BACTERIOLOGICAL LABORATORY OF THE WARRINGTON HEALTH DEPARTMENT.

The following table shows the number of specimens examined at the Public Health Department Laboratory during the past five years, and it will be observed how the work increases each year :—

Diphtheria. Year	1910	1911	1912	1913	1914
For diagnosis of cases in Hospital	152	170	191	156	186
For diagnosis of cases under treatment of private practitioners ...	106	145	66	94	143
For diagnosis of suspected cases under Health Department ...	60	38	52	69	104
Before discharge of a case from Hospital	132	113	211	210	205
Examination of contacts	143	99	191	131	161
Enteric Fever.					
For diagnosis of cases in Hospital	29	38	3	13	27
For diagnosis of cases under treatment of private practitioners ...	17	36	23	19	37
Tuberculosis.					
For diagnosis of cases under treatment of private practitioners ...	29	61	70	200	274
For diagnosis by A.S.M.O. ...	—	—	—	5	20
Ringworm.					
For diagnosis of cases under supervision of School Medical Officer	75	54	58	36	44
For diagnosis of cases under treatment of private practitioners ...	5	—	—	—	—
For diagnosis of cases of Cerebro Spinal Meningitis	1	12	—	—	1
For diagnosis of cases of Anthrax	6	2	—	2	3
For diagnosis of Other Cases ...	5	1	—	—	3
	760	769	865	935	1208

Samples of Water (the general domestic supply of the Borough) submitted to the Public Analyst for chemical analysis during the year 1914.

Date.	Where taken	Free Ammonia.	Albuminoid Ammonia.	Oxygen absorbed 4 hours	Nitrogen as Nitrates.	Chlorine.	Solids Total.	Solids Fixed.
Jan. 23	140, Gorsey Lane... ...	·002	·004	·004	·610	2·4	38·0	27·0
Feby. 25	Bank House	·0005	·0014	·005	·90	2·5	33·0	30·0
Mar. 20	1, Taylor's Yard	·001	001	·0045	·600	2·15	36·0	28·0
May 1	Aikin Street Hospital ...	0005	0008	·0052	·650	2·3	37·0	29·0
May 22	32, Knutsford Road ...	·001	0008	·004	·640	2·4	32·0	22·0
June 26	1, Cloth Hall Yard ...	·001	·0008	·004	·660	2·5	26·0	18·0
July 23	58, Thelwall Lane ...	·0014	·0005	·005	·660	2·3	34·0	22·0
Aug. 21	Bath Street	·0012	0008	·006	·56	2·1	35·0	22·0
Sept. 30	Garven House	·001	·0006	·0048	·600	2·25	34·0	22·0
Oct. 27	42, Lythgoes Lane ...	·001	·0005	·010	·530	2·3	36·0	22·0
Nov. 27	136, Liverpool Road ...	·0008	·0004	·008	·700	2·4	34·0	22·0
Dec. 22	28, School Brow	001	·0008	009	·600	2·2	36·0	22·0

SAMPLES OF WATER (Domestic Supply for the Borough)

Submitted to Professor Delépine, Public Health Laboratory, Manchester, for Bacteriological Examination during the year 1914.

Date.	Where taken.	Quantitative Analysis: Aerobic Micro-organisms growing in 3 days nutrient gelatine at 20°C. to 21°C.						Qualitative Analysis.
		Non-liquifying Bacteria.		Liquifying Bacteria.		Other Micro-organisms.		Bacteria associated with Sewage and Fæcal Pollution.
		No. of Colonies in 1 gramme.	No. of kinds of Bacteria clearly recognisable	No. of Colonies in 1 gramme.	No. of kinds of Bacteria clearly recognisable	No. of Colonies in 1 gramme.	No. of kinds of Bacteria clearly recognisable	
Jan. 23 ...	140, Gorsey Lane	8	2	7	3	—	—	Bacillus Coli Communis not found in 100cc.
Feb. 25 ...	Bank House	21	2	8	3	1	1	ditto.
Mar. 20 ...	1, Taylors Yard	15	2	2	2	1	1	ditto
May 1 ...	Aikin Street Hospital ...	5	1	1	1	—	—	ditto.
May 22 ...	32, Knutsford Road	1	1	3	2	—	—	ditto.
June 26 ...	1, Cloth Hall Yard	10	2	1	1	—	—	ditto.
July 23 ...	58, Thelwall Lane	12	2	1	1	1	1	ditto.
Aug. 21 ...	Bath Street	45	5	10	3	14	1	ditto.
Sept. 30 ...	Garven House	5	2	1	1	—	—	ditto.
Oct. 27 ...	42, Lythgoes Lane	12	2	2	2	1	—	ditto.
Nov. 27 ...	136, Liverpool Road ...	6	2	—	—	—	—	ditto.
Dec. 22 ...	28, School Brow	8	2	1	1	—	—	ditto.

SECTION III.

GENERAL SANITARY ADMINISTRATION.

MEAT INSPECTION.—There are 16 private slaughter-houses in the Borough ; 12 of these are licensed annually, and 4, which were in existence before 1875, are registered.

942 visits have been paid to the slaughter-houses, and, as far as possible, these visits were made during the time slaughtering was being carried on.

During the year 18 carcases were found to be affected with tuberculosis. In several instances the state of the carcase was reported by the butcher to the Health Department ; in a certain number of instances the Inspector was present during the slaughtering and detected the diseased condition. Our action in dealing with the carcases affected with tuberculosis is guided by the recommendations made by the Royal Commission.

In addition to the 18 tuberculous carcases, there were two other carcases condemned, the animals having been diseased or injured to such an extent as to render the meat unfit for human food.

The following table summarises the amount of unsound food which was either seized or surrendered during the year, and which was destroyed :—

	Quantity.	
	cwts. qrs. lbs.	
BEEF	78 3 0	
MUTTON	0 3 7	
PORK	17 3 12	
FISH	26 0 0	
SHEEP KIDNEYS (Frozen) .	10 dozen.	
RABBITS	109 head.	
POULTRY	41 head.	

FOOD POISONING.

No cases of illness that could be attributed to poisoning by food have come to the notice of this department during the year, and, as far as we are able, strict watch has been kept on all places where food is prepared.

BACTERIOLOGICAL EXAMINATION OF MILK SUPPLIED TO THE BOROUGH.

83 samples of milk taken within the Borough were submitted to Professor Delépine, Public Health Laboratory, Manchester, for bacteriological examination during the year 1913.

73 samples were certified Tubercle Bacilli not found (inoculation test).

10 samples were certified Tubercle Bacilli found (inoculation test).

The 10 samples in which Tubercle Bacilli were found were supplied from 8 farms outside the Borough and two within the Borough.

On visiting these 10 farms with a veterinary inspector a cow on each of 8 farms, and two cows on another farm, were found with apparently tuberculous udders and the finding of tubercle bacilli in samples of milk taken from these cows pointed to their being the source of infection. The affected cows were at once removed from the milking herd and kept isolated until slaughtered or otherwise disposed of.

In one case the source of infection was not found after an examination had been made of all the cattle upon the farm, but it must be pointed out that during the period in which the sample was being examined several cows had been sold off. Further samples taken from the bulk of the milk supplied from the farm were after examination certified "Tubercle Bacilli not found."

In addition to the 83 samples stated above, 39 further samples were submitted to check the milk from suspicious cows on the 10 farms stated.

FACTORIES, WORKSHOPS, WORKPLACES AND HOMEWORK.

1.—INSPECTION.

Including Inspections made by Sanitary Inspectors.

Premises.	Number of		
	Inspections.	Written Notices.	Prosecutions.
Factories (including Factory Laundries)...	114	7	...
Workshops (including Workshop Laundries)	303	8	...
Workplaces (other than Outworkers' premises included in Part 3 of this Report)...	991	6	...
Total	1408	21	...

2.—DEFECTS FOUND.

Particulars.	Number of Defects.			Number of Prosecutions.
	Found.	Remedied.	Referred to H.M. Inspect'r	
NUISANCES UNDER THE PUBLIC HEALTH ACTS: *				
Want of cleanliness	4	4	...	...
Want of ventilation	3	3	...	...
Overcrowding	...	...	...	...
Want of drainage of floors	...	...	...	...
Other nuisances	21	21	...	...
Sanitary accommodation — insufficient	6	4	...	...
Sanitary accommodation — unsuitable or defective	19	17	...	...
Sanitary accommodation — 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)... ...	...	...	...	...
Other offences ... ... (Excluding offences relating to outwork which are included in Part 3 of this Report)	...	...	...	...
Total	53	49	...	...

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

3.—HOMEWORK.

Outworkers Lists (Section 107):—	Wearing Apparel.	File Making.
Lists received from Employers twice in the year		
Lists	6	2
Outworkers	22	9
Lists received from Employers once in the year		
Lists	1	1
Outworkers	4	6
Outwork in Infected Premises (Sections 109, 110)		
Instances	...	...
Orders made (Sec. 110) ...	...	...

4.—REGISTERED WORKSHOPS.

Workshops on the Register (S. 131) at the end of the year:—		Number.
Important classes of workshops.	Bakehouses	59
	Boot and Shoe Repairers	35
	Clog Makers and Repairers... ..	6
	Dressmakers	31
	Milliners	24
	Tailors	15
	All Others	61
Total number of workshops on Register ...		231

5.—OTHER MATTERS.

Class.	Number.
Matters notified to H.M. Inspector of Factories:—	
Failure to affix Abstract of the Factory and Workshop Act (S. 133)	...
Action taken in matters referred by H M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (S. 5) — Notified by H.M.Inspector	22
Action taken in matters referred by H M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (S. 5) — Reports (of action taken) sent to H.M. Inspector ...	17
Other new Factories and Workshops	18
Underground Bakehouses (S. 101):—	
Certificates granted during the year	2
In use at the end of the year	Nil

HOUSING OF THE WORKING CLASSES ACTS, 1890—1903, and HOUSING AND TOWN PLANNING ACT, 1909.

Under the above mentioned Acts the following houses have been dealt with during the year 1913 :—

30, Oliver Street.	Closed.
32, ,, ,,	,,
34, ,, ,,	,,
36, ,, ,,	,,
1, Back Ellesmere Street.	Alterations and improvements made.
2, Porter Street.	Alterations and improvements to be made.
1 & 2, Barrows Yard.	,, ,, ,, ,,

Statement as to action taken during the year 1914 in regard to houses reported upon in previous years :—

18, Dial Street.	Demolition order made. House demolished.
20, ,, ,, ,, ,,	,,
22, ,, ,, ,, ,,	,,
1, 3, & 5, Dial Court.	Demolished by owner.
2 to 24, ,, ,, ,,	,,
37A, Golborne Street.	,, ,,
30, 32 & 34, King Street.	,, ,,

SECTION IV.

THE SUPERVISION OF THE MIDWIVES PRACTISING IN THE BOROUGH.

The duties of the Inspector of Midwives are as follows:—

(1) Paying periodical visits to each midwife's home to ascertain that strict cleanliness is observed, and to examine the midwife's bag and registers.

(2) Investigating in certain instances the midwife's method of practice while conducting a case of labour.

(3) Holding classes for the instruction of midwives and giving additional instruction, especially to the untrained midwives, as occasion arises.

(4) Keeping a record of all notices sent in by midwives in accordance with the rules of the Central Midwives Board.

(5) Investigating all cases of still-birth occurring in the midwife's practice.

(6) Investigating cases of Puerperal Fever.

(7) Making special inquiries in connection with any suspected neglect of duty on the part of a midwife.

During the year it was found necessary to report one Midwife to the Central Midwives Board for a breach of the rules and general incapacity. After hearing all the evidence the Central Midwives Board ordered the removal of her name from the Midwives Roll.

In addition on five occasions midwives were sent for and reprimanded for minor breaches of the rules, which were not quite serious enough to have the attention of the Board drawn to them.

There were, during 1914, 29 Midwives registered as practising in the Borough, 5 of these also having midwifery practices outside the Borough. Of these 29 midwives, 9 hold the certificate of the Central Midwives Board, 5 others have had some training while 15 have had no training, and two of these are unable to read or write.

The 2,271 children born (living and still-born) in the Borough during the year were attended as follows:—

By Doctors - - - - -		607 cases.
(Engaged for case previously) -	440)	
(Called in - - - - -	167)	
By Midwives - - - - -	1637	,,
In Union Infirmary - - - -	27	,,
	2,271	

The Midwives Act, 1902, forbade any uncertified woman attending a case of labour after April 1st, 1910, unless under the direction of a Medical Practitioner, and has thus given Local Authorities more complete control over midwifery practice.

SUMMARY OF WORK UNDER MIDWIVES ACT.

	1914.
Enquiries concerning still-births and abortions -	72
,, ,, cases of puerperal fever - (4 Doctors' cases, 6 Midwives' cases)	10
Number of visits to midwives and homes - -	126
Enquiries concerning cases attended by uncertified women who were acting as midwives - -	12
Visits to homes during lying-in-period in order to investigate midwives' work -	20
,, ,, of expectant mothers - -	273
Number of notices received from midwives of sending for medical help - - - -	779
,, of notifications by midwives of deaths of children before the attendance of a doctor - - - - - -	3
,, of classes held for the instruction of midwives - - - - - - -	4
,, of midwives visited *re* disinfection after exposure to infectious cases - -	8

In every case of difficulty the midwife must summon medical assistance and notify the Medical Officer of Health that this has been done.

During the year 779 notifications were received, and for the following cases:—

Difficult labour - - -	120
Malpresentation - - -	15
Ante partum hæmorrhage -	12
Illness during pregnancy -	20
Complication after labour -	114
Condition of infant - -	83
Miscarriage and still-birth -	26
Discharging eyes in infant -	389
	779

This number is nearly double the average number for past years, and is largely to be explained by the number of cases in which attention has been drawn to the fact that the infant's eyes were inflamed, as a result of the new regulations with regard to Ophthalmia Neonatorum. In addition, the fact that mothers now receive some financial assistance under the Insurance Act may make them less reluctant to send for a doctor when necessary.

INFANTILE MORTALITY AND CHILD WELFARE WORK.

The adoption of the Notification of Births Act in the Borough in the early part of the year 1910 has enabled the Health Department to obtain early information of all births, and nearly all homes where there are new-born babies are now visited within 10 days of the birth, except in cases in which a doctor is in attendance. These visits, 1,891 in number, were during 1914 paid by the Health Visitors, who were then able to give advice to the mother concerning the future feeding and general care of the child and at the same time ascertain whether the mother was receiving suitable food and attention.

The total number of births registered in the town during 1914, and belonging to Warrington, was 2,225. The number of births notified to us under the Act, however, was 2,226, and together with 45 not notified make a total of 2,271. The apparent discrepancy between the figures furnished to us by the Registrar and our figures obtained from the information placed at our disposal by the Notification of Births Acts is due to two things. Six weeks is allowed during any of which period a parent may register the birth of a child, whereas notification under the Act must take place within 36 hours. In addition, still-births have to be notified under the Act, whereas these are not registered.

Number of Births notified			by Doctors	189
,,	,,	,,	Midwives	1983
,,	,,	,,	Parents	27
,,	,,	,,	Union	27
			Not notified	45
				2,271

The Health Visitors have kept the children under observation during the first twelve months of their lives. As a rule, unless more frequent visits are deemed necessary, the subsequent visits have been paid at the end of the third, sixth, ninth, and twelfth month. It has thus been attempted to instruct the mother as to the ordinary care and feeding of the infant until it is twelve months of age.

In this connection 6,288 visits were paid by the Health Visitors.

218 enquiries have also been made as regards the deaths of children under twelve months of age.

During the year the two Mothers' and Babies' Welcomes, one in Catherine Street, Bewsey, and the other in Academy Street, were continued. These institutions are carried on by certain Voluntary Lady Helpers, under the auspices of the Health Committee and the Guild of Help, and are doing very useful work.

Each Welcome is open one afternoon a week and all mothers who have babies under twelve months of age and expectant mothers are invited to attend. The babies are weighed and short lectures given by one of the Health Visitors.

A great many mothers however will not bring their children, sometimes on account of their own clothes and sometimes on account of prejudice to the institution. Much of the work of the Health Visitors, therefore, is done in the homes of those who are too poor or too ignorant to attend or appreciate the advantages to be gained by regular attendance at the Welcomes.

It is hoped to arrange for a system of Medical Inspection or Infant Consultations in connection with these Welcomes, and to be of real value the age period will have to be increased to include all children under school age.

Medical Inspection of school children constantly reveals sufferers from certain defects or ailments which might not have occurred if attention had been called to the child's condition in earlier life.

This aspect of the question has been approached by the Health Committee, who appointed a third Health Visitor to deal especially with children between the ages of 1 and 5 or until they come under the supervision of the School Medical Service.

1,088 visits have been paid by the Health Visitors in relation to this part of the work, and 93 visits to make enquiries into deaths of children in this age period.

Statistics show that a great deal of the loss of life occurs during the age period one to two years, and figures are given for the past seven years in the case of Warrington.

The actual causes of these deaths are chiefly measles, whooping cough, diarrhœa and respiratory diseases, which diseases are largely preventible.

Infantile Mortality in Warrington since 1879.

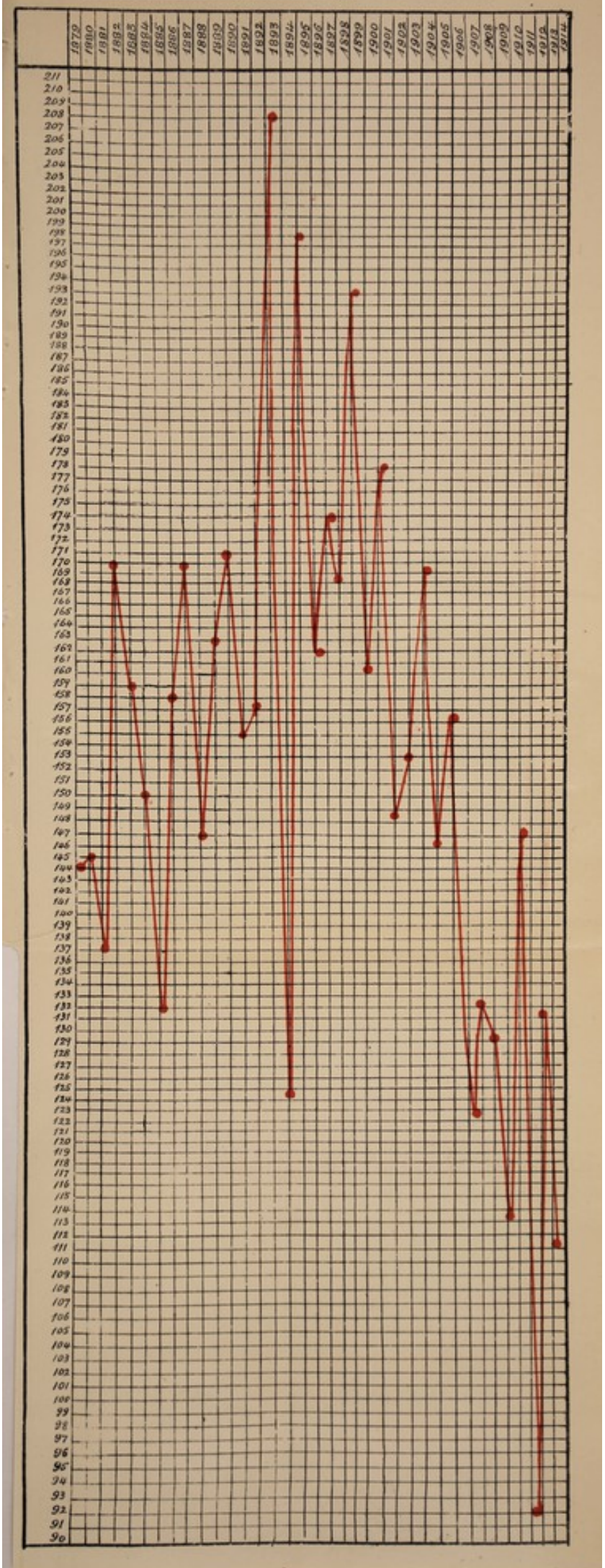
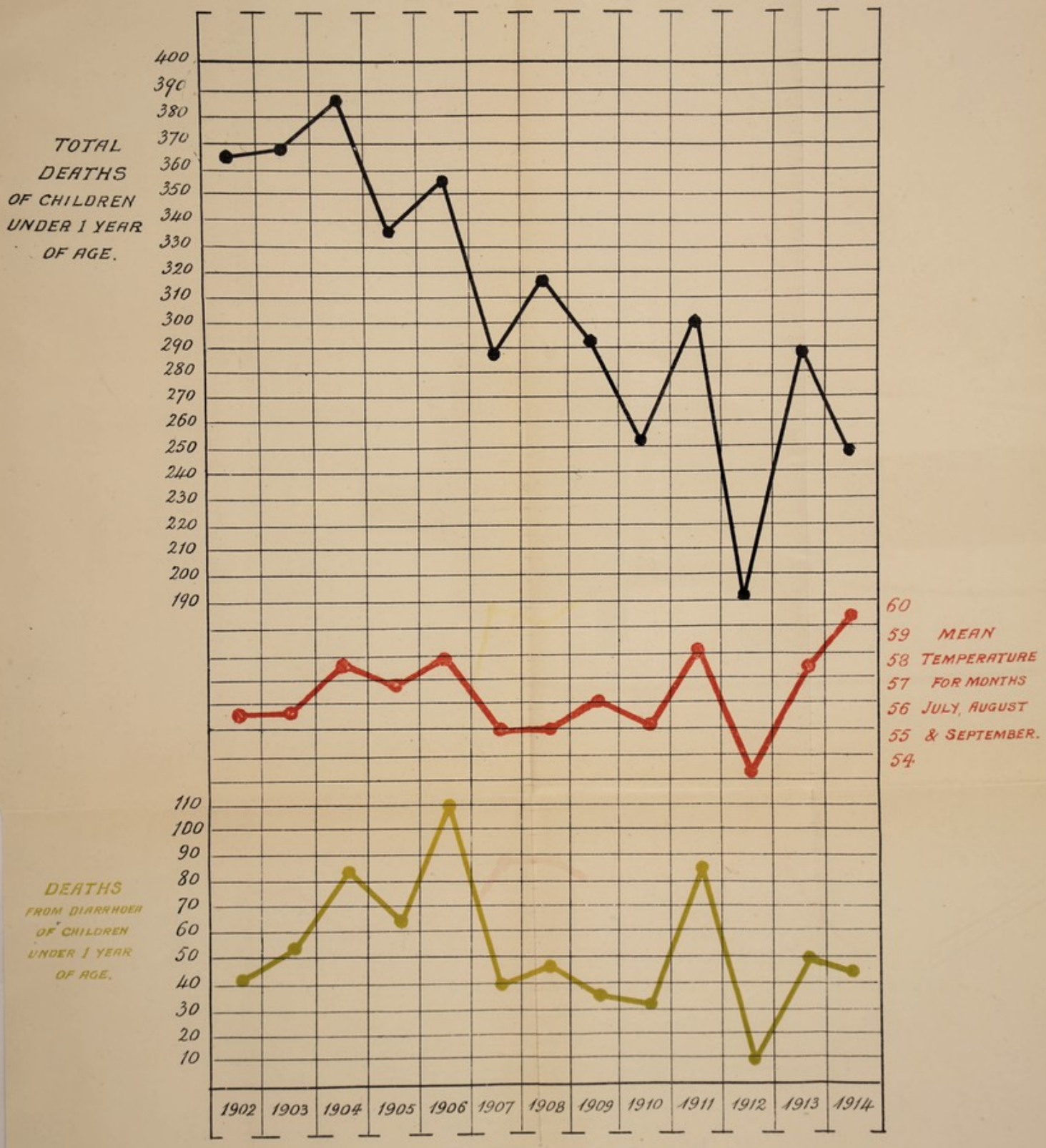


CHART shewing total Deaths and Deaths from Diarrhoea among Children under one year of age during the years 1902 to 1914, also the mean temperature for the months July, August and September for the same years.



DEATHS OF CHILDREN UNDER ONE YEAR AND OVER ONE YEAR BUT UNDER FIVE YEARS OF AGE, OCCURRING DURING THE YEARS 1908 to 1914.

Year.		Under 1.	1 to 2.	2 to 3.	3 to 4.	4 to 5.
1908	...	318	107	50	23	25
1909	...	292	140	66	30	20
1910	...	252	72	23	14	8
1911	...	299	106	28	24	14
1912	...	192	92	58	19	14
1913	...	289	101	29	22	13
1914	...	249	96	43	16	20

The total number of deaths in children under 1 year of age in 1914 was 249, compared with 289 the previous year, so that the infantile mortality or number of deaths per 1,000 infants born during the year was 111 compared with 131 in 1914. (*See* Table IV, page 32.)

The death-rate among illegitimate children was much higher than among legitimate as is usually the case, the rates being respectively 250 and 108·6 per 1,000 births.

The birth-rate 29·7 during 1914 was the same as last year, and very good compared with the rest of the country.

A high infantile death-rate almost invariably follows a high birth-rate, but it is gratifying to note a general decline in the death-rate for the first two years of life, and this in spite of the fact that the number of deaths from infantile diarrhœa was 57.

Year after year one is struck by the number of deaths due to congenital debility, malformation, and other ailments due to ante-natal conditions. These for the year under consideration total 86, which is more than a third of the infant deaths for the year.

Attention is drawn to this in my opening letter, and nothing but the inauguration of a Maternity Centre for advice to pregnant women, and in certain cases a home for Lying-in, will help to diminish a large number of these preventible deaths.

The chart (page 79B) shows very clearly how in recent years a rise or fall in the Infantile Mortality Rate has accompanied a rise or fall in the average temperature for the 3 months July, August and September. In the warmer summers Diarrhœa has followed the higher temperature, and was responsible in the year 1911 for raising the Infantile Mortality Rate to a figure which was more characteristic of earlier times (*see* chart). It may be undoubtedly accepted that a high summer temperature can only affect the Infantile and other death rates through certain defects

in sanitation and the heavy infant death toll levied in the years, which as far as the weather is concerned are the brightest, will only cease when these defects are remedied. Greater cleanliness both within and in the immediate surroundings of the dwellings, and the extermination from inhabited districts of all collections of filth and refuse, whether small or large, is a prime essential.

SUMMARY OF WORK PERFORMED BY THE HEALTH VISITORS.

Infant first visits	1891
Infant revisits	6288
Infant death enquiries	218
House inspections	982
Visits to Welcomes	89
Other visits	293
Health Talks	89
Visits to Children over 12 months	1088
Nuisances reported	42
Visits to expectant Mothers	273
Enquiries into deaths ages 1—5 years	93

OPHTHALMIA NEONATORUM.

The following details concerning the cases of this disease were collected during the year :—

Notified.	Age at onset.	Age when treated.	Where treated.	Length of treatment.	Mothers attended in confinement by	Result and Remarks.
May 27th	5 days	6 days	At home	2 weeks	M	Good } Twins. Taken in Union June 6th, 1914.
May 27th	5 days	6 days	At home	2 weeks	M	Good }
June 8th	(not given)	16 days	Union Infirmary	?	M	Not known—Died in Union April, 1915, from Congenital Specific Disease. Mother died June 14th, Pneumonia and Puerperal Fever.
June 24th	1 day	1 days	At home	4 weeks	Dr.	Good.
July 2nd	2 days	5 day	At home	4 weeks	M	Good.
July 22nd	2 days	2 days	At home	2 weeks	Dr.	Good.
July 24th	1 day	5 days	At home	10 days	Dr.	Good.
July 27th	2 days	2 days	At home	2 weeks	M	Good.
July 28th	4 days	4 days	At home	1 week	M	Good.
July 28th	4 days	4 days	At home	1 week	M	Good.
July 28th	5 days	5 days	At home	1 week	M	Good.
July 31st	2 days	2 days	Union Infirmary	?	Dr.	Died Sept. 14th, Congenital Syphilis (Illegitimate) in Union.
Aug. 26th	2 days	3 days	At home	1 week	M	Good.
Sept. 28th	10 days	16 days	At home	3 weeks	M	Good.
Nov. 10th	3 days	4 days	At home	3 weeks	M	Good.
Dec. 3rd	2 days	3 days	Manchester Eye Hospital	7 weeks	Dr.	Good. (Bacteriologically examined.)
Dec. 16th	4 days	4 days	At home	3 weeks	M	Good.
Dec. 20th	5 days	6 days	At home	3 weeks	Dr.	Good.

Number of cases 18, out of 2086 living births = ·86 per cent.

COUNTY BOROUGH OF WARRINGTON.

THE

Sanitary Inspector's Report

FOR THE

YEAR ENDING 31st DECEMBER, 1914.

To the Chairman and Members of the Health Committee.

GENTLEMEN,

I have pleasure in submitting to you my Fourteenth Annual Report of the Sanitary Work and other duties carried out during the year 1914.

In compiling this report I have endeavoured to be as brief as possible. The statements show the number of visits paid to various premises which have to be kept under observation by the Sanitary Staff.

The number of nuisances dealt with as stated on page 83 is not quite as large as in previous years, but this is to be accounted for partly by the fact that a considerable increase has been necessary in the visits which have had to be paid to homes in consequence of the prevalence of infectious disease (page 84) and partly through the changes which have taken place in the Staff.

On page 70 a statement is given as to the amount of food which has had to be destroyed owing to its diseased or unsound condition, and on page 87 a summary showing the result of the samples of food submitted for analysis.

While dealing with the food question, I wish to refer to the improvements made in the Fish Market by the removal of the old wooden stalls, and I hope that before the next annual report is issued that the Old Market Hall, if it is not demolished, will be closed and stalls made for the tenants to offer their food stuffs under better sanitary conditions.

The year closed with the price of food considerably in excess of the prices in the previous year and with no immediate prospect of a reduction, especially in the meat trade.

During the latter half of the year a great many men who had practically made the Common Lodging House their home enlisted in the Army, but owing to the great demand for labour in Warrington a great influx of men from towns in which work was not so plentiful soon occupied their beds.

SUMMARY OF NUISANCES DEALT WITH DURING THE YEAR.

Overcrowded houses	19
Insufficiently ventilated rooms	9
Dirty dwellings	14
Defective floors	21
,, walls and ceilings	22
Dirty ,, ,, ,, ...	17
Defective roofs	34
,, spouting	74
Defective slopstones and pipes	54
Blocked drains	189
Choked gulleys	18
Defective drains	25
Defective pavement in yards and passages ...	75
Damp basements	13
,, walls of dwellings...	27
Pools of stagnant water	8
Defective pail closets and ashplaces	103
,, water-closets	16
Insufficient closet accommodation	4
Animals kept so as to be a nuisance	7
Accumulation of manure	20
,, ,, refuse...	8

Dirty walls of passages and yards	177
Dangerous yard and closet walls	11
Defective Middensteads...	7
Miscellaneous	51
Total	1024
Complaints received from Inhabitants... ...	46
Preliminary Notices sent calling attention to nuisances	355
Legal Notices served to abate nuisances ...	231

BYELAWS FOR THE PREVENTION OF NUISANCES ARISING FROM THE KEEPING OF ANIMALS.

Since the adoption of the above byelaws a more rigid supervision has been kept over premises where animals are kept to see that there is a suitable receptacle for manure, and further that the manure is regularly removed in accordance with the times stated in the byelaws, viz., once at least in every week during the months of April, May, June, July, August, September and October, and once at least in every fortnight during the months of January, February, March, November and December. Many applications have been made to the Corporation to remove the manure from various premises, chiefly because of the small quantity which accumulates in the time specified in the byelaws and frequently owing to the farmers being so occupied with their farm work that they will not send at the stated periods.

INFECTIOUS DISEASES.

The following is a statement of the visits paid during the year :—

Visits to premises where cases of Scarlet Fever, Diphtheria, or Enteric Fever occurred ...	1263
Revisits to premises where cases of Scarlet Fever, Diphtheria, or Enteric Fever had occurred to ascertain as to contacts, &c. ...	617
Revisits to premises where cases of Scarlet Fever or Diphtheria have been treated at home	1365
Visits to homes of children reported by Education Department as being absent from School owing to either Measles, Whooping Cough, Chickenpox or Mumps...	3621
Revisits to homes of children suffering from either Measles, Whooping Cough, Chickenpox or Mumps	3005

Visits to homes when children are absent from school with a Sore Throat or suspicious Rash	549
Visits to premises *re* cleansing and disinfection after cases of infectious disease	620
Total	11040

Information obtained as to cases of infectious disease is submitted to the Medical Officer of Health, and the matters contained therein dealt with according to his instructions.

Attention was also paid to the disinfection of the premises, bedding, and clothing, especially after cases of notifiable infectious disease, and also to the cleansing and stripping of the walls where necessary.

4,221 Notices have been sent to the Headmasters or Mistresses of the various Day and Sunday Schools in the Borough, intimating to them any case of infectious disease occurring amongst the scholars attending at their school, and also stating the period during which both the sufferer and any child who has been in contact must be excluded from school.

DISINFECTION.

Month.	Houses.	Articles.
1914—January ...	80 ...	667
February ...	69 ...	476
March ...	82 ...	643
April ...	85 ...	467
May ...	109 ...	944
June ...	99 ...	872
July ...	93 ...	827
August ...	114 ...	1423
September ...	148 ...	1474
October ...	144 ...	1487
November ...	150 ...	1937
December ...	115 ...	1027
	1,228	12,244

In addition to the visits in connection with infectious disease there were 2,419 visits paid to homes of persons notified as suffering from tuberculosis. The details of this work are given on pages 48 and 49.

267 Notices were served for the stripping and cleansing of premises where certain cases of Infectious disease had been resident.

SMOKE OBSERVATIONS DURING THE YEAR 1914.

109 observations have been taken of 60 chimneys. Special attention has been paid to the chimneys upon premises where offences have previously been committed, and I am pleased to be able to report that there has been a marked improvement.

BAKEHOUSES.

169 Visits have been paid to the 61 Bakehouses which are in use within the Borough. The sanitary control of the Bakehouses is carried on under the Public Health Acts and the Factory and Workshops Acts.

COWSHEDS AND MILKSHOPS.

There are 86 Milkshops and 12 Registered Cowsheds within the Borough. 269 inspections have been made of the Milkshops, and 67 inspections of the Cowsheds and Cattle kept therein.

COMMON LODGING-HOUSES.

There are 36 Common Lodging-houses within the Borough registered to accommodate 741 persons: 1,103 visits have been paid to them, and a strict watch kept over travellers lodging therein with a view to preventing the spread of infectious diseases, to see that there was no overcrowding and that the requirements of the byelaws were carried out. 19 cases of tuberculosis have been reported at registered Common Lodging-houses during the year.

HOUSES LET IN LODGINGS.

There are 15 houses within the Borough registered as above; 40 visits have been paid to them. The number of houses registered under the above heading have gradually diminished during the last ten years, but recently owing to scarcity of cheap dwelling-houses the furnished apartment has been resorted to in the centre portion of the town.

CANAL BOATS.

98 Boats which were found berthed on the River Mersey within the Borough of Warrington were inspected during the year.

The following infringements of the Canal Boats Acts and Local Government Board Regulations were found, and dealt with.

1 Boat. Cabins required repainting.

2 Boats. Defective portions of deck over cabins.

1 Boat ,, water cask.

There was no overcrowding in any of the cabins, nor cases of infectious disease notified from canal boats.

Warrington is not a Registration Authority under the Canal Boats Act.

THE SALE OF FOOD AND DRUGS ACTS, 1875—1907.

During the year 237 samples were submitted to the Public Analyst to be analysed. The following statement gives the number of genuine and adulterated samples, and the proceedings taken against the owners of adulterated articles.

	Examined.	Adulterated.	Extent of Adulteration and action taken.
Milk	75	4	No. 464. Cream reduced 3·6% below standard. Retailer warned by Inspector. No. 465. Cream reduced 3·4% below standard. Retailer warned by Inspector. No. 501. Cream 33% below standard. Retailer fined by Magistrates 20s., including costs. No. 546. 1% water added. Warned by Inspector.
Cream	6	—	
Butter	51	1	No. 568A. Informal sample. Margarine.
Margarine	4	—	
Cheese	25	—	
Lard	9	—	
Flour	1	—	
Tea	3	—	
Coffee	9	—	
Sugar	10	—	
Jam	1	—	
Pepper	1	—	
Beer	23	—	
Vinegar	2	—	
Salmon	2	—	
Herrings	1	—	
Ground Rice ...	2	—	
Arrowroot	1	—	
Glycerine	1	—	
Camphorated Oil	1	—	
Baking Powder ...	4	—	
Green Peas	1	—	
Cream of Tartar ...	2	—	
Mincemeat	2	—	
Total ...	237	5	= 2·1 per cent.

The samples of Milk were also examined for the presence of preservative.

Upon the receipt of the Analyst's Certificate stating that a formal sample was adulterated, the case was reported to the Health Committee and the offender afterwards dealt with in accordance with their instructions.

All samples of Milk certified by the Public Analyst to be below the Board of Agriculture standard are traced back to the cows supplying, and in this way very valuable information has been obtained.

The Milk and Cream Regulations, which became operative on the first day of October, 1912, make it an offence to add any preservative substance to milk intended for sale for human consumption; and also imposes restriction on the use of preservatives in cream. All receptacles containing preserved cream must now be labelled in accordance with these Regulations.

Two persons were summoned before the Health Committee and reprimanded for offences against the Margarine Act.

Ice-cream.

There were 61 premises within the Borough where Ice-cream was manufactured during part of the year. Under the Warrington Corporation Act, 1911, very useful powers were obtained, dealing with the inspection of the premises where ice-cream is manufactured or sold, and the materials or commodities or articles of food upon the premises.

The Shops Act, 1912.

This Act came into operation on the first day of May, 1912. It enjoins that every Shop Assistant shall on at least one week day in each week not be employed about the business of a shop after half past one o'clock in the afternoon.

It also fixes definite intervals for meals and the providing of seats behind the counter for female shop assistants.

The term Shop Assistant includes persons engaged in the business of a barber or hairdresser, the sale of refreshments or intoxicating liquors, and retail sales by auction.

The Act also implies that certain shops shall be closed for the serving of customers not later than one o'clock in the afternoon on one week day in every week.

The enforcing of this section of the Act is very difficult, for while in the centre of the town you have shops catering for one definite trade, the shops in the outskirts carry on usually four

or five different trades certain of which are exempted from this section of the Act, and while customers are permitted to enter the shops to purchase an exempted article, it is a great temptation to the Shop-keeper to supply one of the unexempted articles when asked for it. The shop-keepers within the Borough have been informed of the requirements of the Act and as to the various notices necessary to be fixed up in the shop, both as regards their assistants and the closing of the shop.

A petition was received from several Boot and Shoe Dealers within the Borough, asking the Local authority to make a Closing Order for their class of shops. A Central Area was fixed and the necessary notices issued, but upon a vote being taken of the Boot and Shoe Dealers in the area I am sorry to report that the majority voted against the Order.

CONTAGIOUS DISEASES (ANIMALS) ACTS AND ORDERS OF THE BOARD OF AGRICULTURE.

Swine Fever (Regulation of Movement) Order, 1908.

It is still necessary to obtain a movement licence from the Health Department to bring store swine into the Borough from districts outside Lancashire, but considerable benefit is derived by both butchers and farmers under the arrangement that fat swine for slaughter can be removed into the Borough on the licence of the Inspector for the district in which the pigs had been kept.

There were no cases of Swine Fever, Foot and Mouth Disease, Parasitic Mange, Gander, Farcy, or Anthrax in cattle dealt with in this Borough during the year 1914.

Since the outbreak of the War quite a number of Orders made under the Diseases of the Animals Act have been suspended, the chief of these being the Tuberculosis Order, 1914. The paying of compensation under this Order has been the means of getting rid of a large number of diseased cattle. Cattle keepers and dealers were also paying more attention to abnormal conditions in their stock.

REFERENCES TO OTHER DEPARTMENTS.

Referred to Borough Surveyor	64
,, ,, Water Engineer	15
,, ,, Cleansing Superintendent	66

The references to the Borough Surveyor comprise blocked drains and defective pavement in streets and back passages.

The references to the Water Engineer are mainly defective fittings resulting in waste of water.

Those made to the Cleansing Superintendent are for want of ashtubs and pails, defective ashtubs or leaking pails, or the non-removal of house refuse.

SUMMARY.

Workshops within the Borough	183
Bakehouses ,, ,, ...	61
Slaughter-houses ,, ,, ...	16
Unregistered premises where brawn, potted meats, etc. is prepared and sold in small quantities within the Borough	137
Milkshops ,, ,, ...	86
Cowsheds ,, ,, ...	12
Ice-cream makers' premises within the Borough	65
Common Lodging-houses ,, ,,	36
Houses Let in Lodgings ,, ,,	15
Tripe Boilers ,, ,,	3
Knacker's Yard ,, ,,	1
Gut Scrapers ,, ,,	1

In conclusion my thanks are due to the District Inspectors and Clerks for their valuable help in carrying out the ever increasing work of the Department. Their ready response to perform any duty devolving upon them is both gratifying and worthy of mention.

WALTER T. FLOOD,

Chief Inspector of Nuisances.