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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 1913,

ALSO

THE REPORT OF THE INSPECTOR OF NUISANCES.



WARRINGTON
PRINTED BY MACKIE AND CO. LTD.

County Borough of Warrington.

1913-14.

HEALTH COMMITTEE.

Mayor :

MR. COUNCILLOR PETER PEACOCK.

Chairman :

MR. ALDERMAN JAMES EVANS, J.P.

Deputy-Chairman :

MR. ALDERMAN BURTON, J.P.

MR. ALDERMAN TINNION, J.P.	COUNCILLOR DR. JOSEPH, J.P.
„ COUNCILLOR ARCHER	„ „ McKEE.
„ „ BROADHURST	MR. COUNCILLOR SHAW.
„ „ HAWTHORN	„ „ WILKINSON, J.P.
„ „ JENKINS.	„ „ 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 MONKS.

† ° JAMES SNAILHAM.

† ° BENJAMIN KNOWLES.

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

Inspectors of Midwives and Health Visitors :

† MISS EDWARDS. † ° MRS. ALLCOCK.

School Nurse :

x MISS ADA PHILLIPS.

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.

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TO THE CHAIRMAN AND MEMBERS OF THE
HEALTH COMMITTEE.

GENTLEMEN,—

I beg to submit to you my first Annual Report on the sanitary condition of the Borough, namely, that for the year 1913.

VITAL STATISTICS.—The birth-rate for Warrington shows an improvement over the two previous years and is higher than that for England and Wales as a whole or than the average for the 96 great towns.

The general death-rate for the year was 17·2, a figure somewhat greater than the corresponding rate for the previous year.

The actual death-rate for the Borough is 15·9 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 24.

The following table gives the general and infantile death-rates for the Borough and the 96 great towns of England and Wales during the years 1912 and 1913 :—

		General Death-Rate.	Infantile Death-Rate.
Warrington - - {	1912	15·7	92
	1913	17·2	131
96 Great Towns {	1912	14·6	101
	1913	14·7	117

In the table on page 30 a list of the causes of and ages at death will be found. The greatest number of deaths have been due to bronchitis or pneumonia or to tuberculosis, and the death-rates from these diseases show an increase on the preceding year. These together with a higher rate of infantile mortality chiefly made up of cases of diarrhoea and enteritis are the main reasons for a higher general death-rate.

A table on page 21 compares some of the principle 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 many rates there is an improvement over last year.

The question of infantile mortality is referred to on page 68.

UNCERTIFIED DEATHS.

Attention must again be called to the matter of uncertified deaths in this Borough.

The proportion of such deaths to those that are certified by a medical man is extremely high, in fact, it is the highest in this country in the Great Towns.

From the table on page 21 it will be seen that in Warrington during 1913, 4·8 per cent. of the deaths were not certified compared with an average of only ·8 per cent. for the 96 great towns of England and Wales.

This necessarily means that our proportion of inquests is low compared with these other towns.

In the 96 great towns an average of 9 inquests are held to 1 uncertified death whereas in this town there are more uncertified deaths than inquests.

On page 26 a list is given of the causes to which these deaths are attributed together with the ages of the persons.

We have nothing but the word of relations and others as a guide to the cause of death, so in statistical returns these deaths are grouped under "other causes" as it is obviously impossible to rely on them being correct enough for inclusion under the diseases given.

Take for instance such causes as apoplexy at age 9, heart failure at age 7 years, or such an ambiguous cause as "a fit," all of which are found in the table on page 26 for the year under consideration.

But even if these are valueless for statistical purposes there is another more important point and that is that failure to hold inquests may act as a cloak for crime. Especially is this so in

the case of infants. It will be seen that among the 28 uncertified deaths of infants under 1 year of age, 21 or 75 per cent. are ascribed to "convulsions," whilst among those that are duly certified only 8 or 3 per cent. are attributed to this cause out of a total of 261.

INFECTIOUS DISEASES.

During the year under report scarlet fever has been more prevalent than during the last 3 years, but it is gratifying to note that the death-rate from this disease is lower.

Careful inquiries have been instituted in every case notified, but nothing was discovered to account for the unusual prevalence.

The incidence of this disease has been high throughout the country during the year 1918, and a table is given on page 45 showing the number of cases notified together with their rate per 1000 inhabitants for the different county boroughs of Lancashire and for the whole of England and Wales.

Undoubtedly one great cause of the amount of infectious disease seems to be the utter indifference of a certain class of mother to the dangers not only of scarlet fever and diphtheria but also of measles and whooping cough. After they have been told by the medical man in attendance that the case is infectious they take no precautions 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. Most cases which do not call in a doctor are warned as to the seriousness and risk of infection by an Inspector of the Health Department. 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.

The death-rates from all the infectious diseases except whooping cough are lower than last year as is seen from the figures on page 21. 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.

PAWNSHOPS AND DISEASE.

I should like to draw attention here to what undoubtedly is a serious cause of the propagation of infectious disease in our midst. I refer to pawnshops and other businesses which deal in secondhand and old bedding and clothing.

A very large amount of pawning of clothing goes on regularly among the poorer classes, and parents also often take advantage of the fact that a child is ill to pawn some of the garments, quite regardless as to whether the child is suffering or not from an infectious disease.

These clothes when pawned are made up into bundles and packed away on shelves in the shops. Should the pledge be redeemed by the owner and the clothing happen to be infectious the infection is more or less limited to the original household unless this bundle has infected others with which it was in contact, but it is otherwise if the pledge is not recovered within the stipulated period.

In most pawnshops one day a week is set apart for holding a sale of garments which have been pledged and not redeemed. The bundles are opened among a crowd of women who buy what articles they need and by taking these things home may disseminate infection widely throughout that neighbourhood. In numerous instances this clothing too is found to be verminous.

It is not known exactly how long infection may remain in clothing, and although this time must vary for the different diseases, it undoubtedly remains a long time under suitable conditions.

Of course as soon as the existence of a case of one of the notifiable diseases comes to our knowledge, steps are taken to disinfect as soon as possible not only the premises but any articles of bedding or clothing with which the patient has been in contact.

We have however to take into consideration the large number of cases of measles and whooping cough which diseases are not notified as well as a number of cases of scarlet fever

which remain unrecognised. In the poorer homes there is often much delay in calling in medical aid after the patient first shows signs of sickness so that there is great opportunity afforded for the infection of these homes.

Recently we had the case of a man who sent his daughter to pawn some of the bedclothes off his wife who was lying seriously ill with what eventually proved to be typhoid fever. Not only did the daughter contract the disease but the pawnbroker's assistant also developed typhoid fever from which he died.

It is very hard to trace cases of infection to pawnshops as parents will not as a rule admit dealings with them and often give false names and addresses to the pawnbroker. This is also complicated by the fact that goods are often taken to the pawnshop by neighbours for one another.

The whole question is a difficult one but something further must be done by disinfecting the clothing before re-distribution if we are to prevent what is assuredly a serious source of disease.

That there is a very large class of this business carried on is seen from the fact that one shop alone on the average deals with about 1,000 bundles per week.

CINEMATOGRAF EXHIBITIONS.

The present-day popularity of such places of amusement as Picturedromes, which offer a form of entertainment specially attractive to children and within the reach of their slenderest resources, must tend to the spread of infectious disease unless close attention is paid to the ventilation of these buildings and more care is taken by parents to keep away children who are either themselves in an infectious condition or have come from infected homes. It is by no means uncommon to find that a child who has been excluded from school on account of there being non-notifiable infectious disease, such a Measles and Whooping Cough, at home is allowed to visit a Picturedrome where he is a possible source of danger to other children who may be present.

If no ill-effects are to be produced on members of the audience every effort must be made to have the places of entertainment satisfactory from a sanitary point of view. The majority of picture halls are inadequately provided with means of ventilation, especially during performances. Windows are closed and either shuttered or curtained off, at any rate during performances in the day time, in order to prevent the entrance of light, which would interfere with the pictures on the screen. To remedy this, inlet and outlet ventilators should be provided on both sides of the hall, in order to allow a constant stream of fresh air to enter. Sunlight is an efficient germicide, and it is a pity that very little attempt is made to allow it to enter these buildings when possible at those times that performances are not taking place.

Sufficient sanitary accommodation must be provided and this should be so situated as to be separated by an intervening ventilated space from the body of the hall.

The attention of the Proprietors of Picture Halls in the Borough has been called to the above sanitary details and it is to be hoped that they will soon be remedied where necessary.

INFANT AND CHILD MORTALITY.

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 69 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.

As regards Diarrhœa, the chart on page 72B shows how this disease becomes especially prevalent during those years which have high mean summer temperatures, and it is evident that it can only be controlled during a hot summer by the strictest observance of the laws of sanitation. Greater attention should be paid to the scavenging and cleansing the poorer districts. The dirty and badly paved back-yard or common court, which is still to be found in various parts of the Borough, the uncovered ashbin, the pail closet with its stored up contents and the

middenstead with its collection of manure, are all potential dangers which become actual ones in a hot summer.

The Health Committee, recognising this, have made arrangements for a larger supply of water to be used during the summer months and for the more frequent cleansing of courts and passages in the poorer parts of the town.

The inhabitants themselves can help a great deal in this work if they will only burn all animal and vegetable refuse in their own houses and not place it in the ashbins where it becomes a favourable breeding place for flies.

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 last summer 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.

In a report on Sanitary Conveniences in Urban Districts published in 1913 by the Board, Warrington was shown to have 15,000 pail closets and 850 w.c.'s, a proportion of 94·6% to 5·4%.

This condition of things was worse than that occurring in any other of the 95 great towns of England and Wales. These figures however need amending up-to-date and are now

approximately 15,000 pail closets and 2,662 w.c.'s, a proportion of 84·9% to 15·1%.

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. But undoubtedly the time has come for the discussion of the question, and with this end in view 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.

TUBERCULOSIS.

The systematic efforts of the Health Committee towards the prevention and cure of this disease, which were a special feature of the Health Work of the Borough in preceding years, 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 62). By the Tuberculosis Order, 1913, made under the Diseases of Animals Act, 1894 to 1911, further powers have been obtained in this direction, Sections 2, 9, and 10 of the above order impose the following duties on the owners of cattle.

SECTION 2.—(1.) Every person having in his possession or

- (i) under his charge any cow which is, or appears to be, suffering from tuberculosis of the udder, indurated udder or other chronic disease of the udder; or
- (ii) any bovine animal which is, or appears to be, suffering from tuberculosis with emaciation; shall without avoidable delay give information of the fact to a constable of the police force for the area wherein the animal is, or to an Inspector of the Local Authority, and the constable or Inspector shall transmit the information to the Local Authority, who, if not themselves the Sanitary Authority, shall inform that Authority.

(2.) The person in possession or having charge of the animal shall forthwith take such steps as are necessary to secure compliance with Article 9 (*Precautions to be adopted with respect to Milk, &c.*) and Article 10 (*Detention and Isolation of Suspected Animals*).

SECTION 9.—(1.) The milk produced by any cow which is, or appears to be, suffering from chronic disease of the udder or tuberculosis with emaciation, shall not be mixed with other milk until the cow has been examined by a Veterinary Inspector in accordance with the provisions of this Order, and until the owner or person in charge thereof has been notified that this Article has ceased to apply to the cow; and all milk affected by this Article shall forthwith be boiled or otherwise sterilised, and any utensil in which such milk is placed before being so treated shall be thoroughly cleaned with boiling water before any other milk is placed therein.

SECTION 10.—(1.) Every person having in his possession or under his charge any cow which is, or appears to be, suffering from chronic disease of the udder, or any bovine animal which is, or appears to be, suffering from tuberculosis with emaciation, shall keep the animals isolated as far as practicable from other bovine animals, and also keep the animal in his possession or under his charge, until the animal has been examined by a Veterinary Inspector in accordance with the provisions of this Order and the owner or person in charge thereof has been notified that this Article has ceased to apply to the animal; provided that the animal may at any time be slaughtered by the owner or person in charge.

Before the slaughter of an animal which is found to be giving tuberculous milk, the Local Authority shall agree with the owner of the animal as to the value thereof in its condition at the time of valuation.

This is a marked improvement, inasmuch as it is applicable to both Urban and Rural Districts. Previous to this order the powers to deal with cows giving tuberculous milk were only such as could be obtained under special Local Acts. Under previous powers it was only necessary for the farmer to isolate his cow from the milking herd, and there was nothing to prevent him, even after he knew it was giving tuberculous milk, from selling the cow to a farmer in another part of the country for milking purposes. The bulk of the work under the Tuberculosis Order falls on the County Councils who administer the Order in Rural Districts, and it is to be hoped that active preventive work will be encouraged, otherwise bovine tuberculosis will continue to flourish and thus perpetuate the paying of compensation.

By the Public Health (Tuberculosis) Regulations, 1912, which came into force on the 1st day of February, 1913, every case of Tuberculosis (pulmonary or non-pulmonary) in the Borough has to be notified to the Medical Officer of Health within 48 hours of the Medical Practitioner becoming aware that a person is suffering from this disease. On page 39 a table will be found showing the actual notifications of the different forms of the disease at the different age periods received during

the past year, and immediately following this is another table showing what parts of the body were affected in the non-pulmonary cases. Other figures are given showing the incidence in the different wards of the town and the occupations of those affected.

Within our knowledge the number of persons suffering from pulmonary tuberculosis living in Warrington on the 31st December, 1913, was 285—from other forms of the disease 162.

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% to 7% of the specimens of sputum found on the public streets contained tubercle bacilli in a virulent form.

The two pavilions at Sankey Sanatorium have been kept in full use during the year, and insured patients have received treatment in this Institution under an arrangement made between the Health and Insurance Committees. A scheme is well in hand for altering and enlarging the Institution at Sankey.

The scheme involves the enlargement of the Sanatorium so as to accommodate 50 patients (these patients comprising both early and advanced cases) and the erection 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 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 greater part of 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

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 bound 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 over 50,000 persons died in England and Wales last year alone from Tuberculosis, it is seen that ultimate success will be worth any effort financial or otherwise that can be made to attain it.

HOUSING.

How to secure suitable houses at a low rental for the poorer classes is a difficult question at present in the Borough.

On page 22 tables are given showing the unoccupied houses, with their rentals, in July, 1911, and in July, 1913. The rapid diminution in the number of unoccupied dwellings is there seen, and at the time of writing this report the shortage is still greater.

THE PREPARATION OF ARTICLES OF FOOD.

Although the Public Health Acts afford control as regards the sanitary condition of premises in which food is regularly prepared on a large scale, there are many instances in which small shop-keepers prepare such articles as potted meat, brawn, meat-pies, etc., at irregular intervals and in small quantities without being subjected to any direct supervision or control under existing legislation. The premises in which the food is prepared in this casual way are frequently quite unsuitable for the purpose and cases of illness have been traced to the consumption of food prepared under these unsatisfactory conditions. It is very desirable that the preparing of all food which is to be offered for sale to the public should be restricted to premises specially registered for the purpose.

It seems that there are three main points to be considered in any attempt to improve the hygienic conditions of the preparation, storage, etc. of articles of food.

In the first place we must have further legislative powers to enable us to deal not only with the persons who prepare or sell these articles, but also with the premises in which they are prepared or sold.

Under this heading with other things will come the question of the open stalls of butchers, fishmongers and fruiterers shops. The only excuse I have ever heard advanced for having these windows open to the dust of the streets is that the shop would be stuffy if enclosed, but this infers surely that the shop is otherwise

inefficiently ventilated. It ought to be quite easy to have glass windows which would prevent the ingress of dust, at the same time having means of allowing a good supply of fresh air.

The second point I think is that the plans of all new dwelling houses should be submitted to the Health Authority of the district before they are finally approved by the Local Authority. It would then be possible to see among other things that proper provision was made in every home for the storage of food. (See page 71).

Thirdly the people must be educated to look after the food stuffs in their own dwellings, to protect it from flies, dust and vermin, and to take advantage of the accommodation for storage provided for them. In this direction a good deal can be done by public lectures, adult schools, Mothers' Welcomes and such agencies, but to my mind by far the most important is the teaching of the individuals in their own homes by efficient health visitors.

During the year under consideration an outbreak of ptomaine poisoning was traced to some brawn prepared by one of these small dealers. In this instance five persons in the borough and two families residing outside were affected.

A short account of this case will be found on page 62.

APPOINTMENTS OF HEALTH DEPARTMENT STAFF.

Dr. J. Coote Hibbert having resigned to take up the position of Medical Officer of Health and School Medical Officer at Blackburn, I was appointed to fill the vacancy. Dr. Lumb was appointed Assistant Medical Officer of Health in June, 1913. Nurse Spence resigned in August, 1913, after five years' work as School Nurse, and Nurse Phillips was appointed in her stead. Late in December Mrs. Allcock, one of the Health Visitors, resigned to take up a similar appointment at Willesden, and two Health Visitors were to be advertised for at the beginning of the following year.

To the members of the staff I tender my most sincere thanks for the willing and zealous way in which they have carried out their respective duties, and to Mr. Flood in particular I would acknowledge my indebtedness for his cordial and loyal assistance in carrying on the work of the Health Department.

I am, Gentlemen,

Your Obedient Servant,

G. W. N. JOSEPH.

SECTION I.

Vital Statistics.

SUMMARY.

Population (estimated to middle of 1913)	...	74,065
Population at Census, 1911	...	72,166
Area of Borough (acres)	...	3,115
Density of population (<i>i.e.</i> number of persons per acre)	...	23·77
Number of houses in occupation (middle of year)		14,763
Number of houses not in occupation	do.	169
Number of houses built during the year	...	87
Estimated average number of persons per house		5·01
Number of births (males, 1,065; females, 1,139)		2,204
Birth-rate per 1,000 living	...	29·7
Number of deaths (614 males, 564 females)	...	1,178
Death-rate per 1,000 living	...	15·9
Death-rate per 1,000 living corrected for age and sex distribution	...	17·2
Excess of registered Births over Deaths	...	1,026
Number of Marriages	...	679
Marriage-rate per 1,000 living	...	9·1
Phthisis Death-rate per 1,000 living...	...	1·56
Death-rate per 1,000 population from other forms of Tuberculosis	...	·43
Death-rate from all forms of Tuberculosis, including phthisis	...	1·99
Death-rate from diseases of respiratory organs other than Tuberculosis...	...	2·6
Infantile Mortality-rate (<i>i.e.</i> the number of deaths of children under one year per 1,000 births)	...	131

Comparison of the Birth Rate, the General, Zymotic, Infantile and other Death Rates of Warrington, with those for England and Wales for the year 1913. The figures for Warrington for the year 1912 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.						
	Total Deaths.		Deaths from						Diarrhoea 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.	Stan- dard- ized.	Enteric Fever.	Smallpox.	Measles.	Scarlet Fever.									Whooping Cough.	Diphtheria.	Violence.
Births.																		
England and Wales ..	23.9	13.7	13.4	0.04	0.00	0.28	0.06	0.14	0.12	0.53	23.41	109	7.5	80.3	21.2	91.6	7.2	1.2
96 Grt. Towns (including London)	25.1	14.3	14.7	0.04	0.00	0.34	0.07	0.17	0.13	0.52	29.33	117	8.2	84.1	27.8	91.3	7.9	0.8
145 Smaller Towns ..	23.9	12.8	13.0	0.05	0.00	0.30	0.05	0.13	0.11	0.44	24.73	112	6.9	79.7	14.7	92.6	5.9	1.5
England and Wales less the 241 towns	22.8	13.1	12.1	0.04	0.00	0.20	0.05	0.12	0.11	0.58	14.39	96	6.7	76.9	14.0	91.7	6.6	1.7
London	24.5	14.2	14.2	0.02	—	0.34	0.04	0.17	0.09	0.56	27.50	105	8.0	84.0	43.6	89.6	10.3	0.1
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
Warrington, 1912	28.3	14.5	15.7	0.12	0.00	1.14	0.13	0.10	0.15	0.46	11.1	92	9.4	96.7	23.1	92.5	4.4	3.1

The POPULATION as given us by the Registrar-General, and estimated to the middle of 1913 is 74,065.

RETURN SHOWING THE NUMBER OF DWELLING-
HOUSES AND LOCK-UP SHOPS OCCUPIED AND
UNOCCUPIED ON JULY 15TH, 1913 :—

Ward.	OCCUPIED.		UNOCCUPIED.	
	Houses.	Lock-up.	Houses.	Lock-up.
Town Hall ...	947	162	15	13
Whitecross ...	1,866	16	13	1
Bewsey ...	996	10	20	—
Orford ...	2,013	12	17	—
St. John's ...	2,046	34	30	—
Fairfield ...	2,066	27	18	—
Howley ...	1,302	66	19	9
St. Austin's ...	1,286	82	23	2
Latchford ...	2,241	34	14	2
	<u>14,763</u>	<u>443</u>	<u>169</u>	<u>27</u>

UNOCCUPIED HOUSES.

The following table goes to show the rapid diminution in the number of unoccupied houses in the Borough, especially of those at the cheaper rentals. Since July, 1913, another survey of the Borough has been made and it was then found that there were only 79 vacant houses, 21 of these untenanted ones were in the barracks and 30 of the remainder were at a rental of over 5s. per week. This leaves us with only a total of 28 unoccupied houses at a rental of 5s. or under, compared with 332 in 1911 and 116 in July, 1913.

The houses included in these lists are only those that are fit for habitation. There are a number of condemned and closed houses which have not been demolished :—

NUMBER OF UNOCCUPIED HOUSES.			AMOUNT OF RENT	
Year 1911.	1913.		PER WEEK.	
1 ...	1 ...	...	1s. 9d.	
1 ...	— ...	...	2s.	
12 ...	1 ...	...	2s. 6d.	
6 ...	7 ...	...	2s. 9d.	
15 ...	15 ...	...	3s.	
16 ...	9 ...	...	3s. 3d.	
27 ...	18 ...	...	3s. 6d.	
52 ..	— ...	...	3s. 9d.	
23 ...	33 ...	...	4s.	
43 ...	8 ...	...	4s. 3d.	
56 ...	11 ...	...	4s. 6d.	
42 ...	13 ...	...	4s. 9d.	
38 ...	— ...	...	5s.	
150 ...	53 ...	...	Over 5s.	
Total <u>482</u>	<u>169</u>			

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 ...	1909.	1910.	1911.	1912.	1913.
Town Hall	—	—	—	—	—
Whitecross	15	2	—	—	—
Bewsey	—	27	—	—	—
Orford	82	—	114	21	4
St. John's	—	—	2	—	—
Fairfield	99	107	33	33	25
Howley	10	9	21	—	4
St. Austin's	—	5	25	2	11
Latchford	31	52	26	43	43
Total	237	202	221	99	87

MARRIAGES.—There were 679 marriages during the year, the marriage-rate per 1,000 population being 9·1. In 1912 there were 617 marriages, giving a marriage-rate of 8·4.

BIRTHS.—There were 2,204 births (1,065 males, 1,139 females). The figures give a birth-rate of 29·7 as against 28·3 for 1912. The average for the ten years, 1903 to 1912 was 31·5 per 1,000.

The birth-rate in England and Wales for the year 1913 was 23·9 per 1,000 of the population, as against 23·8 for 1912. The average for the ten years, 1903 to 1912 was 26·3 per 1,000.

DEATHS.—1,192 deaths were registered as occurring in the Borough during 1913. Of these 267 occurred in public institutions, as follows:—

In the Infirmary	57	} 267
In the Workhouse	... ..	182
In the Fever Hospital	... ..	28

Included in the total 1,192, there were 52 deaths of persons who were non-residents in the Borough, 47 of whom died in local public institutions.

Eight deaths, occurring in the Workhouse, and two deaths at the Infirmary, accredited to Warrington, were those of vagrants belonging, so far as is known, to no particular locality.

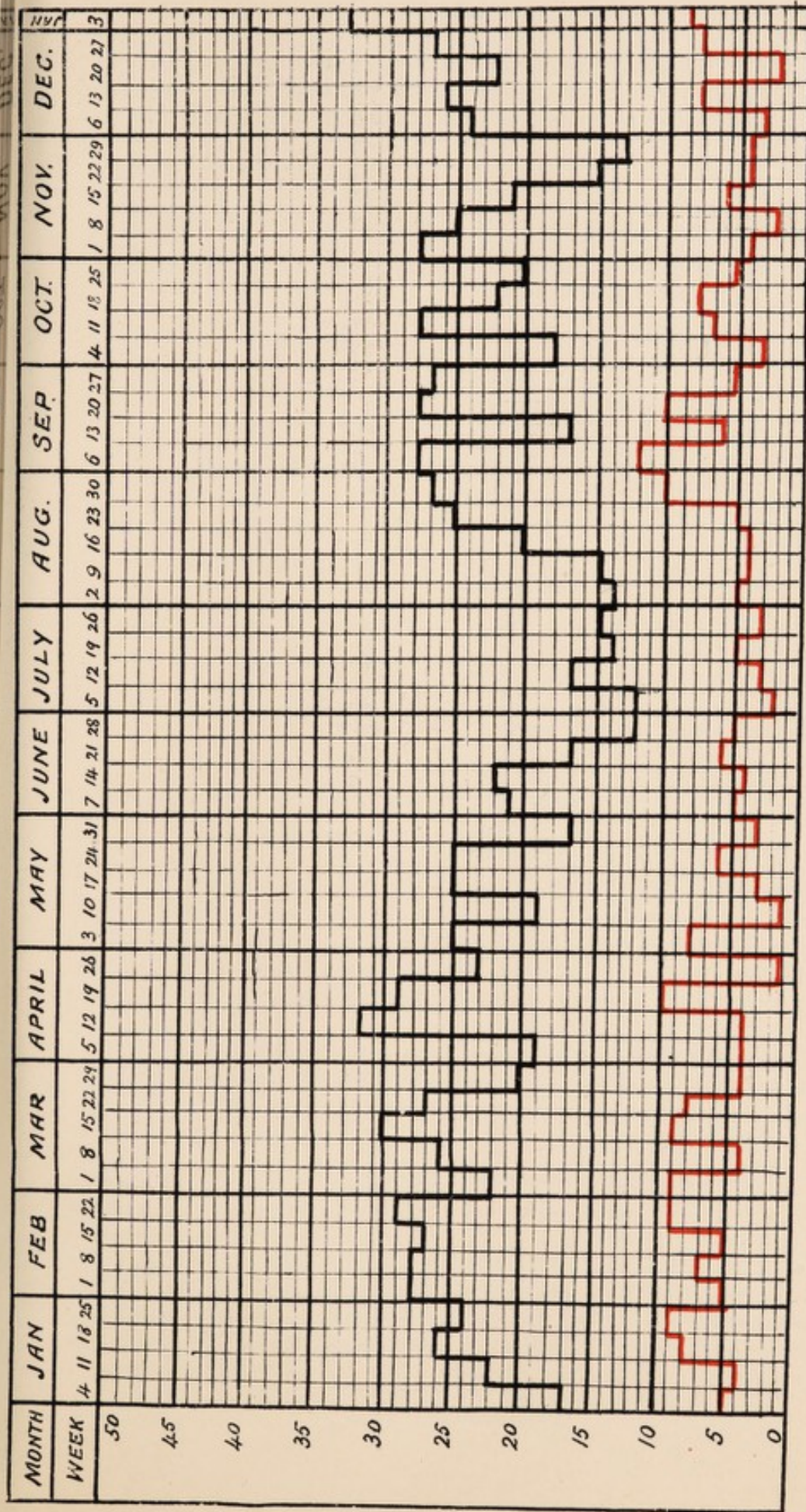
Thirty-eight deaths have been reported to me as having occurred outside the district, but as belonging to Warrington. These deaths occurred in the following Institutions and Districts:—

	No. of Deaths.		No. of Deaths.
Winwick Asylum	3	Liverpool	1
Sankey Sanatorium	7	Sankey	3
Manchester Infirmary	4	Penketh	2
Liverpool Infirmary	1	Blackpool	1
Liverpool City Hospital	1	Poulton	1
Prestwich Asylum	1	Lincoln	1
Warwick Asylum	1	Glossop	1
Strangeways Prison	1	St. Helens	1
Heaton Chapel	1	Frodsham	1
Stockton Heath	1	Walton Superior	1
Latchford Without	1	Grappenhall	1
Runcorn	1	Ellesmere	1

Deducting the deaths of the 52 non-residents from, and adding the deaths of the 38 residents dying outside the Borough to the registered number 1,192, we get a figure 1,178, which represents the actual number to be credited to Warrington. The crude death-rate calculated on this figure is 15·9.

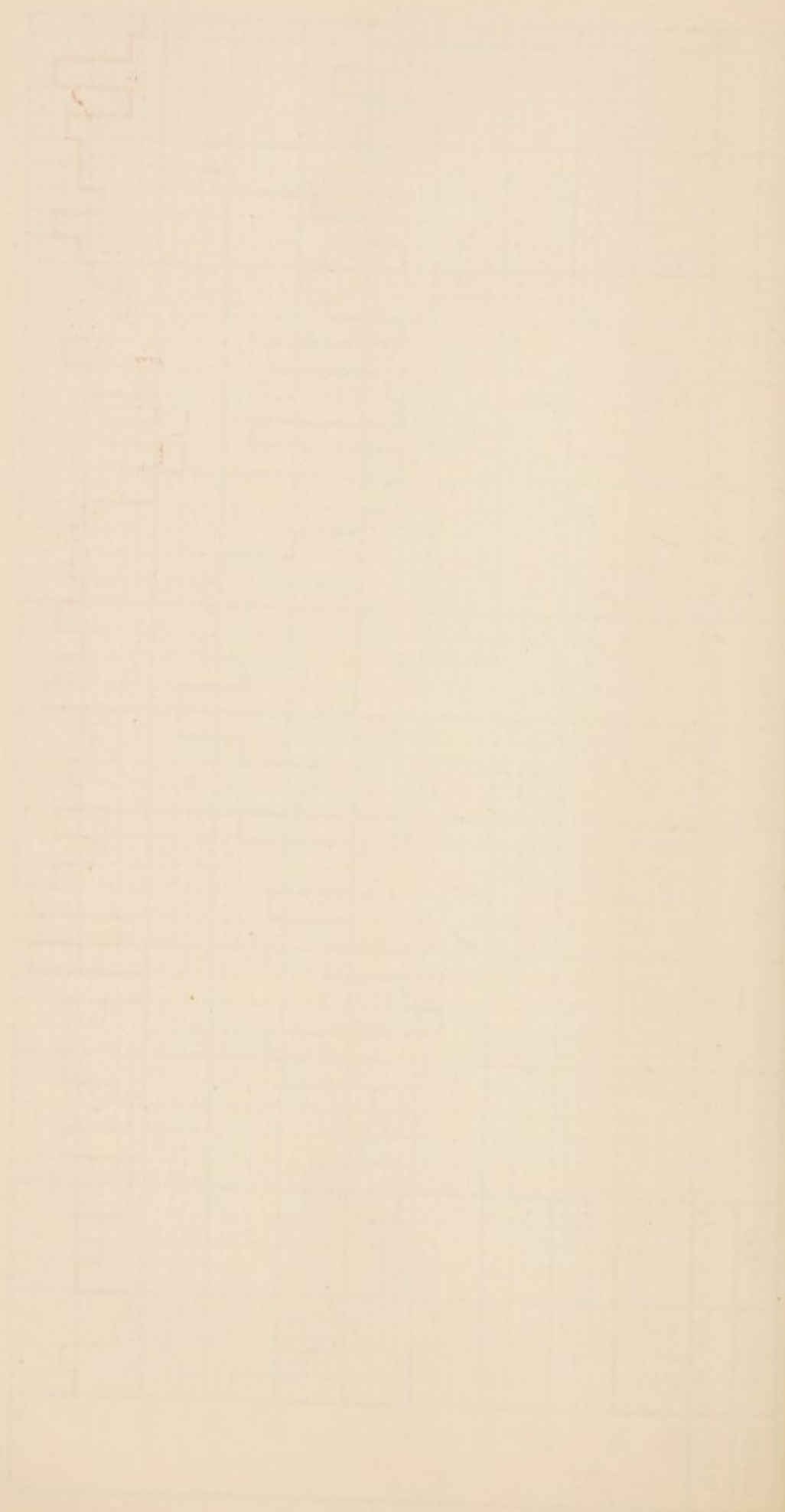
Now it is known that the death-rate is higher amongst males than amongst females and also that it is relatively low amongst young adults as compared with the very young and the aged. It would therefore be misleading as a test of the relative healthiness of various districts to compare together the rates 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 (15·9) has to be multiplied by a factor 1·0861 in order to get the corrected death-rate 17·2. 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 compar-



— Number of Deaths registered each week during the year 1913 at all ages.

— " " " " " " " Children under one year.



ing 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	77	70	147
3 6 „	34	20	54
6—12 „	40	48	88
Totals under 1 year ...	151	138	289
Over 1 and under 2 ...	46	50	96
„ 2 „ 3	18	14	32
„ 3 „ 4	6	13	19
„ 4 „ 5	7	11	18
Totals 1 to 5 years ...	77	88	165
Over 5 and under 10... ..	15	20	35
„ 10 „ 15... ..	11	9	20
„ 15 „ 25... ..	30	23	53
„ 25 „ 35... ..	55	24	79
„ 35 „ 45... ..	50	45	95
„ 45 „ 55... ..	64	45	109
„ 55 „ 65... ..	59	60	119
„ 65 „ 75... ..	66	60	126
„ 75 „ 85... ..	31	44	75
Over 85	3	10	13
Totals at ages over 5 ...	384	340	724

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 Measles and Diphtheria, are somewhat in excess of the average for the 96 great towns.

The DEATH-RATE for the DISEASES OF THE RESPIRATORY ORGANS other than those of tuberculous origin was 2·6 per 1,000 population. The figures for preceding years are given below :—

1901. 1902. 1903. 1904. 1905. 1906. 1907. 1908. 1909. 1910. 1911. 1912.
3·0 3·2 2·4 3·0 2·3 3·1 2·9 2·9 3·45 2·1 2·6 2·39

DEATHS FROM TUBERCULOSIS.—There were 116 deaths from Tuberculosis of the Lungs, giving a death-rate of 1·99. The deaths from other forms of Tuberculosis numbered 32, giving a death-rate of ·43. A further report on this disease is given on page 35.

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 are in the first place due to Syphilis. The actual prevalence of Venereal diseases in the Borough cannot be determined. 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. | | | |
|------------|-----|-----|---|------------|-----|-----|---|
| Stomach | ... | ... | 9 | Stomach | ... | ... | 5 |
| Intestines | ... | ... | 6 | Intestines | ... | ... | 4 |
| Liver | ... | ... | 6 | Liver | ... | ... | 5 |
| Lung | ... | ... | 2 | Kidney | ... | ... | 1 |
| Prostate | ... | ... | 2 | Uterus | ... | ... | 7 |
| Æsophagus | ... | ... | 1 | Breast... | ... | ... | 5 |
| Rectum | ... | ... | 1 | Neck | ... | ... | 1 |
| Tongue | ... | ... | 2 | Ovary | ... | ... | 2 |
| Larynx | ... | ... | 1 | Pharynx | ... | ... | 1 |
| Neck... | ... | ... | 3 | Mouth | ... | ... | 1 |
| Face... | ... | ... | 1 | Face | ... | ... | 1 |
| Pelvis | ... | ... | 1 | | | | |
| Spleen | ... | ... | 1 | | | | |
| <hr/> | | | | <hr/> | | | |
| 36 | | | | 33 | | | |
| Total 69. | | | | | | | |

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... .. | 22 | 21 | 1 | ... | ... | ... | ... |
| Heart Failure | 23 | ... | ... | 2 | 1 | 14 | 6 |
| Marasmus | 1 | 1 | ... | ... | ... | ... | ... |
| Epileptic Fit | 1 | ... | 1 | ... | ... | ... | ... |
| Senile Decay | 1 | ... | ... | ... | ... | ... | 1 |
| Premature Birth | 5 | 5 | ... | ... | ... | ... | ... |
| Pulmonary Tuberculosis and
Heart Failure | 1 | ... | ... | ... | ... | 1 | ... |
| Congenital Debility | 1 | 1 | ... | ... | ... | ... | ... |
| Apoplexy | 1 | ... | ... | 1 | ... | ... | ... |
| Diarrhœa, Convulsions | 1 | ... | 1 | ... | ... | ... | ... |
| A Fit | 1 | ... | 1 | ... | ... | ... | ... |
| Totals | 58 | 28 | 4 | 3 | 1 | 15 | 7 |

LIST OF CASES ON WHICH AN INQUEST HAS
BEEN HELD.

| | | | | | |
|-------------------------------------|-----|-----|-----|-----|-----|
| ACCIDENTS by falls | ... | ... | ... | ... | 7 |
| " kicked by cow | ... | ... | ... | ... | 1 |
| " burns | ... | ... | ... | ... | 7 |
| " suffocation | ... | ... | ... | ... | 1 |
| " scalds | ... | ... | ... | ... | 6 |
| " drowning | ... | ... | ... | ... | 4 |
| " run over by cart | ... | ... | ... | ... | 2 |
| " run over by cab | ... | ... | ... | ... | 9 |
| " run over by motor wagon | ... | ... | ... | ... | 1 |
| " crushed between wagon and wall | ... | ... | ... | ... | 1 |
| " machinery in works | ... | ... | ... | ... | 5 |
| | | | | | —44 |
| DEATHS from Heart Failure | ... | ... | ... | ... | 2 |
| " Broncho-Pneumonia | ... | ... | ... | ... | 1 |
| " Overdose of Morphia | ... | ... | ... | ... | 1 |
| " Chronic Lead Poisoning | ... | ... | ... | ... | 1 |
| " Anthrax | ... | ... | ... | ... | 1 |
| " Shock | ... | ... | ... | ... | 1 |
| | | | | | — 7 |
| SUICIDE by cut throat | ... | ... | ... | ... | 2 |
| " hanging | ... | ... | ... | ... | 3 |
| " poisoning | ... | ... | ... | ... | 1 |
| | | | | | — 6 |
| | | | | | — |
| Total | ... | ... | ... | ... | 57 |

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

| WARD. | Estimated
Population
in Middle
of 1913. | 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 | Phthisis
Death
Rate
per 1,000
living. |
|------------------|--|---|--|--|--|---|---|
| TOWN HALL | 4,640 | 4.9 | 17.6 | 18.7 | 97 | 3.0 | 1.0 |
| WHITECROSS .. | 10,076 | 5.4 | 33.8 | 16.5 | 140 | 2.9 | 1.9 |
| BEWSEY | 5,378 | 5.4 | 33.8 | 20.0 | 170 | 3.5 | 2.7 |
| ORFORD | 10,266 | 5.1 | 31.4 | 14.8 | 121 | 1.5 | 1.7 |
| ST. JOHN'S | 10,434 | 5.1 | 36.8 | 18.5 | 154 | 3.0 | 1.7 |
| FAIRFIELD..... | 9,710 | 4.7 | 31.4 | 12.6 | 88 | 1.2 | 1.0 |
| HOWLEY | 6,770 | 5.2 | 33.8 | 19.3 | 170 | 1.4 | 2.0 |
| ST. AUSTIN'S .. | 6,272 | 4.8 | 21.8 | 11.6 | 80 | 2.0 | .9 |
| LATCHFORD | 10,532 | 4.7 | 21.3 | 12.6 | 116 | 1.2 | .5 |
| WHOLE BOROUGH | 74,065 | 5.05 | 29.7 | 15.7 | 131 | 2.1 | 1.9 |

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. | | No. * | Rate. | of Non-residents registered in the District. † | of Residents not registered in the District. ‡ | Under One Year of age. | | At all Ages. | |
| | | | No. † | Rate. | | | | | No. * | Rate per 1,000 Nett Births | No. * | Rate. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 1908 | 72,562 | 2369 | | 32.6 | 1264 | 17.4 | 38 | 13 | 318 | 134 | 1,239 | 17.0 |
| 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 | 14.33 |
| 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 | 17.2 |

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 1913.

| 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. | | Letchford. | |
| | | 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) | 108 | 2 | 31 | 61 | 9 | 5 | 21 | 3 | 12 | 10 | 17 | 12 | 13 | 7 | 5 | 25 | 103 | .. |
| Erysipelas | 54 | 2 | 2 | 1 | 5 | 21 | 22 | 3 | 18 | 5 | 5 | 7 | 4 | 1 | 2 | 5 | 231 | .. |
| Scarlet Fever | 240 | 2 | 62 | 155 | 13 | 5 | 3 | .. | 110 | 9 | 23 | 5 | 16 | 10 | 26 | 34 | .. | .. |
| Typhus Fever | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Enteric Fever | 28 | .. | 1 | 10 | 2 | 12 | 3 | .. | 2 | 1 | 7 | 8 | 3 | 3 | 2 | 1 | 27 | .. |
| Relapsing Fever | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Continued Fever | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 1 | .. | 1 | .. | .. | .. | .. |
| Puerperal Fever | 7 | .. | .. | .. | 1 | 6 | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Cerebro-Spinal Meningitis | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. |
| Poliomyelitis | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Pulmonary Tuberculosis | 205 | 3 | 5 | 31 | 45 | 77 | 38 | 6 | 34 | 19 | 31 | 29 | 17 | 30 | 18 | 13 | 67 | .. |
| Other forms of Tuberculosis | 162 | 16 | 27 | 68 | 22 | 17 | 11 | 1 | 26 | 9 | 24 | 27 | 18 | 31 | 10 | 11 | .. | .. |
| Totals | 805 | 23 | 128 | 327 | 97 | 143 | 77 | 10 | 204 | 53 | 110 | 90 | 71 | 83 | 63 | 89 | 428 | .. |

*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 1913.

| 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 .. | 1120 | 261 | 99 | 62 | 52 | 52 | 172 | 215 | 207 | 266 |
| | { Uncertified .. | 58 | 28 | 2 | 2 | 3 | 1 | 2 | 13 | 7 | 1 |
| Enteric Fever... | ... | 9 | .. | .. | 1 | 1 | .. | 7 | .. | .. | 9 |
| Small Pox | ... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Measles | ... | 24 | 6 | 6 | 8 | 3 | .. | 1 | .. | .. | 4 |
| Scarlet Fever | ... | 7 | .. | 1 | 3 | 3 | .. | .. | .. | .. | 7 |
| Whooping Cough | ... | 24 | 10 | 10 | 4 | .. | .. | .. | .. | .. | .. |
| Diphtheria and Croup | ... | 9 | 2 | 1 | 6 | .. | .. | .. | .. | .. | 8 |
| Influenza... | ... | 12 | .. | .. | .. | 3 | .. | 4 | 4 | 1 | 1 |
| Erysipelas | ... | 5 | 1 | .. | 1 | .. | 1 | 2 | .. | .. | 2 |
| Phthisis (Pulmonary Tuberculosis)... | ... | 116 | 4 | 3 | 4 | 7 | 20 | 47 | 28 | 3 | 38 |
| Tuberculous Meningitis | ... | 10 | 5 | 3 | .. | 1 | 1 | .. | .. | .. | 1 |
| Other Tuberculous Diseases... | ... | 22 | 5 | 6 | 2 | 5 | .. | 2 | 2 | .. | 4 |
| Cancer, Malignant Disease | ... | 69 | .. | 1 | .. | .. | 3 | 10 | 36 | 19 | 16 |
| Rheumatic Fever | ... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Meningitis | ... | 19 | 7 | 3 | 6 | 1 | 1 | .. | 1 | .. | .. |
| Organic Heart Disease | ... | 29 | .. | .. | .. | 2 | 8 | 7 | 5 | 7 | 6 |
| Bronchitis | ... | 81 | 34 | 6 | .. | .. | .. | 5 | 17 | 19 | 7 |
| Pneumonia (all forms)... | ... | 112 | 24 | 18 | 9 | 4 | 5 | 22 | 18 | 12 | 15 |
| Other Diseases of Respiratory organs | ... | 4 | .. | .. | .. | .. | .. | 1 | 2 | 1 | .. |
| Diarrhoea and Enteritis | ... | 86 | 49 | 29 | 5 | .. | .. | .. | .. | 3 | 3 |
| Appendicitis and Typhlitis | ... | 11 | .. | .. | .. | 3 | 3 | 4 | 1 | .. | 6 |
| Cirrhosis of Liver | ... | 3 | .. | .. | .. | .. | .. | .. | 3 | .. | .. |
| Alcoholism | ... | 2 | .. | .. | .. | .. | .. | 1 | 1 | .. | .. |
| Nephritis and Bright's Disease | ... | 14 | .. | .. | 1 | 1 | .. | 5 | 6 | 1 | 7 |
| Puerperal Fever | ... | 2 | .. | .. | .. | .. | .. | 2 | .. | .. | .. |
| Other Accidents and diseases of Pregnancy and Parturition | ... | 4 | .. | .. | .. | .. | .. | 4 | .. | .. | 2 |
| Congenital Debility and Malformation, including Premature Birth | ... | 88 | 86 | .. | .. | .. | 1 | 1 | .. | .. | 1 |
| Violent Deaths, excluding Suicide... | ... | 48 | .. | 4 | 7 | 7 | 3 | 8 | 16 | 3 | 33 |
| Suicides | ... | 9 | .. | .. | .. | .. | 1 | 6 | 1 | 1 | .. |
| Other Defined Diseases... | ... | 301 | 28 | 7 | 5 | 11 | 5 | 33 | 75 | 137 | 97 |
| Diseases ill-defined or unknown | ... | 58 | 28 | 3 | 2 | 3 | 1 | 2 | 12 | 7 | .. |
| Totals | ... | 1178 | 289 | 101 | 64 | 55 | 53 | 174 | 228 | 214 | 267 |

TABLE IV.—COUNTY BOROUGH OF WARRINGTON.

INFANTILE MORTALITY DURING THE YEAR 1913.

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

| CAUSE 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 | 38 | 8 | 12 | 17 | 75 | 53 | 48 | 51 | 34 | 261 |
| Uncertified | 7 | 1 | 2 | .. | 10 | 10 | 6 | 1 | 1 | 28 |
| Smallpox | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Chickenpox | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Measles | .. | .. | .. | .. | .. | 2 | 2 | 1 | 1 | 6 |
| Scarlet Fever.. .. . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Whooping Cough | .. | .. | .. | .. | .. | 3 | 2 | 3 | 2 | 10 |
| Diphtheria and Croup | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 2 |
| Erysipelas | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 |
| Tuberculous Meningitis | .. | .. | .. | .. | .. | .. | .. | 2 | 3 | 5 |
| Abdominal Tuberculosis | .. | .. | .. | .. | .. | 1 | 1 | 1 | 1 | 4 |
| Other Tuberculous Diseases | .. | .. | .. | .. | .. | 2 | 2 | .. | 1 | 5 |
| Meningitis (not Tuberculous) | .. | .. | .. | .. | .. | .. | 3 | 2 | 2 | 7 |
| Convulsions | 2 | .. | 1 | 2 | 5 | 3 | .. | .. | .. | 8 |
| Laryngitis | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Bronchitis | 1 | .. | 2 | 2 | 5 | 11 | 7 | 6 | 5 | 34 |
| Pneumonia (all forms) | .. | 1 | 1 | 1 | 3 | 4 | 2 | 12 | 3 | 24 |
| Diarrhoea | .. | .. | .. | 1 | 1 | 7 | 9 | 8 | 8 | 33 |
| Enteritis | .. | .. | 1 | 1 | 2 | 2 | 4 | 6 | 2 | 16 |
| Gastritis | .. | .. | .. | .. | .. | 1 | 4 | .. | .. | 5 |
| Syphilis | .. | .. | 1 | 1 | 2 | 1 | .. | .. | .. | 3 |
| Rickets | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Suffocation, overlying | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Injury at Birth | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Atelectasis | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | 1 |
| Congenital Malformations | 14 | 2 | 3 | 2 | 11 | 1 | 2 | .. | .. | 14 |
| Premature Birth | 25 | 4 | 4 | 2 | 35 | 3 | .. | 2 | .. | 40 |
| Atrophy, Debility, Marasmus | 2 | 2 | .. | 2 | 6 | 10 | 10 | 3 | 3 | 32 |
| Other Causes | 10 | .. | 1 | 3 | 14 | 11 | 6 | 5 | 3 | 39 |
| | 45 | 9 | 14 | 17 | 85 | 63 | 54 | 52 | 35 | 289 |

| | | | | | | |
|--------------------|---|------------------------------|----|----|----|-------|
| Births in the year | { | Legitimate | .. | .. | .. | 2,147 |
| | { | Illegitimate | .. | .. | .. | 57 |
| Deaths in the year | { | Legitimate Infants | .. | .. | .. | 277 |
| | { | Illegitimate Infants | .. | .. | .. | 12 |

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 12 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 | ... | 1,227 |
| Schools | ... | 547 |
| Factories and Workshop | ... | 327 |
| Offices, Shops, &c. | ... | 272 |
| Picture Palaces | ... | 10 |
| Theatres | ... | 23 |
| Public Institutions | ... | 209 |
| Railway Stations | ... | 23 |
| Public Conveniences | ... | 24 |
| Total | ... | 2,662 |
| (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 Dépôt at Howley and at the Longford Dépôt.

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.

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. Medical practitioners are allowed to attend their own 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 greater part 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 :—

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 for the Guild.)

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 41.

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 who they know is 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 disinfecter, 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.

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.

200 such specimens were examined during the year, and as there were only 205 primary notifications of this disease, 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 1913 the following notifications of cases of tuberculosis were received :—

PULMONARY TUBERCULOSIS.

| | | |
|-------------------------|-------------------------------------|-----|
| Primary Notifications.— | Form A by Private Practitioners ... | 129 |
| | Form A by Poor Law Doctors | 55 |
| | Form A by Hospitals and Sanatoria | 17 |
| | Form B School Medical Officer ... | 4 |
| | Total ... | 205 |
| | Duplicate Notifications ... | 89 |

NON-PULMONARY TUBERCULOSIS.

| | |
|--|-------|
| Primary Notifications.—Form A by Private Practitioners ... | 94 |
| Form A by Poor Law Doctors | 16 |
| Form A by Hospitals..... | 48 |
| Form B School Medical Officer..... | 4 |
| | <hr/> |
| Total ... | 162 |
| | <hr/> |
| Duplicate Notifications ... | 26 |

These were divided up as follows :—

PULMONARY TUBERCULOSIS.

| | | Males. | Females. | Total. |
|-------------------------------|-------------|--------|----------|--------|
| Insured | } Adults. { | 79 | 17 | 96 |
| Non-Insured | | 28 | 42 | 70 |
| School Children ... | ... | 10 | 21 | 31 |
| Children under school age ... | ... | 5 | 3 | 8 |

NON-PULMONARY TUBERCULOSIS.

| | | |
|-------------------------------|-------------|-------|
| Insured | } Adults. { | 35 |
| Non-Insured | | 16 |
| School Children ... | ... | 68 |
| Children under school age ... | ... | 43 |
| | | <hr/> |
| Total ... | | 162 |

The incidence of the Disease in the different wards of the town is shown on page 40. This incidence has been worked out per 1,000 of the population in the particular ward, and comparison is made with the year 1912.

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 1913 was 9.

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 | 123 | 8 | 4 | 10 | 22 | 52 | 28 | 4 |
| Females | 82 | ... | 1 | 21 | 23 | 25 | 10 | 2 |
| Other Forms. | | | | | | | | |
| Males | 79 | 10 | 12 | 29 | 12 | 11 | 5 | ... |
| Females | 83 | 6 | 15 | 39 | 10 | 6 | 6 | 1 |
| Total | 367 | | | | | | | |

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

| Affected Parts. | ADULTS. | | | CHILDREN. | | |
|----------------------------|----------|-------------|--------|-------------|-------------------|--------|
| | Insured. | Non-Insured | Total. | School Age. | Under School Age. | Total. |
| Glands | 10 | 5 | 15 | 42 | 7 | 49 |
| Pleura | 2 | — | 2 | — | — | — |
| Skin | 7 | 5 | 12 | 1 | — | 1 |
| General | — | — | — | 1 | 1 | 2 |
| Abscesses | 5 | 1 | 6 | — | 1 | 1 |
| Intestines | — | 1 | 1 | 2 | 12 | 14 |
| Peritoneum | 1 | — | 1 | 3 | 6 | 9 |
| Brain | 1 | — | 1 | — | 5 | 5 |
| Kidney | — | 1 | 1 | — | — | — |
| Knee | 2 | 1 | 3 | 1 | 1 | 2 |
| Hip Joint | 3 | 1 | 4 | 6 | 2 | 8 |
| Spine | — | — | — | 6 | 3 | 9 |
| Tibia | 1 | — | 1 | — | 1 | 1 |
| Femur | — | — | — | 1 | — | 1 |
| Tarsus | 2 | — | 2 | — | — | — |
| Thumb | 1 | — | 1 | — | — | — |
| Ankle | — | 1 | 1 | 1 | — | 1 |
| Arm | — | — | — | 1 | — | 1 |
| Finger | — | — | — | 1 | 2 | 3 |
| Ribs and Metacarpus | — | — | — | 2 | — | 2 |
| Carpus | — | — | — | — | 1 | 1 |
| Dactylitis | — | — | — | — | 1 | 1 |
| Total | 35 | 16 | 51 | 68 | 43 | 111 |

TABLE SHOWING NUMBER OF CASES OF PULMONARY TUBERCULOSIS NOTIFIED IN THE VARIOUS
WARDS OF THE BOROUGH DURING THE YEARS 1912 AND 1913.

| WARDS. | Male
Population
Census
1911. | Female
Population
Census
1911. | YEAR, 1912. | | | | YEAR, 1913. | | | | | |
|--------------------|---------------------------------------|---|------------------|--------------------|------------------|--------------------|---|------------------|--------------------|----------|------|------|
| | | | MALES. | | FEMALES. | | Total
Rate
both
Male
and
Female. | MALES. | | FEMALES. | | |
| | | | 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 | 11 | 4.72 | 4 | 1.71 | 3.22 | 8 | 3.43 | 6 | 2.57 | 3.00 |
| WHITECROSS | 5,124 | 4,879 | 15 | 2.29 | 11 | 2.25 | 2.59 | 20 | 3.90 | 14 | 2.86 | 3.39 |
| BEWSEY | 2,739 | 2,511 | 9 | 3.28 | 10 | 3.98 | 3.61 | 10 | 3.65 | 9 | 3.58 | 3.42 |
| ORFORD | 5,025 | 4,720 | 10 | 1.99 | 14 | 2.96 | 2.46 | 18 | 3.57 | 13 | 2.73 | 3.18 |
| ST. JOHN'S | 5,330 | 5,283 | 13 | 2.43 | 15 | 2.83 | 2.64 | 23 | 4.31 | 6 | 1.13 | 2.70 |
| FAIRFIELD | 4,259 | 4,709 | 14 | 3.28 | 8 | 1.79 | 2.45 | 9 | 2.11 | 8 | 1.69 | 1.89 |
| HOWLEY | 3,436 | 3,246 | 15 | 4.36 | 9 | 2.77 | 3.59 | 20 | 5.82 | 10 | 3.08 | 4.48 |
| ST. AUSTIN'S | 3,110 | 3,123 | 12 | 3.85 | 3 | 0.96 | 2.40 | 9 | 2.89 | 9 | 2.88 | 2.88 |
| LATCHFORD | 4,992 | 5,024 | 10 | 2.00 | 9 | 1.76 | 1.89 | 6 | 1.20 | 7 | 1.39 | 1.29 |
| TOTALS | 36,341 | 35,825 | 109 | 2.72 | 83 | 2.31 | 2.66 | 123 | 3.38 | 82 | 2.28 | 2.83 |

DEATHS FROM TUBERCULOSIS DURING 1913.

PULMONARY.

| | |
|---|-----|
| Number of notified cases of pulmonary tuberculosis which have died during the year | 128 |
| Number of notified cases of pulmonary tuberculosis which were certified on the death return as having died from other causes | 20 |
| Total number of deaths certified from pulmonary tuberculosis | 116 |
| Number of the above cases which were not notified ... | 8 |

NON-PULMONARY.

| | |
|---|----|
| Number of notified cases of non-pulmonary tuberculosis which have died since these regulations came in force on February 1st | 22 |
| Number of non-pulmonary cases which have died and were not notified | 3 |
| Number of deaths from non-pulmonary tuberculosis previous to the regulations coming into operation | 4 |
| Total deaths | 29 |

NOTIFIED CASES OF PULMONARY TUBERCULOSIS which have attended at the Health Office for examination during the year 1913 :—

| | Males. | Females. | Totals. | No. of
Examinations |
|--------------------------|--------|----------|---------|------------------------|
| Insured cases... .. | 57 | 7 | 64 | 82 |
| Non-insured cases | 6 | 10 | 16 | 17 |
| School children | 13 | 21 | 34 | 90 |
| Totals | 76 | 38 | 114 | 189 |

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 1913 :—

| | Number of
Cases. | Number of
Examinations. |
|-------------------------------|---------------------|----------------------------|
| Pulmonary Tuberculosis | 4 | 15 |
| Ditto (doubtful) | 7 | 36 |
| Glands | 11 | 46 |
| Knee joints | 2 | 2 |
| Femur | 1 | 2 |
| Spine | 1 | 3 |
| Ribs | 1 | 1 |
| Skin | 1 | 2 |
| Foot | 1 | 2 |
| Hip joint | 1 | 2 |
| | 30 | 111 |

SUMMARY.

| | |
|--------------------------------|----------------------|
| Cases attended Health Offices. | No. of Examinations. |
| 144 | 300 |

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. | 205 |
| 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. ... | 995 |
| Number of visits for the purpose of arranging for patient's admission to the Sanatorium | 89 |
| Number of visits to arrange for disinfection and cleaning of the homes after death, removals to institutions, or when patients have changed their address | 191 |
| 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 ... | 132 |
| 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 | 96 |
| Total visits to Pulmonary cases | <u>1708</u> |

NON-PULMONARY TUBERCULOSIS.

| | |
|--|------------|
| Number of visits paid to the homes of patients after receipt of primary notifications | 162 |
| Number of re-visits paid for the purpose of ascertaining the patients progress and home conditions ... | 312 |
| Total visits to Non-Pulmonary cases | <u>474</u> |

SECTION II.

INFECTIOUS DISEASES.

During 1913 Measles was prevalent the whole year, Whooping Cough specially during the early portion, and Scarlet Fever during the latter portion of the year.

Excepting the excessive prevalence of Scarlet Fever during the year under consideration, the number of notifications of the notifiable diseases, other than pulmonary tuberculosis, show a decrease on the previous year.

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

| DISEASE | Cases notified in 1913. | Deaths registered in 1913. |
|--|-------------------------|----------------------------|
| Smallpox | — | — |
| Scarlet Fever | 240 | 7 |
| Diphtheria and Membranous Croup | 108 | 9 |
| Enteric or Typhoid Fever | 28 | 9 |
| Puerperal Fever | 7 | 2 |
| Cholera | — | — |
| Erysipelas | 54 | 5 |
| Plague | — | — |
| Phthisis | 205 | 116 |
| Other forms of Tuberculosis | 162 | 32 |
| Cerebro-Spinal Meningitis | 1 | 1 |
| Poliomyelitis | — | — |
| | 805 | 181 |

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.

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 | — | — | 299 | 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. 78 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.

| | 1903 | 1904 | 1905 | 1906 | 1907 | 1908 | 1909 | 1910 | 1911 | 1912 | 1913 |
|--|----------|-----------|----------|-----------|-----------|-----------|------------|------------|------------|------------|------------|
| Births | 2395 | 2268 | 2230 | 2260 | 2373 | 2336 | 2258 | 2226 | 2041 | 2111 | 2166 |
| Successfully vaccinated .. | 2092 | 2007 | 2040 | 2003 | 2117 | 2015 | 1890 | 1754 | 1470 | 1313 | 1287 |
| Insusceptible of vaccination | 26 | 10 | 15 | 13 | 5 | 9 | 3 | 3 | 10 | 3 | — |
| Died unvaccinated | 241 | 221 | 212 | 214 | 201 | 196 | 165 | 177 | 192 | 115 | 156 |
| Exemptions | 8 | 11 | 3 | 13 | 38 | 99 | 169 | 210 | 253 | 251 | 347 |
| Removed: Address unknown | 27 | 19 | 5 | 7 | 12 | 17 | 13 | 50 | 73 | 35 | 50 |
| Had Small-pox | 1 | — | — | — | — | — | — | — | — | — | — |
| Children born in other districts but vaccinated here | 66 | 47 | 41 | 40 | 8 | 17 | — | — | 16 | 9 | 11 |

Total number of Exemptions for the year 1913—**347**.

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 6 years. The future effects will doubtless be a severe epidemic of Small-pox.

SCARLET FEVER.—240 cases of Scarlet Fever have been notified during the year, 7 of which terminated fatally.

The mortality from the disease ($\cdot 09$ in 1913 compared with $\cdot 13$ in 1912) 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 AND 1913.

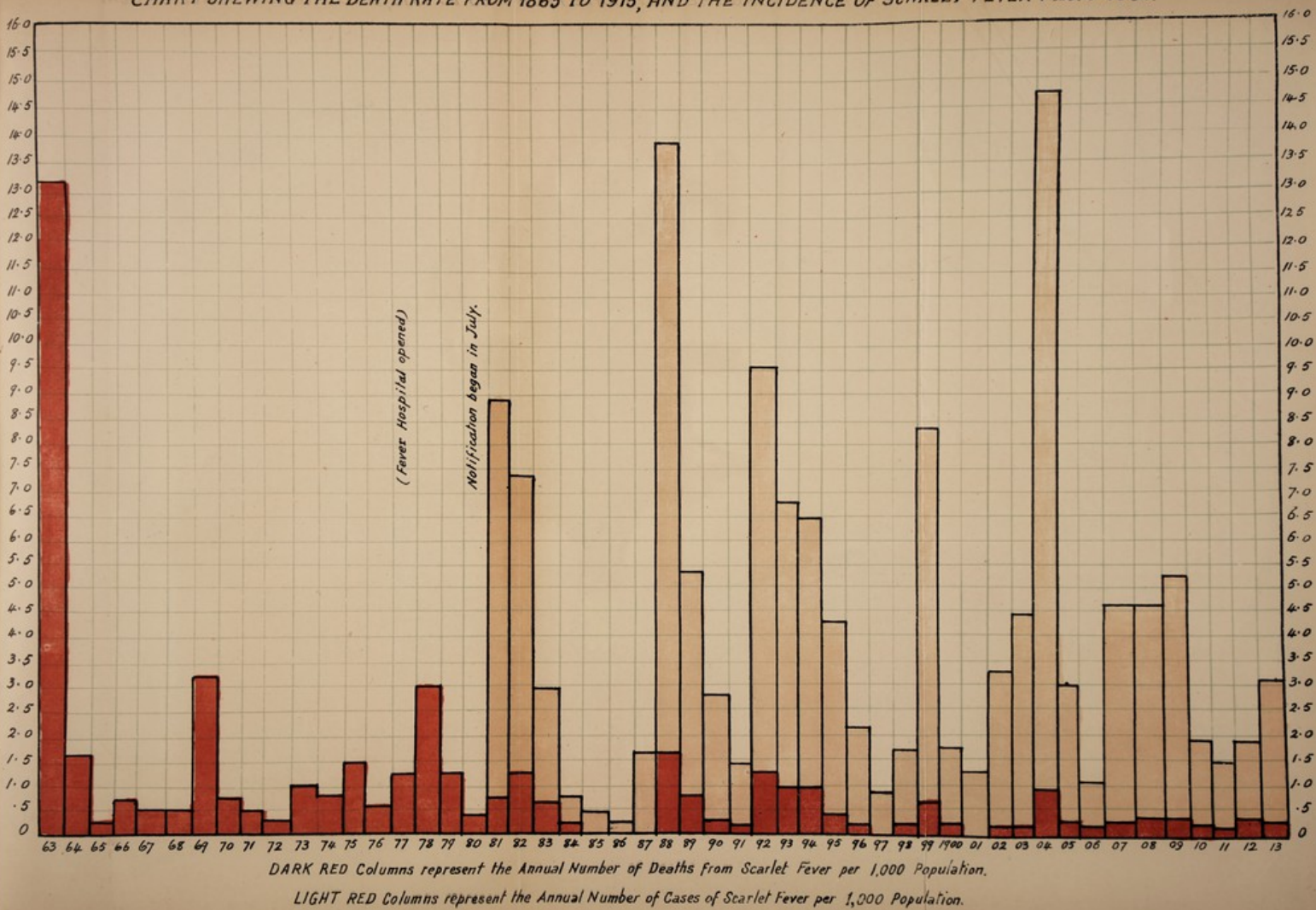
| | 1881-85. | 1886-90. | 1891-95. | 1896-1900. | 1901-5. | 1906-10. | 1911. | 1912. | 1913. |
|-------------------------|----------|----------|----------|------------|---------|----------|-------|-------|-------|
| Cases | 168 | 126 | 306 | 179 | 364 | 243 | 111 | 144 | 240 |
| Deaths | 20.6 | 25.2 | 36 | 11.4 | 15 | 11 | 4 | 10 | 7 |
| Case Mortality % | 15.6 | 7.6 | 11.3 | 6.8 | 3.2 | 4.1 | 3.6 | 6.9 | 2.9 |
| Cases per 1,000 living | 4.0 | 4.7 | 5.6 | 2.9 | 5.4 | 3.3 | 1.5 | 1.9 | 3.2 |
| Deaths per 1,000 living | .5 | .5 | .6 | .2 | .2 | 0.14 | .05 | .13 | .09 |
| Percentage Isolated .. | 70 | 81 | 78 | 79 | 87 | 73 | 77 | 81 | 96 |

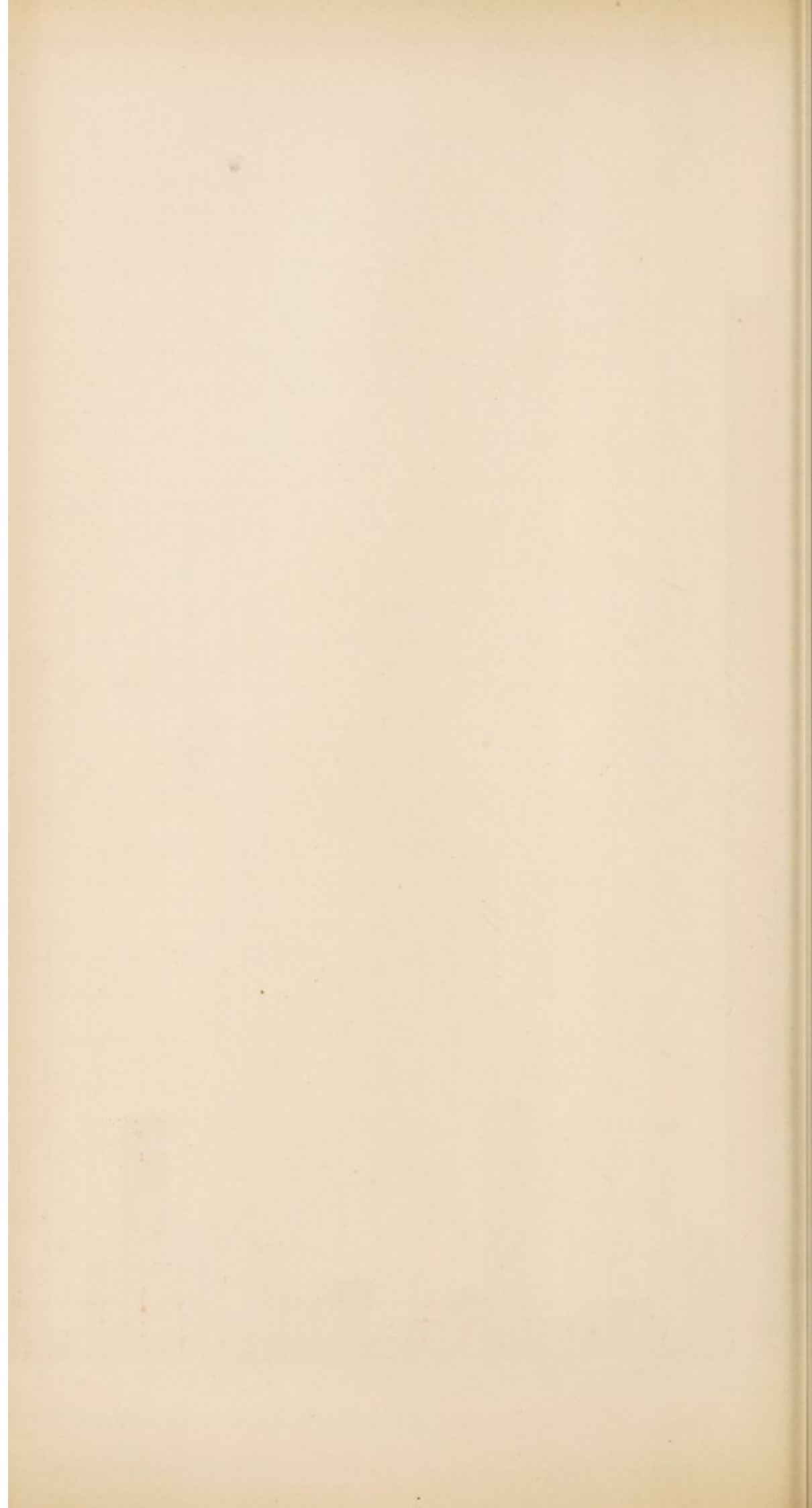
SCARLET FEVER IN WARRINGTON DURING 52 YEARS.

| Year. | Popula-
tion. | 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 |

DIPHTHERIA.—There were 108 cases of this disease notified during the year, 9 of which terminated fatally. There has been a gradual increase in the prevalence of this disease in most large towns during recent years.

CHART SHEWING THE DEATH RATE FROM 1863 TO 1913, AND THE INCIDENCE OF SCARLET FEVER FROM 1881.





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.

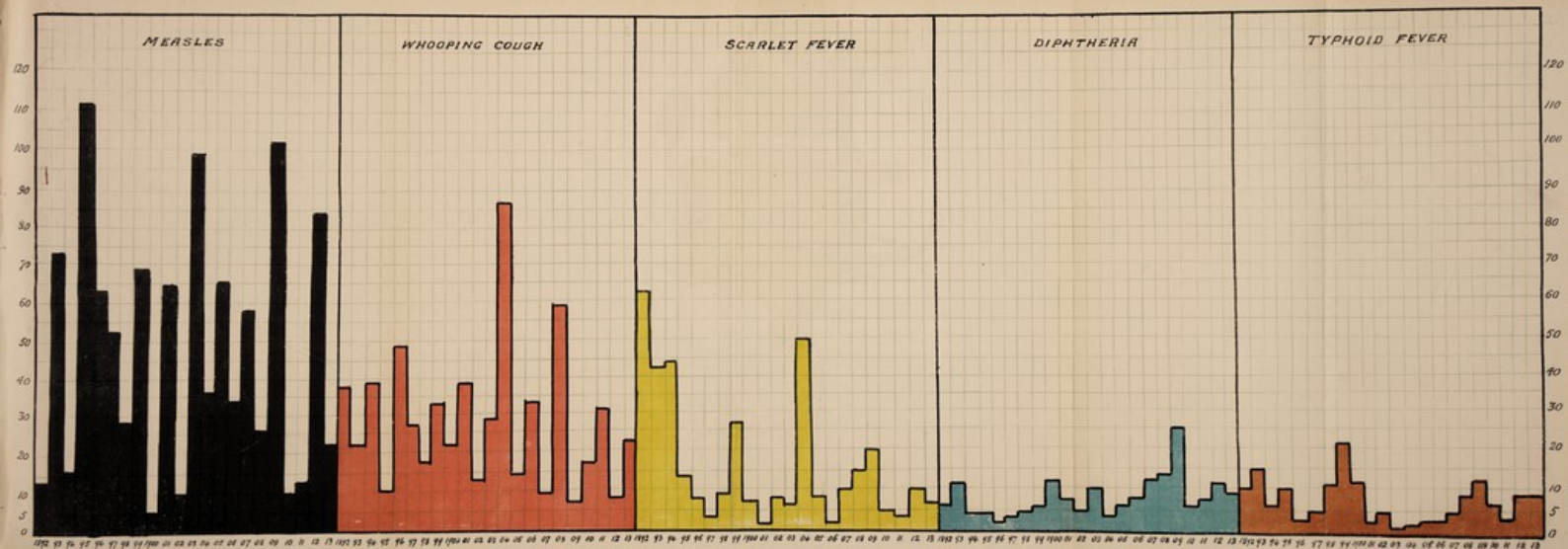
| | 1899. | 1900. | 1901. | 1902. | 1903. | 1904. | 1905. | 1906. | 1907. | 1908. | 1909. | 1910. | 1911. | 1912. | 1913. |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Number of cases of Diphtheria notified | 22 | 23 | 25 | 24 | 34 | 34 | 27 | 28 | 78 | 123 | 146 | 108 | 88 | 110 | 108 |
| Death-rate for Diphtheria per 10000 of population .. . | ·12 | ·20 | ·12 | ·09 | ·01 | ·05 | ·12 | ·12 | ·19 | ·22 | ·35 | ·09 | ·12 | ·15 | ·12 |
| Number of cases admitted to Isolation Hospital .. . | 1 | 2 | 9 | 9 | 20 | 4 | 8 | 8 | 43 | 78 | 89 | 78 | 69 | 99 | 103 |

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 | ... | ... | ... | 59 |
| Bacillus absent | ... | ... | ... | 42 |
| No swab submitted | ... | ... | ... | 5 |
| Died. No swab submitted | ... | ... | ... | 2 |
| | | | | <hr/> 108 <hr/> |

| YEAR. | | SCARLET FEVER. | | DIPHTHERIA AND MEMBRANOUS CROUP. | | MEASLES. | | WHOOPIING COUGH. | |
|------------------------|-----|----------------|-------------------|----------------------------------|-------------------|----------------|-------------------|------------------|-------------------|
| | | Under 5 years. | | Under 5 years. | | Under 5 years. | | Under 5 years. | |
| | | and over. | 5 years and over. | and over. | 5 years and over. | and over. | 5 years and over. | and over. | 5 years and over. |
| 1893 | ... | 34 | 9 | 10 | 3 | 71 | 1 | 23 | 1 |
| 1894 | ... | 35 | 10 | 4 | 1 | 17 | ... | 37 | 1 |
| 1895 | ... | 13 | 4 | 5 | ... | 07 | 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 | ... |
| Totals for 21 years... | | 219 | 103 | 164 | 50 | 994 | 49 | 581 | 33 |
| Totals: all ages | ... | 322 | | 214 | | 1043 | | 614 | |

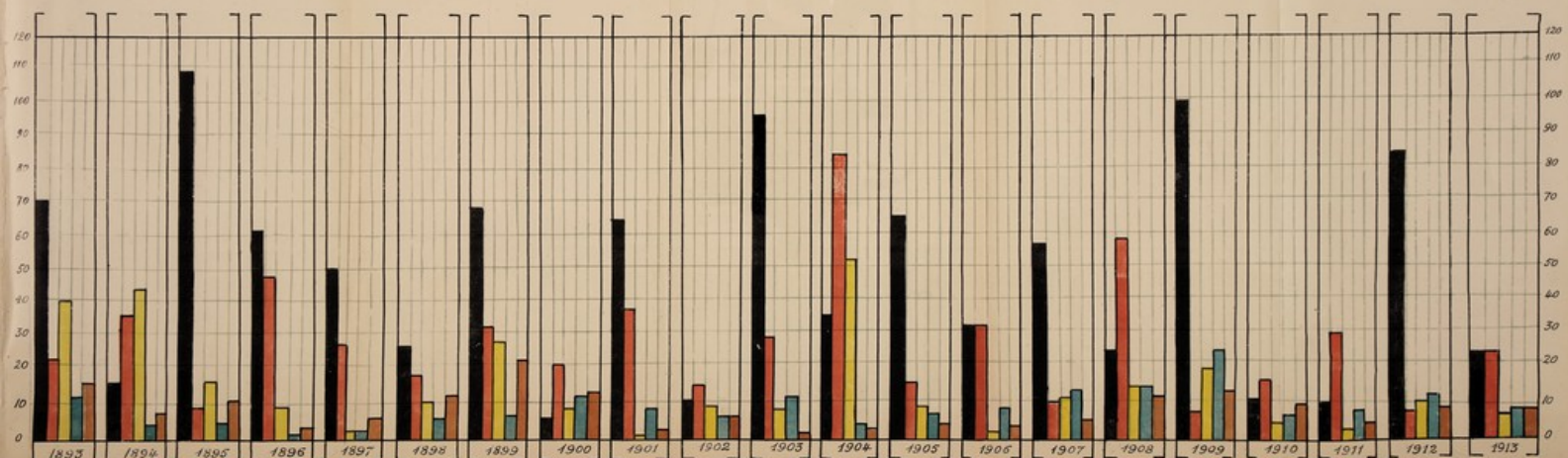
CHART SHEWING TOTAL YEARLY DEATHS FROM FIVE IMPORTANT INFECTIOUS DISEASES.

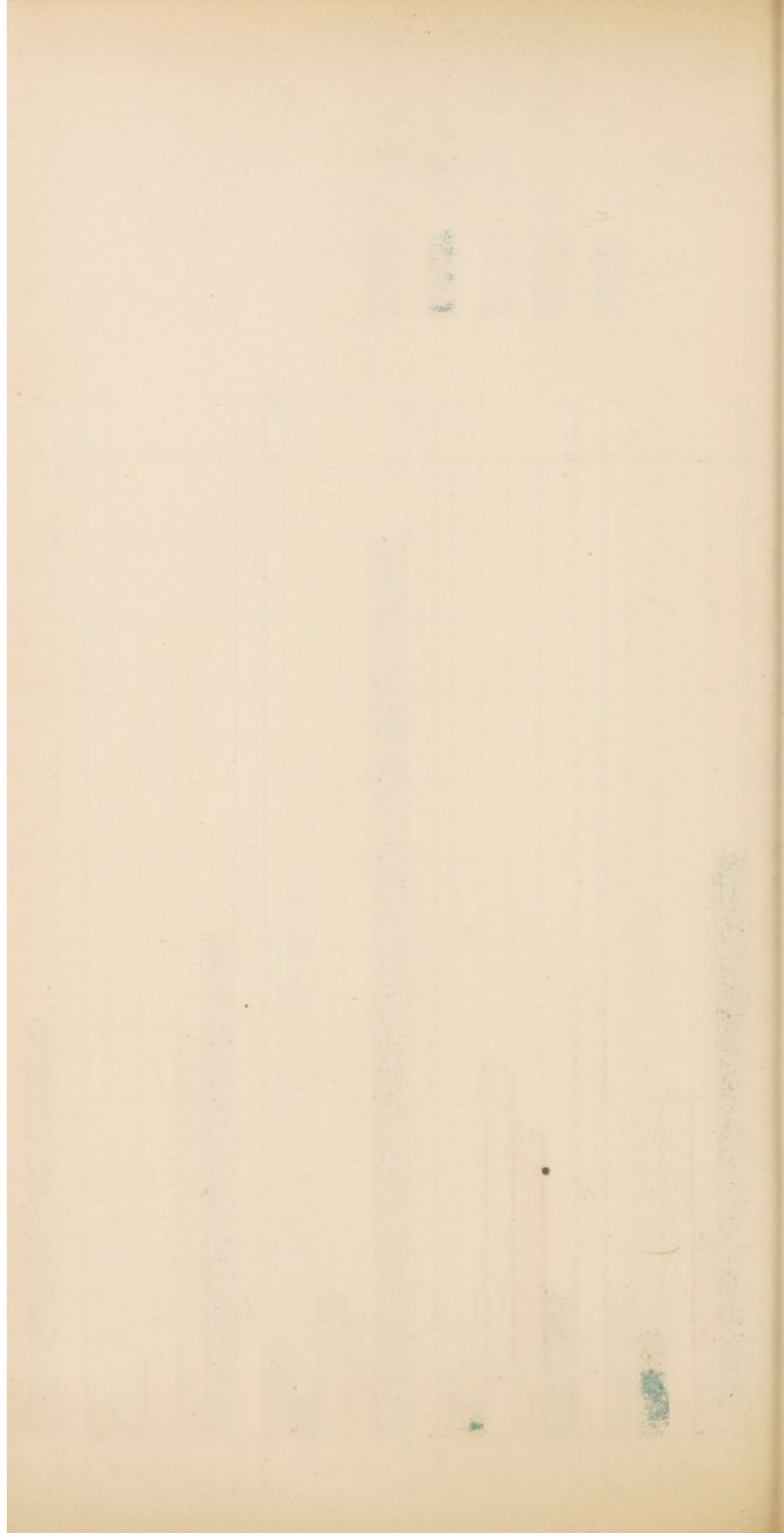




Measles
 Whooping Cough
 Scarlet Fever
 Diphtheria
 Typhoid Fever

CHART TO SHEW TOTAL YEARLY DEATHS FROM 1893 TO 1913
 FROM FIVE IMPORTANT EPIDEMIC DISEASES.





AND DEATHS FROM INFECTIOUS DISEASES
(RATES CALCULATED PER 1,000 POPULATION).

| YEAR. | Smallpox. | | Erysipelas. | | Diphtheria & Membranous Group. | | 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 | .151 | 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 | .02 | 108 | .19 | 940 | .09 | 98 | .12 | 7 | .02 | — | .32 | — | .32 |

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 Newton Urban and Warrington Rural Districts are admitted and treated for a sum of £2 10s. per week.

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

Patients suffering from each of the three diseases treated in the Hospital were as a rule present, thus necessitating all the wards being kept in use and fully staffed with Nurses. For this reason, in an Infectious Disease Hospital, the cost of administration cannot necessarily be reduced proportionately to the reduction in the number of cases treated.

It will be noticed that Scarlet Fever accounted for a large proportion of the cases.

Sixteen of these Diphtheria cases had the seat of the disease in the wind-pipe, necessitating recourse to the operation of tracheotomy in 10 instances, of which 5 recovered.

It is interesting to note that only 57 of the 103 patients sent in as suffering from Diphtheria were proved bacteriologically to be definite cases of Diphtheria.

Two cases of Pulmonary Tuberculosis were treated in the Hut in the Hospital grounds.

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.

Thus one child admitted with Diphtheria developed Whooping Cough shortly after admission, and another developed Chicken-Pox. Two Patients suffering from scarlet fever developed measles.

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, whilst three cases admitted as Scarlet Fever were found to have German Measles.

Two patients admitted as Enteric Fever were proved to be suffering from other diseases, one from Tubercular Peritonitis and the other from acute Pneumonia.

Six patients admitted as Scarlet Fever did not desquamate and two of these had had burns.

These additional diseases necessitate the reserving of separate small wards for the isolation of cases of mixed infection, and further accommodation in this respect would be of great service, especially in epidemic times.

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 | | | ... | 16 beds. |
| | accommodate ... | | | ... | 3 „ |
| | The Hut will accommodate ... | | | ... | 3 „ |

The following table is a summary of the number of patients and of the diseases for which they were under treatment during 1913:—

| | From the
Borough. | From
Warrington
Rural
District. | From
Newton
Urban
District. | Total. |
|---|----------------------|--|--------------------------------------|--------|
| Remaining in hospital at
the end of 1912 ... | 26 | 1 | — | 27 |
| Admitted during 1913: | | | | |
| As Scarlet Fever ... | 231 | 4 | 1 | 236 |
| „ Enteric Fever ... | 27 | 1 | — | 28 |
| „ Diphtheria ... | 103 | 3 | — | 106 |
| „ Phthisis ... | 2 | — | — | 2 |
| Under treatment during
1913 ... | 389 | 9 | 1 | 399 |
| Deaths during 1913: | | | | |
| Scarlet Fever ... | 7 | — | — | 7 |
| Enteric Fever ... | 8 | — | — | 8 |
| Diphtheria ... | 8 | 2 | — | 10 |
| Phthisis ... | 1 | — | — | 1 |
| Other causes ... | 4 | — | — | 4 |
| Totals ... | 28 | 2 | — | 30 |
| In hospital at end of 1913: | | | | |
| Enteric Fever ... | 4 | — | — | 4 |
| Scarlet Fever ... | 48 | — | — | 48 |
| Diphtheria ... | 4 | — | — | 4 |
| Phthisis ... | — | — | — | — |
| | 56 | — | — | 56 |

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 1905, 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 1913 a total of 76 cases have received treatment at the Sanatorium.

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

| | | Males. | Females. |
|-------------------------------|-----|--------|----------|
| <i>Non-insured</i> adults ... | ... | 6 | 12 |
| School children ... | ... | 3 | 7 |
| <i>Insured</i> ... | ... | 40 | 8 |
| | | — | — |
| Total | ... | 49 | 27 |

A list of these cases is found on page 56A and a summary of the condition of the 54 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 54 CASES WHICH HAVE LEFT THE SANATORIUM.

| | Early Cases. | | Advanced Cases. | |
|--|--------------|----------|-----------------|----------|
| | Males. | Females. | Males. | Females. |
| Apparent arrest of disease | 8 | 2 | 1 | — |
| Great Improvement ... | 2 | — | — | 2 |
| Much improved ... | 6 | 2 | 1 | 6 |
| Left Sanatorium, disease advancing ... | — | — | 4 | 1 |
| Left Sanatorium, disease <i>in statu quo</i> ... | 1 | 1 | 4 | 3 |
| Developed mental symptoms, transferred to Union Hospital ... | — | — | 1 | — |
| Died in Sanatorium ... | 1 | — | 6 | 2 |

Cases of Pulmonary Tuberculosis which have received Treatment in Sankey Sanatorium during the Year 1913.

| Initials. | No. on Register. | Sex. | Age. | Occupation. | Date of Admission. | State on Admission. | Date of Discharge. | State on Discharge. | Increase in weight. | Duration of Treatment. | Remarks. |
|-----------|------------------|------|------|----------------------------------|----------------------|----------------------------|--|---|---------------------|------------------------|--|
| T. F. | 32 | M | 31 | Wireworks Labourer | 31st January, 1912 | Advanced both lungs | 27th June, 1913 | In statu quo; discharged own request | ... | 73 weeks 1 day | Afterwards admitted to Aldin Street Hospital. Died 24/9/13 |
| M. T. | 43 | M | 28 | Forge Labourer | 29th April, 1912 | Advanced both lungs | Still in Sanatorium | In statu quo | ... | 88 weeks 5 days | |
| A. T. | 48 | F | 20 | Domestic Servant | 1st October, 1912 | Fairly advanced both lungs | 15th March, 1913 | Improved | ... | 23 weeks 3 days | |
| B. F. | 64 | F | 9 | School | 5th October, 1912 | Fairly advanced one lung | 14th January, 1913 | Much improved, parents' request | ... | 15 weeks | |
| J. C. | 66 | M | 39 | Forge Labourer | 2nd January, 1913 | Slight one lung | 30th January, 1913, re-admitted 22nd October, 1913, to 29th November, 1913 | Improved | + 21lb. | 9 weeks 2 days | Previous treatment in Sanatorium, 10 weeks 6 days. |
| F. H. | 67 | M | 16 | General Labourer | 11th October, 1912 | Slight one lung | 21st March, 1913 | Great improvement | ... | 22 weeks 5 days | Tuberculin T.R. 00005 initial to 91. worked regular since. |
| E. F. | 69 | M | 34 | Galvanizer | 26th October, 1912 | Advanced both lungs | 19th January, 1913, re-admitted 7th June, 1913, to 1st October, 1913 | Left on own accord, general condition good, disease advancing | + 3 1/2lb. | 29 weeks 6 days | |
| V. E. | 70 | M | 31 | Wireworks Labourer | 26th October, 1912 | Slight one lung | 26th January, 1913, re-admitted 29th July, 1913, to 19th September, 1913 | Apparent arrest of disease, left without leave | + 8 1/2lb. | 17 weeks 3 days | Worked continuously since. |
| E. L. | 70a | F | 23 | Cotton Weaver | 26th October, 1912 | Advanced both lungs | 22nd February, 1913 | No improvement | ... | 16 weeks 5 days | Died at home 3/5/13. |
| T. O. D. | 72 | M | 31 | Iron Works Labourer and Army | 2nd January, 1913 | Advanced both lungs | 21st March, 1913 | Disease steadily advancing | ... | 11 weeks | Previous treatment in Sanatorium 6 weeks 6 days. Died in Union Hospital 14/10/13 |
| G. E. S. | 73 | M | 19 | Army Bandman | 14th December, 1912 | Advanced one lung | Died 28th May, 1913 | Disease steadily advanced | ... | 23 weeks 5 days | |
| P. D. | 74 | M | 38 | Insurance Agent, 1 year and Army | 14th December, 1912 | Slight both lungs | Died 28th March, 1913 | Disease rapidly advanced | ... | 14 weeks 5 days | |
| A. M. | 74a | M | 31 | Song Works Labourer | 14th December, 1912 | Fairly advanced one lung | 14th May, 1913 | Apparent arrest of disease, great improvement | + 5 1/2lb. | 21 weeks 4 days | Tuberculin. Has worked continuously since discharge. |
| S. E. R. | 75 | F | 18 | Wire Worker | 23rd December, 1912 | Fairly advanced both lungs | 15th March, 1913 | Disease in statu quo, general condition good | + 3 1/2lb. | 11 weeks 5 days | |
| J. S. | 76 | M | 33 | Labourer | 28th December, 1912 | Advanced both lungs | Died 4th June, 1913 | ... | ... | 22 weeks 4 days | |
| G. B. | 77 | M | 18 | Emmeller and Wire Weaver | 20th December, 1912 | Advanced both lungs | Still in Sanatorium | Disease slowly extending | + 1lb. | 52 weeks | Tubercular engorgement. |
| S. J. | 78 | M | 46 | Wire Worker | 16th January, 1913 | Advanced both lungs | Died 23rd March, 1913 | ... | ... | 9 weeks 3 days | |
| E. J. | 79 | F | 16 | Velvet Cutter | 22nd January, 1913 | Advanced both lungs | 14th June, 1913 | Much improved | + 6 1/2lb. | 19 weeks 5 days | Previous treatment in Sanatorium, 12 weeks. |
| G. M. | 80 | M | 31 | Wire Worker | 25th January, 1913 | Slight one lung | 2nd July, 1913 | Great improvement | + 4 1/2lb. | 22 weeks 5 days | Worked continuously since discharge. |
| J. H. | 81 | M | 21 | Engine Attendant | 2nd February, 1913 | Slight one lung | 29th April, 1913 | Apparent arrest of disease | + 4 1/2lb. | 12 weeks 1 day | |
| E. G. | 82 | F | 37 | Household | 27th February, 1913 | Advanced both lungs | 25th August, 1913, re-admitted 2nd December, 1913, Still in Sanatorium | Improved | ... | 29 weeks | |
| H. B. | 83 | F | 49 | Household | 8th March, 1913 | Advanced both lungs | 8th June, 1913 | Improved, left against advice | + 5 1/2lb. | 12 weeks | |
| J. B. | 84 | F | 26 | Carriage Painter | 17th March, 1913 | Fairly advanced both lungs | 16th June, 1913 | Much improved | + 9 1/2lb. | 12 weeks 1 day | Worked since. |
| M. F. | 85 | F | 17 | Soap Worker | 17th March, 1913 | Advanced both lungs | Died 27th April, 1913 | ... | ... | 5 weeks 4 days | |
| J. C. | 86 | M | 31 | Wire Worker and Army | 20th March, 1913 | Advanced both lungs | Died 12th May, 1913 | ... | ... | 6 weeks 2 days | |
| W. H. G. | 87 | M | 31 | Insurance Agent and Machinist | 20th March, 1913 | Slight one lung | 18th June, 1913 | Apparent arrest of disease | + 12 1/2lb. | 12 weeks | Worked continuously since. |
| E. T. | 88 | F | 23 | Cotton Weaver | 27th March, 1913 | Advanced both lungs | 9th October, 1913 | Great improvement in general condition | + 5 1/2lb. | 28 weeks | |
| W. J. | 89 | M | 33 | Iron Works Labourer | 29th March, 1913 | Advanced both lungs | 14th August, 1913 | Disease rapidly advancing | ... | 18 1/2lb. | Tubercular laryngitis. Died at home, 31/8/13. |
| G. E. | 90 | M | 19 | Iron Works Labourer | 9th April, 1913 | Slight one lung | 2nd July, 1913 | Apparent arrest of disease | + 6 1/2lb. | 12 weeks | Worked continuously since. |
| G. D. | 91 | M | 24 | Groomman | 9th April, 1913 | Slight one lung | 12th July, 1913 | Much improved; left own accord | + 1 1/2lb. | 10 weeks 3 days | |
| A. M. | 92 | F | 18 | Domestic Servant | 30th April, 1913 | Advanced both lungs | 6th November, 1913 | In statu quo | + 6 1/2lb. | 27 weeks | |
| A. T. | 93 | F | 11 | School | 9th May, 1913 | Early case, one lung | 6th September, 1913, re-admitted 26th December, 1913, Still in Sanatorium | Improving | ... | 18 weeks | |
| T. T. | 94 | M | 18 | Iron Moulder | 17th May, 1913 | Slight one lung | 26th July, 1913 | Left own accord; much improved | + 4 1/2lb. | 10 weeks 2 days | Worked continuously since. |
| A. Q. | 95 | M | 16 | Wire Worker | 17th May, 1913 | Advanced both lungs | 19th May, 1913 | In statu quo; left own accord | ... | 2 days | |
| W. C. C. | 96 | M | 45 | Commercial Traveller | 23rd May, 1913 | Advanced both lungs | Died 31st May, 1913 | ... | ... | 1 week 1 day | |
| W. L. | 98 | M | 24 | Wire Works Labourer | 4th June, 1913 | Slight one lung | 16th October, 1913 | Disease apparently arrested | + 6 1/2lb. | 19 weeks 3 days | Worked continuously since. |
| J. P. | 99 | M | 10 | School | 4th June, 1913 | Advanced both lungs | Died 20th August, 1913 | ... | ... | 12 weeks 2 days | |
| A. S. | 100 | F | 44 | Household | 10th June, 1913 | Advanced both lungs | 7th November, 1913 | Much improved | + 11 1/2lb. | 23 weeks 4 days | |
| N. W. | 101 | F | 12 | School | 14th June, 1913 | Early case | 6th September, 1913 | Much improved | + 8 1/2lb. | 11 weeks 4 days | Previous treatment in Sanatorium, 11 weeks. |
| J. M. | 102 | M | 35 | Blacksmith's Striker | 19th June, 1913 | Slight one lung | 26th July, 1913 | Very much improved; left own accord | + 14 1/2lb. | 5 weeks 4 days | Worked continuously since. |
| J. H. | 103 | M | 35 | Cool Hocker | 6th July, 1913 | Advanced one lung | 21st October, 1913 | Disease advancing; left without leave | + 7 1/2lb. | 15 weeks | |
| G. B. | 104 | M | 32 | Forge Labourer | 8th July, 1913 | Slight one lung | Still in Sanatorium | Improving | + 23 1/2lb. | 25 weeks 1 day | |
| W. C. | 105 | M | 22 | Wire Works Furnace-man | 8th July, 1913 | Fairly advanced both lungs | Still in Sanatorium | Improving | + 9 1/2lb. | 35 weeks 1 day | |
| T. F. | 106 | M | 41 | Seedman | 8th July, 1913 | Slight one lung | 29th July, 1913 | Improved; left own accord | + 3 1/2lb. | 5 weeks | |
| M. A. | 107 | F | 11 | School | 8th July, 1913 | Early case | 6th September, 1913 | Much improved | + 11 1/2lb. | 8 weeks 3 days | |
| A. E. | 108 | M | 12 | School | 16th July, 1913 | Fairly advanced | 1st November, 1913 | Improved; left at parents' request | + 8 1/2lb. | 19 weeks 4 days | |
| M. W. | 109 | F | 35 | Household | 16th July, 1913 | Advanced both lungs | 22nd July, 1913 | In statu quo; left own accord | + 1 1/2lb. | 7 days | Previous treatment in Sanatorium, 15 weeks 6 days. |
| E. D. | 110 | F | 17 | Cotton Weaver | 26th July, 1913 | Very slight one lung | 18th October, 1913 | Apparent cure | + 17 1/2lb. | 12 weeks | Worked continuously since. Previous treatment in Sanatorium, 10 weeks. |
| L. H. | 111 | M | 38 | Galvanizer | 26th July, 1913 | Advanced one lung | Still in Sanatorium | In statu quo | + 8 1/2lb. | 22 weeks 4 days | |
| W. J. R. | 112 | M | 40 | Iron Grinder | 1st August, 1913 | Slight one lung | 25th October, 1913 | Improved | + 5 1/2lb. | 12 weeks 1 day | Worked continuously since. |
| F. T. | 113 | M | 27 | Wire Works Labourer | 1st August, 1913 | Very slight | 25th October, 1913 | Apparent cure | + 18 1/2lb. | 12 weeks 1 day | |
| E. G. S. | 115 | M | 37 | Carrier | 22nd August, 1913 | Slight one lung | 12th December, 1913 | Apparent arrest of disease | + 28 1/2lb. | 16 weeks | |
| A. M. | 116 | F | 34 | Household and Laundry Worker | 23rd August, 1913 | Advanced both lungs | Still in Sanatorium | ... | ... | 18 weeks 2 days | Previous treatment, 29 weeks 1 day. |
| J. F. | 117 | M | 43 | Wire Works Labourer and Army | 9th September, 1913 | Fairly advanced one lung | 9th November, 1913 | In statu quo; left own accord | + 28 1/2lb. | 8 weeks 5 days | |
| L. A. | 118 | F | 43 | Household Duties | 9th September, 1913 | Advanced case | Still in Sanatorium | ... | ... | 16 weeks 1 day | |
| M. B. | 119 | F | 18 | Household Duties | 9th September, 1913 | Slight case | 27th September, 1913 | In statu quo; left without leave | ... | 2 weeks 3 days | |
| M. C. | 120 | F | 11 | School | 13th September, 1913 | Slight case | 6th November, 1913 | Apparent cure | + 10 1/2lb. | 7 weeks 4 days | |
| J. M. | 121 | M | 30 | Galvanizer | 22nd September, 1913 | Slight one lung | 26th September, 1913 | In statu quo; left without permission | ... | 4 days | |
| J. F. | 122 | M | 36 | Labourer | 29th September, 1913 | Fairly advanced both lungs | Still in Sanatorium | Improving | + 22 1/2lb. | 13 weeks 2 days | |
| F. B. | 123 | F | 17 | Cotton Weaver | 30th September, 1913 | Advanced both lungs | 22nd December, 1913 | In statu quo; general condition good; left own accord | + 3 1/2lb. | 12 weeks | |
| A. E. | 124 | M | 7 | School | 3rd October, 1913 | Fairly advanced one lung | Still in Sanatorium | Improved | + 3 1/2lb. | 12 weeks 5 days | |
| A. W. | 125 | F | 22 | Household Duties | 14th October, 1913 | Slight case | Still in Sanatorium | Apparent cure | + 24 1/2lb. | 11 week 1 day | |
| M. G. | 126 | F | 16 | Cotton Weaver | 21st October, 1913 | Advanced both lungs | Died 22nd October, 1913 | ... | ... | 3 days | |
| E. W. | 127 | M | 28 | Forge Labourer | 21st October, 1913 | Advanced both lungs | 14th November, 1913 | Developed mental symptoms; transferred to Union Infirmary | ... | 3 weeks 3 days | Died in Union Hospital 15/11/13 |
| A. B. | 129 | F | 12 | School | 20th October, 1913 | Slight case | Still in Sanatorium | Much improved | + 10 1/2lb. | 9 weeks 4 days | |
| J. G. | 130 | M | 31 | Publican | 26th October, 1913 | Advanced both lungs | 1st December, 1913 | In statu quo; left own accord | + 8 1/2lb. | 4 weeks 6 days | |
| J. M. | 131 | M | 24 | Forge Labourer | 26th October, 1913 | Advanced one lung | Still in Sanatorium | Improving | + 5 1/2lb. | 9 weeks 1 day | |
| J. C. | 132 | M | 24 | Wire Worker | 2nd November, 1913 | Slight one lung | Still in Sanatorium | In statu quo | + 16 1/2lb. | 8 weeks 7 days | |
| E. N. | 133 | M | 28 | Wire Worker | 18th November, 1913 | Fairly advanced one lung | Still in Sanatorium | Improving | + 9 1/2lb. | 6 weeks 1 day | |
| F. O. D. | 134 | M | 25 | Home Painter | 11th November, 1913 | Advanced both lungs | Still in Sanatorium | Disease advancing | ... | 7 weeks 1 day | |
| W. L. | 135 | M | 49 | Wire Worker | 1st December, 1913 | Advanced one lung | Still in Sanatorium | Improving | + 13 1/2lb. | 4 weeks 2 days | |
| C. L. | 136 | M | 24 | Taxi Driver | 2nd December, 1913 | Advanced one lung | Still in Sanatorium | Improving | + 16 1/2lb. | 4 weeks 1 day | |
| C. H. | 138 | F | 24 | Household Duties | 8th December, 1913 | Advanced one lung | Still in Sanatorium | Much improved | + 12 1/2lb. | 3 weeks 2 days | |
| E. O. | 139 | F | 10 | School | 8th December, 1913 | Slight case | Still in Sanatorium | Disease apparently arrested | + 7 1/2lb. | 3 weeks 2 days | |
| E. B. | 140 | M | 39 | Brewery Labourer | 13th December, 1913 | Fairly advanced one lung | Still in Sanatorium | Improving | + 19 1/2lb. | 2 weeks 4 days | |
| J. T. | 42 | M | 38 | Chemical Works Labourer | 9th July, 1913 | Slight case | 21st August, 1913 | Apparent cure | ... | 6 weeks | Treated in Hut at Aldin Street Hospital. |

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

| | Early Cases | | Advanced Cases. | |
|---------------------------------|-------------|----------|-----------------|----------|
| | Males. | Females. | Males. | Females. |
| Disease apparently arrested | — | 2 | — | — |
| Improving | 2 | 2 | 7 | 2 |
| Disease slowly advancing | — | — | 2 | 1 |
| Disease <i>in statu quo</i> ... | 1 | — | 2 | 1 |

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.

CONDITION ON DEC. 31st, 1913, OF THE 45 CASES
WHICH RECEIVED TREATMENT AND WERE
DISCHARGED FROM THE SANATORIUM DURING
THE YEAR.

| | Males. | Females. |
|---|----------|----------|
| Regularly at work since leaving the Sanatorium | 14 | 2 |
| Fit for work but unable to find employment ... | 1 | — |
| Regularly at work until two weeks ago | 2 | 1 |
| Doing light household work | — | 5 |
| Only left the Sanatorium two weeks ago ... | 1 | 1 |
| Been in Liverpool Sanatorium since (not at work) | 1 | — |
| Been ill since leaving Sanatorium and unable to work | 3 | 2 |
| School children which are well | 1 | 6 |
| Five advanced cases have died | 4 | 1 |
| | <hr/> 27 | <hr/> 18 |

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 two 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 shews the number of specimens examined at the Public Health Department Laboratory during the years 1910-11-12-13, and it will be observed how the work increases each year :—

| Each year .— | Year 1910 | 1911 | 1912 | 1913 |
|---|-----------|------|------|------|
| <i>Diphtheria.</i> | | | | |
| For diagnosis of cases in Hospital | 152 | 170 | 191 | 156 |
| For diagnosis of cases under treatment of private practitioners ... | 106 | 145 | 66 | 94 |
| For diagnosis of suspected cases under Health Department ... | 60 | 38 | 52 | 69 |
| Before discharge of a case from Hospital | 132 | 113 | 211 | 210 |
| Examination of contacts | 143 | 99 | 191 | 131 |
| <i>Enteric Fever.</i> | | | | |
| For diagnosis of cases in Hospital | 29 | 38 | 3 | 13 |
| For diagnosis of cases under treatment of private practitioners ... | 17 | 36 | 23 | 19 |
| <i>Tuberculosis.</i> | | | | |
| For diagnosis of cases in Hospital | 9 | ... | ... | 3 |
| For diagnosis of cases before admittance to Sanatorium ... | ... | 24 | 7 | ... |
| For diagnosis of cases in Sanatorium | ... | 1 | 9 | ... |
| For diagnosis of cases under treatment of private practitioners ... | 29 | 61 | 70 | 200 |
| For diagnosis by A.S.M.O. ... | ... | ... | ... | 5 |
| <i>Ringworm.</i> | | | | |
| For diagnosis of cases under supervision of School Medical Officer | 75 | 54 | 58 | 36 |
| For diagnosis of cases under treatment of private practitioners ... | 5 | ... | ... | ... |
| For diagnosis of cases of Cerebro Spinal Meningitis | 1 | 12 | ... | ... |
| For diagnosis of cases of Anthrax ... | 6 | 2 | ... | 2 |
| For diagnosis of Other Cases | 5 | 1 | ... | ... |
| | 769 | 794 | 881 | 938 |

SAMPLES OF WATER (DOMESTIC SUPPLY FOR THE BOROUGH)
 Submitted to Professor Delépine, Public Health Laboratory, Manchester, for Bacteriological Examination
 during the year 1913.

| Quantitative Analysis:
Aerobic Micro-organisms growing in 3 days
nutrient gelatine at 20°C. to 21°C. | | | | | | | | | | Qualitative Analysis. |
|--|---|------------------------------------|--------------------------------|-------------------------|-----------------------------------|--------------------------------|-------------------------|------------------------------------|--------------------------------|---|
| Date. | Where taken. | Non-liquifying
Bacteria. | | | Liquifying
Bacteria. | | | Other Micro-
organisms. | | Bacteria associated
with Sewage and
Faecal Pollution. |
| | | No. of
Colonies in
1 gramme. | No. of
kinds of
Bacteria | recognisable
clearly | No. of
Colonies in
1 gramme | No. of
kinds of
Bacteria | recognisable
clearly | No. of
Colonies in
1 gramme. | No. of
kinds of
Bacteria | |
| Jan. 27 | ... Aikin Street Hospital | 4 | 2 | 3 | 1 | — | — | — | — | Bacillus Coli Com-
munis not found in
100cc. |
| Feb. 28 | 9, Hill Street | 8 | 1 | 4 | 2 | — | — | — | — | ditto. |
| April 4 | Bank House ... | 8 | 1 | 1 | 1 | — | — | — | — | ditto. |
| May 1 | 46, Marsh House Lane | 7 | 1 | — | — | — | — | — | — | ditto. |
| May 23 | Sankey Sanatorium ... | 1 | 1 | — | — | — | — | — | — | ditto. |
| June 27 | Warrington Infirmary | 2 | 1 | 1 | 1 | — | — | — | — | ditto. |
| July 31 | 14, Clifton Street | 3 | 1 | 1 | — | — | — | — | — | ditto. |
| Aug. 8 | 14, Clifton Street | 26 | 2 | 1 | 1 | — | — | 55 | 1 | ditto. |
| Aug. 26 | 5, Delooze Yard | 1 | 1 | 1 | 1 | — | — | — | — | ditto. |
| Sept. 26 | Police Station | 13 | 1 | — | — | — | — | 1 | 1 | ditto. |
| Oct. 10 | L. & N.W. Rly Engine Shed
(Folly Lane) | 2 | 1 | 1 | 1 | — | — | 3 | 1 | ditto. |
| Nov. 14 | 27, Cartwright Street | 6 | 2 | 1 | 1 | — | — | — | — | ditto. |
| Dec. 17 | 65, Liverpool Road | 48 | 3 | 3 | 3 | — | — | 1 | — | ditto. |

Samples of Water (the general domestic supply of the Borough) submitted to the Public Analyst for chemical analysis during the year 1913.

| Date. | Where taken | Free Ammonia. | Albuminoid Ammonia. | Oxygen absorbed 4 hours. | Nitrogen as Nitrates. | Chlorine. | Solids Total. | Solids Fixed. |
|---------|---|---------------|---------------------|--------------------------|-----------------------|-----------|---------------|---------------|
| Jan. 24 | Aikin Street Hospital ... | ·0015 | ·0025 | ·007 | ·60 | 2·4 | 30·0 | 18·0 |
| Feb. 28 | 9, Hill Street .. | ·0015 | ·0055 | nil | ·63 | 2·3 | 33·0 | 23·0 |
| April 4 | Bank House ... | ·001 | ·006 | ·0027 | ·70 | 2·2 | 36·0 | 28·0 |
| May 1 | 42, Marsh House Lane ... | ·001 | ·004 | nil | ·62 | 2·2 | 34·0 | 26·0 |
| May 23 | Sankey Sanatorium ... | ·0005 | ·0015 | nil | ·60 | 2·3 | 34·0 | 22·0 |
| June 27 | Warrington Infirmary ... | ·0014 | ·0018 | ·004 | ·64 | 2·2 | 38·0 | 20·0 |
| July 31 | 14, Clifton Street ... | ·0007 | ·0036 | ·004 | ·62 | 2·3 | 30·0 | 18·0 |
| Aug. 26 | 5, Delooze's Yard ... | ·002 | ·004 | ·010 | ·55 | 2·4 | 30·0 | 20·0 |
| Sep. 26 | Police Station ... | ·002 | ·004 | ·004 | ·55 | 2·2 | 30·0 | 18·0 |
| Oct. 10 | London and North-Western Engine Shed, Folly Lane .. | ·0005 | ·0016 | ·010 | 1·0 | 7·0 | 32·0 | 24·0 |
| Nov. 14 | 27, Cartwright Street ... | ·001 | ·002 | ·005 | ·65 | 2·4 | 36·0 | 26·0 |
| Dec. 17 | 65, Liverpool Road ... | ·003 | ·002 | ·010 | ·70 | 2·4 | 28·0 | 22·0 |

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.

964 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 13 carcasses were found to be affected with tuberculosis. In several instances the state of the carcass 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 carcasses affected with tuberculosis is guided by the recommendations made by the Royal Commission.

In addition to the 13 tuberculous carcasses, there were three other carcasses condemned, the animals having been diseased or injured to such an extent as to render the meat unfit for human food.

During 1913 two persons were dealt with by the Health Committee for offences committed in connection with unsound 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 | 111 | 0 | 0 | |
| MUTTON | 0 | 3 | 0 | |
| PORK | 1 | 1 | 0 | |
| FISH | 28 | 2 | 7 | |
| FRUIT | 9 | 3 | 8 | |
| RABBITS | 33 | heads. | | |
| TINNED MEAT | 180 | tins. | | |
| TINNED FRUIT | 51 | tins. | | |
| POULTRY | 29 | head. | | |

SUSPECTED FOOD POISONING.

Information was given to this Department by a General Practitioner in the town of a suspicious case of illness possibly due to food poisoning. Careful enquiries were instituted and it was elicited that members of five families, two of which were resident outside the Borough, had been taken ill after partaking of some brawn which had been prepared by a small dealer in the neighbourhood. The supply was seized and destroyed, whilst the premises in which the food was prepared were condemned. Fortunately all the cases recovered. It is highly desirable that early information should be sent to this department in every case of suspected food poisoning, it would then enable us to deal at once with the source of origin and so limit the outbreak.

BACTERIOLOGICAL EXAMINATION OF MILK SUPPLIED TO THE BOROUGH.

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

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

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

The 17 samples in which Tubercle Bacilli were found were supplied from 16 farms outside the Borough and one within the Borough.

On visiting these 17 farms with a veterinary inspector a cow on each of 10 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 four cases the source of infection was not found after an examination had been made of all the cattle upon the farms, but it must be pointed out that during the period in which the sample was being examined in each of the cases one or more cows had been sold off. Further samples taken from the bulk of the milk supplied from each farm were after examination certified "Tubercle Bacilli not found."

In another case a cow had been sent to the knacker's yard immediately after the first sample was taken. The herd upon the premises when examined were found in normal condition.

In the last case, although being unable at the time, after careful examination of the cows at the farm, to find the animal giving milk containing Tubercle Bacilli, within a short period a cow at this farm met with an accident and had to be dressed. Upon examination being made of the carcase it was found to be affected with tuberculosis. The body was well nourished and the udder was soft, free from lumps or tubercular deposit in any degree.

FACTORIES, WORKSHOPS, WORKPLACES AND HOMEWORK.

1. —INSPECTION.

Including Inspections made by Sanitary Inspectors or Inspectors of Nuisances.

| Premises. | Number of | | |
|---|-------------|------------------|---------------|
| | Inspection. | Written Notices. | Prosecutions. |
| Factories (including Factory Laundries)... | 168 | 6 | ... |
| Workshops (including Workshop Laundries) | 920 | 11 | ... |
| Workplaces (other than Outworkers' premises included in Part 3 of this Report)... | 1028 | 9 | ... |
| Total | 2116 | 26 | ... |

4.—REGISTERED WORKSHOPS.

| Workshops on the Register (S. 131) at the end of the year :— | | | | | Number. |
|---|------------------------------|-----|-----|-----|---------|
| Important classes of workshops, such as workshop bake-houses, may be enumerated here. | Bakehouses | ... | ... | ... | 65 |
| | Boot and Shoe Repairers | ... | ... | ... | 34 |
| | Clog Makers and Repairers... | ... | ... | ... | 9 |
| | Dressmakers | ... | ... | ... | 29 |
| | Milliners | ... | ... | ... | 24 |
| | Tailors | ... | ... | ... | 16 |
| | All Others | ... | ... | ... | 51 |
| Total number of workshops on Register | | | | | 228 |

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) | 4 |
| 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) | 11 |
| Notified by H.M. Inspector | 8 |
| Reports (of action taken) sent to H.M. Inspector ... | ... |
| Other | ... |
| Underground Bakehouses (S. 101) :— | |
| Certificates granted during the year | ... |
| In use at the end of the year | ... |

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, or reported on during the year 1913 :—

55, Old Road, alterations to be made.
9, School Street, „ and improvements made.
1, 2, 3, 4, Welch's Yard, demolished by owner.
5, 6, 7, 8, „ closing order made.
1, Back Church Place, alterations and improvements
made.
2, „ „ „
3, „ „ „

Statement as to action taken during the year 1913 in regard
to houses reported upon in previous years :—

2 to 7, Old Gardens, demolished by owners.
5 and 6, Silver Square, „
1, 3 and 5, Pilkingtons Yard, converted into a
workshop.
13, Gandys Walk, demolished by owner.
1, Gandys Yard, „
1 to 11, Gandys Walk, alterations and improvements
made.
2 to 7, Gandys Yard, „
3, 5 and 7, Back Crosley Street, „
49, Old Road, „
9 to 22, Back Crosley 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 in neglecting to send for medical aid when necessary. 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 1913, 29 Certified Midwives registered as practising in the Borough, 5 of these also having midwifery practices outside the Borough. Of these 29 certified midwives, 13 only have received special training in their work, and of the 16 untrained 3 are unable to read or write.

During the year these certified midwives attended (according to their registers) 1,666 confinements in the Borough, and delivered 1,594 living children.

By deducting these 1,594 living births from 2,212, the total number registered as born in Warrington during the year, we obtain a figure 618 which represents the number of living children delivered by doctors, and those born in the workhouse.

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.

| | 1913. |
|--|-------|
| Enquiries concerning still births - - - | 85 |
| „ „ cases of puerperal fever - - | 7 |
| Number of visits to midwives and homes - - | 105 |
| Enquiries concerning cases attended by uncertified women who were acting as midwives - - | 10 |
| Visits to homes during lying-in-period in order to investigate midwives' work - - | 30 |
| „ „ of expectant mothers - - | 108 |
| Number of notices received from midwives of sending for medical help - - - | 364 |
| „ of notifications by midwives of deaths of children before the attendance of a doctor - - - | 9 |
| „ of classes held for the instruction of midwives - - - | 3 |

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, 1765 in number, were during 1913 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 1913, and belonging to Warrington, was 2,204. Under the Act 248 births were notified by Doctors, 1,875 by Midwives, and 6 by relatives, a total of 2,129, or 96.6 of the total number of births.

Infantile Mortality in Warrington since 1879

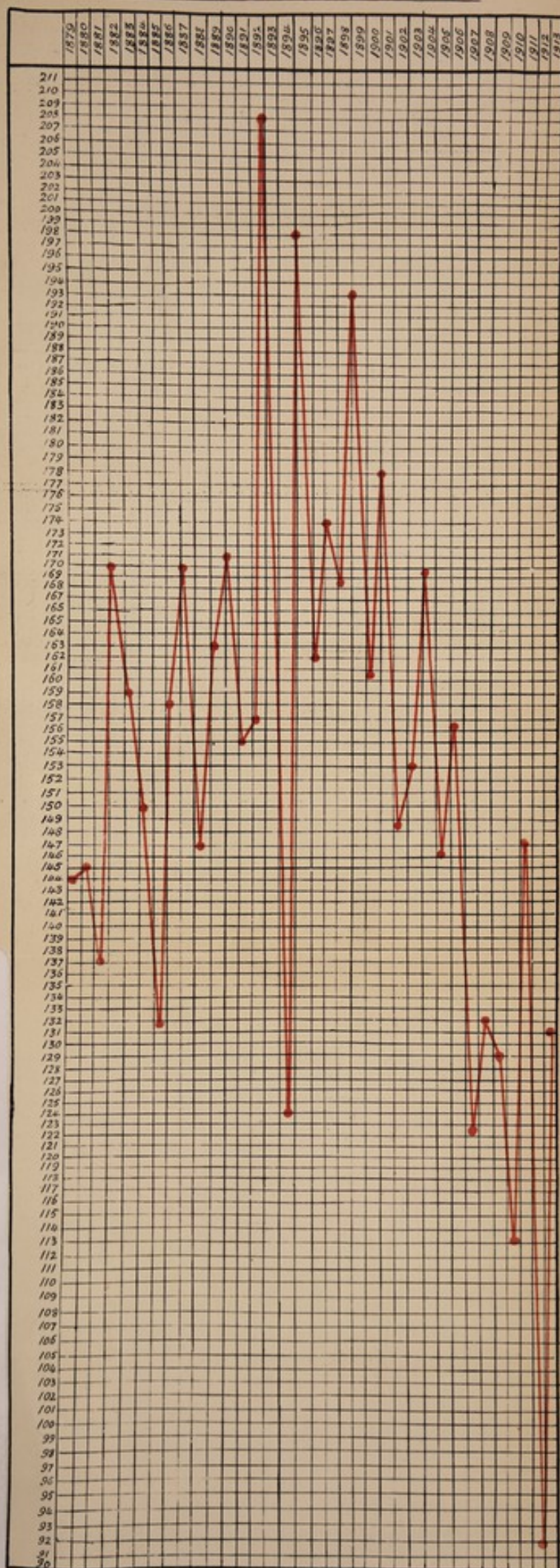


CHART shewing total Deaths and Deaths from Diarrhoea among Children under one year of age during the years 1902 to 1913, also the mean temperature for the months July, August and September for the same years.

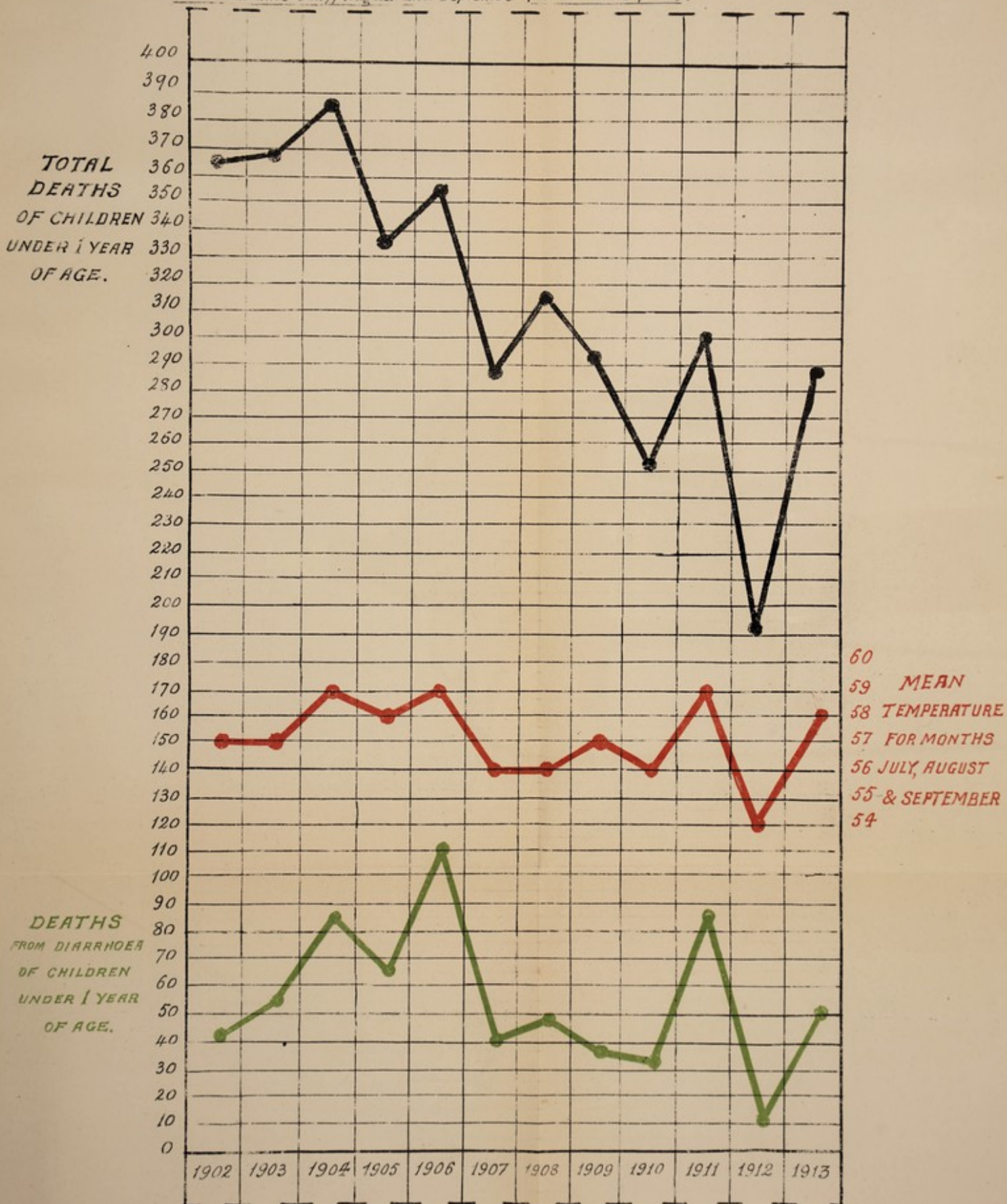
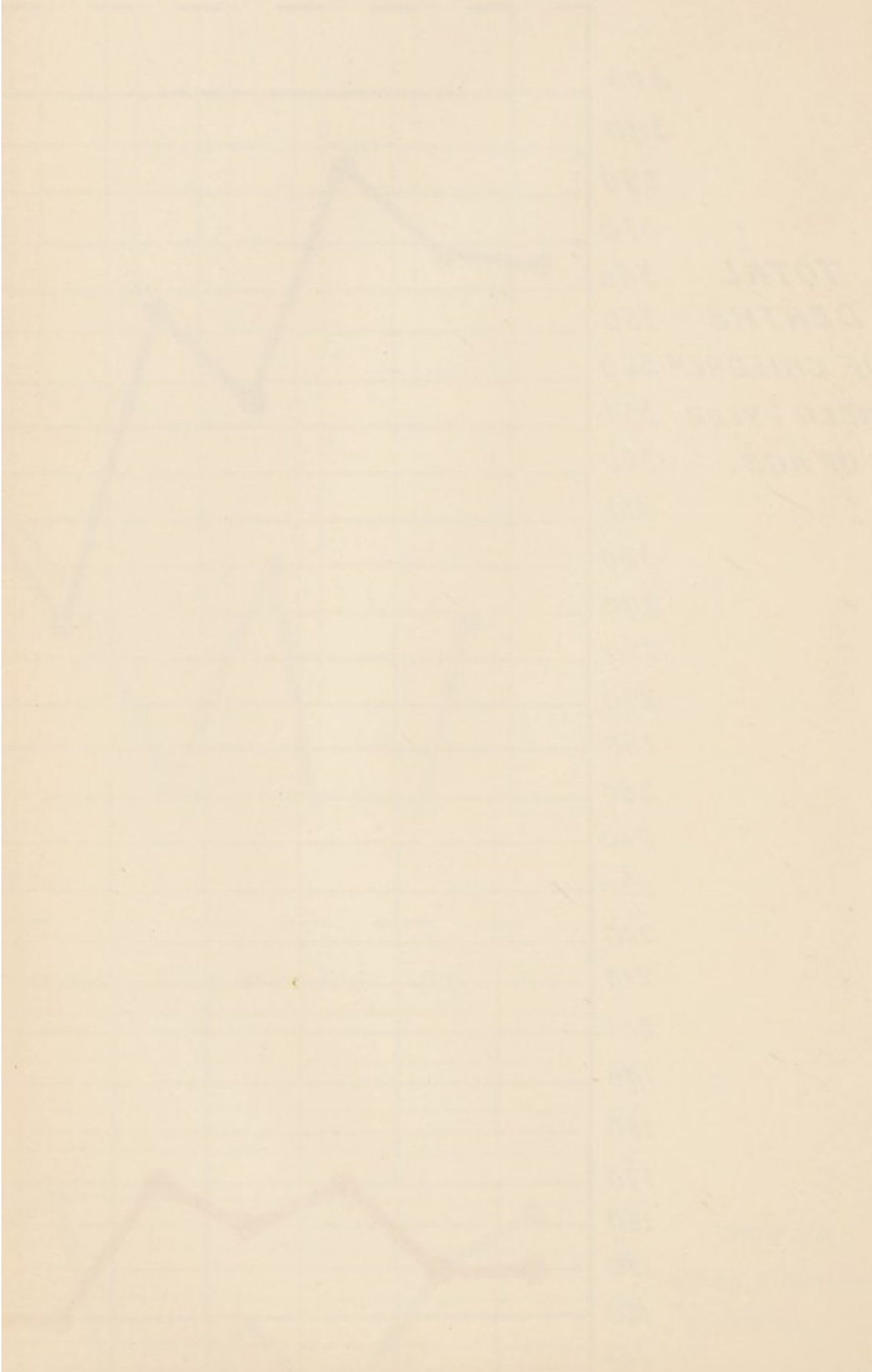


CHART 1. The number of deaths and the number of persons exposed to the disease in the United States, 1910-1919.



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 3,821 visits were paid by the Health Visitors.

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

During the latter part of the year another Mothers' and Babies' Welcome was opened in Bewsey Ward making a total of two in the Borough. 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 have 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.

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 six years in the cases of Warrington.

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

DEATHS OF CHILDREN UNDER ONE YEAR AND OVER
ONE YEAR BUT UNDER FIVE YEARS OF AGE,
OCCURRING DURING THE YEARS 1908 to 1913.

| 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 |

In the 2nd Report on Infant and Child Mortality drawn up by the Medical Officer of the Local Government Board in 1913 Warrington is shown to be the 11th highest in death-rate for 1—5 years, as compared with the 100 large towns of the country during the period 1907-10. The majority of the towns that are worse, however, are Lancashire industrial towns, and, in fact, Lancashire holds the unenviable reputation of having the highest infant and child mortality of any county in the country.

The total number of deaths in children under 1 year of age in 1913 was 289, compared with 192 the previous year, so that the infantile mortality or number of deaths per 1,000 infants born during the year was 131 compared with 92 in 1912. (*See Table IV, page 31*).

The death-rate among illegitimate children was much higher than among legitimate as is usually the case, the rates being respectively 210.5 and 129 per 1,000 births.

The birth-rate 29.7 during 1913 was higher than for the past two years.

A high infantile death-rate invariably follows a high birth-rate and this may account partly for the rise in the figure for the year under discussion.

There were not so many deaths from measles, although there was a slight increase in those from Whooping Cough.

At the same time it is noteworthy that the deaths (58) due to bronchitis and pneumonia are more than double those (25) in the preceding 12 months. Coupling this with the fact that the mortality from measles was so low it is quite possible that some

of these deaths represent complications of cases of measles in which the parents neglected to obtain medical advice until very late in the course of the disease.

The death-rate from Tuberculosis shows an upward tendency in ages below 12 months as it does in the other age periods.

Premature birth as a cause of mortality in infants is high in Warrington (40), although there is some diminution in the number compared with last year (47). There can be no doubt that the taking of drugs by women in the early months of pregnancy is the main factor in producing this condition. Venereal disease, especially syphilis, as a cause of premature birth, does not from the evidence that can be obtained appear to be particularly prevalent in this Borough.

The number of deaths from infantile diarrhoea was 49 whereas in 1912 only 11 were due to this cause. This higher mortality is in part attributable to the unfavourable climatic conditions of a long hot and dry summer. Although a high rate it compares favourably with the average rate in the 96 great towns.

It is very necessary that proper provision should be made in every home for the storage of food, and no plans of new dwelling-houses should be approved until this point has been settled.

In investigations last year into the deaths of children under one year of age from epidemic diarrhoea it was found that in 77 % of the cases there was no accommodation whatever in the houses for storing food, which was simply left exposed to dust flies and vermin.

In the case of the 23 % which had cupboards of some sort these were nearly always quite inadequate or unsuitable. The accommodation consisted mostly of a dark hole under the staircase without any means of ventilation, and instead of being the cleanest part of the house was in nearly every instance the filthiest.

The chart (page 69B) 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 Diarrhoea 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 | - | - | - | - | - | 1,765 |
| Infant revisits | - | - | - | - | - | 3,821 |
| Infant death enquiries | - | - | - | - | - | 236 |
| House inspections | - | - | - | - | - | 230 |
| Visits to Welcome | - | - | - | - | - | 48 |
| Other visits | - | - | - | - | - | 163 |
| Health Talks | - | - | - | - | - | 47 |
| Visits to Children over 12 months | - | - | - | - | - | 146 |
| Nuisances reported | - | - | - | - | - | 41 |

COUNTY BOROUGH OF WARRINGTON.

THE

Sanitary Inspector's Report

FOR THE

YEAR ENDING 31st DECEMBER, 1913.

To the Chairman and Members of the Health Committee.

GENTLEMEN,

I have pleasure in submitting to you my Thirteenth Annual Report of the Sanitary Work and other duties carried out during the year 1913.

The number of nuisances dealt with under the Public Health Acts is not quite as large as in the previous year, chiefly owing to the regular removal of manure from certain stables, etc., by men employed by your Committee, and also that considerable property has in recent years been dealt with under the Housing Acts. The visiting of homes where cases of notifiable and non-notifiable infectious disease have occurred has more than occupied the time of one Inspector. A table on page 75 gives the number of visits paid and the cause of the visit.

On page 77 a statement is given as to the number of smoke observations taken. I would point out that the chimneys on which 30 minute observations have been taken were those which the Inspectors have noted when visiting on their district, or such chimneys as have been mentioned in complaints made to the Health Department.

The Milk and Cream Regulations issued by the Local Government Board and the Tuberculosis Order of 1913 issued by the Board of Agriculture are very important steps towards providing a pure milk supply. The former states that no person shall add, or order or permit any other person to add, any preservative substance to milk intended for sale for human consumption. It also places restrictions on the addition of thickening or preservative substances to cream, and makes it an offence to offer preserved cream for sale unless labelled in the manner prescribed by the Regulations.

The Tuberculosis Order deals with cattle suffering from diseases of the udder and grants power to Local Authorities to pay compensation to the owners of animals slaughtered.

Owing to the scarcity of small dwelling-houses a number of furnished apartments have been commenced to be occupied during the latter portion of the year, and there is every appearance of this unsatisfactory mode of living extending unless more small house accommodation is provided. Although unsatisfactory for several reasons I am compelled to admit it is an improvement on the insanitary small houses which have been closed and which at one time formed the abode of persons of the class now residing in furnished apartments.

No orders have been made under the Shops Act, 1912, but considerable time is occupied in seeing that the Shop Assistants obtain their half-holiday from the stated time, 1.30. Preventing the sale of restricted articles on one half-day in each week in mixed shops is also very difficult.

SUMMARY OF NUISANCES DEALT WITH DURING THE YEAR.

| | | | | | |
|---------------------------------|-----|-----|-----|-----|-----|
| Overcrowded houses | ... | ... | ... | ... | 8 |
| Insufficiently ventilated rooms | ... | ... | ... | ... | 16 |
| Dirty dwellings | ... | ... | ... | ... | 14 |
| Defective floors | ... | ... | ... | ... | 28 |
| „ walls and ceilings | ... | ... | ... | ... | 33 |
| Dirty „ „ „ | ... | ... | ... | ... | 15 |
| Defective roofs | .. | ... | ... | ... | 78 |
| „ spouting | ... | ... | ... | ... | 210 |

| | |
|---|------|
| Defective slopstones and pipes | 51 |
| Blocked drains | 450 |
| Choked gulleys | 21 |
| Defective drains | 27 |
| Defective pavement in yards and passages ... | 104 |
| Damp basements | 32 |
| „ walls of dwellings... .. | 56 |
| Pools of stagnant water | 9 |
| Defective pail closets and ashplaces | 342 |
| „ water-closets | 7 |
| Insufficient closet accommodation | 9 |
| Animals kept so as to be a nuisance | 27 |
| Accumulation of manure | 30 |
| „ „ refuse... .. | 16 |
| Dirty walls of passages and yards | 201 |
| Dangerous yard and closet walls | 16 |
| Defective Middensteads... .. | 4 |
| Miscellaneous | 128 |
| Total | 1932 |
| Complaints received from Inhabitants... .. | 42 |
| Preliminary Notices sent calling attention to
nuisances | 387 |
| Legal Notices served to abate nuisances ... | 350 |

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 ... | 405 |
| Revisits to premises where cases of Scarlet
Fever, Diphtheria, or Enteric Fever had
occurred to ascertain as to contacts, &c. ... | 197 |
| Revisits to premises where cases of Scarlet
Fever or Diphtheria have been treated at
home | 23 |
| Visits to homes of children reported by Educa-
tion Department as being absent from School
owing to either Measles, Whooping Cough,
Chickenpox or Mumps | 2360 |
| Revisits to homes of children suffering from
either Measles, Whooping Cough, Chickenpox
or Mumps | 2716 |

| | |
|--|------|
| Visits to homes when children are absent from school with a Sore Throat or suspicious Rash | 618 |
| Visits to premises <i>re</i> cleansing and disinfection after cases of infectious disease | 16 |
| Total | 6335 |

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.

2,046 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 |
|--------------|---------|----------|
| 1913—January | 45 | 493 |
| February | 32 | 274 |
| March | 42 | 347 |
| April | 47 | 420 |
| May | 41 | 493 |
| June | 30 | 254 |
| July | 40 | 389 |
| August | 45 | 358 |
| September | 71 | 537 |
| October | 70 | 477 |
| November | 70 | 471 |
| December | 67 | 424 |
| | 600 | 5,137 |

In addition to the visits in connection with infectious disease there were 2,182 visits paid to homes of persons notified as suffering from tuberculosis. The details of this work are given on page 43.

100 Notices were served for the stripping and cleansing of premises where certain cases of tuberculosis had been resident.

SMOKE OBSERVATIONS DURING THE YEAR 1913.

197 observations have been taken of 66 chimneys, and 8 offences have been reported in connection with 6 chimneys.

In each case the offence was reported to your Committee, and afterwards dealt with as follows:—

No. 1.—Offence committed August 15th. Legal Notice served. 3 observations since. No offence committed.

No. 2.—Offence committed October 3rd. Legal Notice served. Alterations made in connection with both furnace and chimney. One observation since. No offence committed.

No. 3.—Offence committed March 12th. Firemen warned by order of Committee. 5 observations since. No offence committed.—Second offence committed September 17th. Legal Notice served.—Third offence committed October 22nd. Manager attended before Health Committee and was warned. 6 observations since. No offence committed.

No. 4.—Offence committed October 20th. Upon notice of this offence being given, the Manager informed the Inspectors that they had recently decided to have a new boiler plant, fitted with mechanical stokers. At the end of the year the works were closed down, and alteration in progress.

No. 5.—Offence committed June 18th. Legal Notice served. 5 observations since. No offence committed.

No. 6.—Offence committed July 17th. Legal Notice served. 4 observations since. No offence committed.

BAKEHOUSES.

239 Visits have been paid to the 59 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 88 Milkshops and 12 Registered Cowsheds within the Borough. 413 inspections have been made of the Milkshops, and 82 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: 1,264 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 25 houses within the Borough registered as above; 45 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.

101 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. Certificate did not disclose the present owner's name and address.

3 Boats. Cabins required repainting.

2 „ Defective portion of deck over aft 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 213 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.

| | Exam-
ined. | Adulter-
ated. | Extent of Adulteration and action taken. |
|--------------------|----------------|-------------------|---|
| Milk | 77 | 2 | No. 277. 3·3% water added.
Farmer cautioned.
No. 341. Cream reduced 9% below
standard. Farmer cautioned. |
| Condensed Milk ... | 3 | — | |
| Butter | 44 | 1 | No. 390. Margarine. Fined £5
and costs. |
| Margarine | 2 | — | |
| Cheese | 22 | 1 | No. 264A. 37% deficient in fat.
Informal sample. |
| Lard | 2 | — | |
| Flour | 2 | — | |
| Tea | 11 | — | |
| Coffee | 17 | 3 | No. 293A. 55% Chicory.
No. 315. 46% Chicory.
No. 429. 18% Chicory. All informal
samples. |
| Sugar | 3 | — | |
| Pepper | 4 | — | |
| Beer | 13 | — | |
| Jam | 2 | — | |
| Brawn | 1 | — | |
| Sausages | 1 | 1 | No. 385. 37 grains boric acid per lb.
Shopkeeper warned. Ceased to
buy from manufacturer. |
| Corned Beef ... | 1 | — | |
| Pearl Barley ... | 4 | — | |
| Lentils | 3 | — | |
| Sultanas | 1 | — | |
| Total ... | 213 | 8 | = 3·75 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 63 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.

Byelaws.

The model Byelaws issued by the Local Government Board and dealing with nuisances arising from Snow, Filth, Dust, Ashes and Rubbish, and the Prevention of the Keeping of Animals on any premises so as to be injurious to Health were adopted by the Council of this Borough in December, 1910. Special attention has been given to the portion of the byelaws dealing with the keeping of animals. In the past manure and stable refuse has been deposited on most unsuitable sites and there has been no fixed time for its removal. The byelaws now compel the owners of animals to provide a suitable receptacle, constructed in such a manner as to prevent any soakage therefrom into the ground or into the wall of any adjoining building. The time for removal of manure from the premises is also fixed 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.

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.

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 1918.

REFERENCES TO OTHER DEPARTMENTS.

| | | | | |
|------------------------------|-----|-----|-----|-----|
| Referred to Borough Surveyor | ... | ... | ... | 114 |
| „ „ Water Engineer | ... | ... | ... | 51 |
| „ „ Cleansing Superintendent | ... | ... | ... | 96 |

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 | ... | ... | 163 |
| Bakehouses | " | " | 65 |
| Slaughter-houses | " | " | 16 |
| Unregistered premises where brawn, potted meats, etc. is prepared and sold in small quantities within the Borough | ... | ... | 133 |
| Milkshops | " | " | 88 |
| Cowsheds | " | " | 12 |
| Ice-cream makers' premises within the Borough | | | 63 |
| Common Lodging-houses | " | " | 36 |
| Houses Let in Lodgings | " | " | 25 |
| 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.

ANNUAL REPORT
OF THE
Medical Officer of Health
FOR THE
Rural District of Warrington
FOR 1913.

ANNUAL REPORT

Medical Officer of Health

Rural District of Warrington

1904-1905

*To the Chairman and Members of the Warrington
Rural District Council.*

GENTLEMEN,

I have pleasure in again presenting to you my Annual Report for the year ended December, 31st, 1913, and giving you an account of the Population, Vital Statistics, and the Sanitary Condition of your District.

POPULATION, 14,615. AREA, 19,927 ACRES.

The population is estimated on the same basis as in past years and the increase amounts to 326, viz. :—

| | | | | | |
|--|-----|-----|-----|-----|-------|
| Excess of Births over Deaths | ... | ... | ... | ... | 139 |
| Thirty-four new houses at 5½ persons per house | ... | ... | ... | ... | 187 |
| Estimated population for the year 1912 | ... | ... | ... | ... | 14289 |
| Estimated population for the year 1913 | ... | ... | ... | ... | 14615 |

The Registrars have returned during the year the following :—

| | | | | | | | | |
|--------------|-----|-----|---------|-----|-----|-------|-----|-----|
| BIRTHS—Males | ... | 134 | Females | ... | 141 | Total | ... | 275 |
| DEATHS— | „ | 80 | „ | ... | 54 | „ | ... | 134 |

TRANSFERABLE DEATHS.

Eighteen deaths occurred outside the district but belonging thereto, viz. :—

| | | | | | | | | | |
|-----------|-----|-------|----|-----|---------|---|-----|-------|----|
| In Sankey | ... | Males | 7 | ... | Females | 1 | ... | Total | 8 |
| „ Winwick | ... | „ | 4 | ... | „ | 3 | ... | „ | 7 |
| „ Rixton | ... | „ | 2 | ... | „ | 1 | ... | „ | 3 |
| | | | 13 | | | 5 | | | 18 |

Sixteen deaths occurred in the district but not belonging to it, having fixed residences outside, viz. :—

| | | | | | | | | | |
|---------|-----|-------|----|-----|---------|---|-----|-------|----|
| Sankey | ... | Males | 12 | ... | Females | 2 | ... | Total | 14 |
| Winwick | ... | „ | — | ... | „ | — | ... | „ | — |
| Rixton | ... | „ | 2 | ... | „ | — | ... | „ | 2 |
| | | | 14 | | | 2 | | | 16 |

The deaths in Sankey Sanatorium were—Males 7, Females 2.

| | | | | | |
|---|-----|-----|-----|-----|-----|
| Deaths returned by Registrars | ... | ... | ... | ... | 134 |
| Transferable from outside | ... | ... | ... | ... | 18 |
| | | | | | 152 |
| Deaths of persons not belonging to the district | ... | ... | ... | ... | 16 |
| Net deaths belonging to the district | ... | ... | ... | ... | 136 |

The Eighteen transferable deaths occurred in the following places outside the district but belonging to it, and from the following Sub-registration districts of Sankey, Winwick and Rixton :—

| | | | | | | | |
|---------------------------------|-----------|----|-------|---|--------|-------|----|
| Warrington Union Infirmary from | Sankey | 3 | Males | 1 | Female | Total | 4 |
| „ „ „ „ | Winwick | 2 | „ | — | „ | „ | 2 |
| „ „ „ „ | Rixton... | 1 | „ | 1 | „ | „ | 2 |
| Rainhill Asylum Infirmary from | Sankey | 1 | „ | — | „ | „ | 1 |
| „ „ „ „ | Winwick | 1 | „ | — | „ | „ | 1 |
| Infectious Diseases Hospital, | | | | | | | |
| Warrington from | Winwick | — | „ | 2 | „ | „ | 2 |
| Liverpool Royal Infirmary from | Sankey | 1 | „ | — | „ | „ | 1 |
| Salford „ „ „ | Rixton | 1 | „ | — | „ | „ | 1 |
| Accidents & Sudden Deaths „ | Sankey | 2 | „ | — | „ | „ | 2 |
| „ „ „ „ | Winwick | 2 | „ | — | „ | „ | 2 |
| | | 13 | | 5 | | | 18 |

The Births and Deaths were distributed in the following Sub-registration Districts of

| | | | BIRTHS | | | DEATHS | | |
|---------|-----|-----|--------|---------|-------|--------|---------|-------|
| | | | Males | Females | Total | Males | Females | Total |
| Sankey | ... | ... | 70 | 73 | 143 | 49 | 36 | 85 |
| Winwick | ... | ... | 36 | 39 | 75 | 21 | 9 | 30 |
| Rixton | ... | ... | 27 | 28 | 55 | 10 | 9 | 19 |
| Total | ... | ... | 133 | 140 | 273 | 80 | 54 | 134 |

Two Births occurred outside the district but belonging to it making the Births 275.

The Birth Rate is lower than last year, and equals 18·8.

The Death Rate is the lowest we have had for the last seven years, and equals 9·3 per thousand of the estimated population.

The 152 deaths including the 18 persons who died outside the district but belonging to it were caused by the following diseases, viz :—

| | Sankey | Winwick | Rixton |
|---|--------|---------|--------|
| Measles ... | 10 | — | — |
| Diphtheria ... | 1 | 3 | — |
| Whooping Cough ... | 2 | — | — |
| Phthisis ... | 13 | — | — |
| Other Tubercular ... | — | 1 | — |
| Cancer ... | 3 | 4 | 1 |
| Meningitis ... | 4 | 1 | — |
| Heart Disease ... | 11 | 5 | 4 |
| Bronchitis ... | 5 | 3 | 1 |
| Pneumonia ... | 8 | 4 | 4 |
| Diarrhoea, Enteritis ... | 5 | 2 | — |
| Cirrhosis of Liver ... | 2 | 1 | 1 |
| Congenital Debility & Premature Birth ... | 3 | 2 | 3 |
| Violent Deaths ... | 7 | 2 | 3 |
| Puerperal Fever ... | 1 | — | — |
| Suicide ... | 1 | 1 | — |
| Other Defined Diseases ... | 17 | 8 | 5 |
| Total ... | 93 | 37 | 22 |

The Birth and Death Rates for the three Sub-registration districts for the last seven years will be as follows:—

| | 1907 | | 1908 | | 1909 | | 1910 | | 1911 | | 1912 | | 1913 |
|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | Birth | Death | Birth | Death | Birth | Death | Birth | Death | Birth | Death | Birth | Death | Birth |
| Sankey ... | 25·4 | 13·1 | 24·2 | 11·7 | 24·2 | 12·7 | 21·6 | 11·6 | 24·09 | 12·4 | 22·1 | 12·4 | 20·8 |
| Winwick ... | 24·7 | 9·8 | 25·5 | 11·4 | 25·0 | 11·6 | 25·3 | 13·2 | 16·9 | 6·09 | 19·6 | 7·9 | 14·5 |
| Rixton ... | 21·8 | 7·8 | 13·5 | 8·04 | 17·1 | 10·2 | 16·5 | 7·5 | 16·4 | 12·07 | 16·6 | 10·0 | 17·5 |
| Total | 24·3 | 10·8 | 22·06 | 10·06 | 22·5 | 11·8 | 21·1 | 10·9 | 17·6 | 10·7 | 19·7 | 11·4 | 18·8 |

The ages of mortality were :—

| | | | |
|-----------------------|-----|-----|-----|
| Under 1 year of age | ... | ... | 25 |
| Between 1 and 2 years | ... | ... | 13 |
| " 2 " 5 " | ... | ... | 10 |
| " 5 " 15 " | ... | ... | 8 |
| " 15 " 25 " | ... | ... | 9 |
| " 25 " 45 " | ... | ... | 20 |
| " 45 " 65 " | ... | ... | 40 |
| " 65 " upwards | ... | ... | 27 |
| Total | ... | ... | 152 |

The Infant deaths under one year of age amount to 25, which is lower than last year, and will equal a rate of 91·5 to one thousand net births.

ZYMOTIC DISEASES.

Twenty-four deaths were caused by the following diseases :—

| | Cases. | Sankey. | Winwick. | Rixton. |
|-----------------------|--------|---------|----------|---------|
| Measles | 10 | 10 | — | — |
| Diphtheria | 4 | 1 | 3 | — |
| Whooping Cough | 2 | 2 | — | — |
| Diarrhoea & Enteritis | 7 | 5 | 2 | — |
| Puerperal Fever | 1 | 1 | — | — |
| Total | 24 | 19 | 5 | 0 |

The death rate from these preventable diseases will equal 1·6 per thousand of the estimated population. This is slightly higher than last year, and caused by the epidemic of Measles at Burtonwood.

The table below will give a Zymotic death rate for the last ten years :—

| | 1904 | 1905 | 1906 | 1907 | 1908 | 1909 | 1910 | 1911 | 1912 | 1913 |
|------------|------|------|------|------|------|------|------|------|------|------|
| Sankey... | 3·9 | 2·6 | ·4 | 1·9 | 2·3 | ·3 | ·4 | 1·7 | 1·6 | 1·5 |
| Winwick .. | 2·1 | 2·1 | 1·4 | ·3 | ·6 | ·3 | ·07 | ·5 | ·4 | ·7 |
| Rixton... | ·6 | 1·5 | ·3 | ·8 | ·8 | nil | ·07 | 1·7 | ·5 | nil |
| | 2·8 | 2·2 | ·8 | 1·2 | 1·2 | ·6 | ·5 | 1·2 | 1·1 | 1·6 |

| | | | | |
|------------------------------|---------------------|-----|-----|------|
| The death rate from Phthisis | 13 cases will equal | ... | ... | ·8 |
| " " Bronchitis | 9 " | " | ... | ·6 |
| " " Pneumonia | 16 " | " | ... | 1·09 |
| " " Diarrhoea & Enteritis } | 7 " | " | ... | ·4 |
| " " Cancer | 8 " | " | ... | ·54 |
| " " Diphtheria | 4 " | " | ... | ·2 |
| " " Measles | 10 " | " | ... | ·6 |

NOTIFICATION OF INFECTIOUS DISEASES.

During the year 80 cases of Infectious Diseases have been notified under the Compulsory Notification Act and sent from the following districts, viz :—

| | Sankey. | Winwick. | Rixton. |
|--------------------------|---------|----------|---------|
| Diphtheria | ... | 12 | 5 |
| Scarlet Fever | ... | 5 | 2 |
| Erysipelas | ... | 2 | 2 |
| Enteric Fever | ... | — | 1 |
| Puerperal Fever | ... | — | 1 |
| Pulmonary Tuberculosis } | ... | 13 | 6 |
| | 80 | 51 | 17 |

Nine of these cases were sent into Hospital, viz.: Five from Sankey, two from Winwick, and two from Rixton.

COUNTY ASYLUM, WINWICK.

This Asylum is treated as a separate District, neither sickness or deaths included in the general report.

POPULATION 2,628.

| | Males | Females | Total |
|-------------------------------|-------|---------|-------|
| The number of Patients | 953 | 1,224 | 2,177 |
| „ „ „ Resident Staff ... | 157 | 294 | 451 |

One hundred and seventy-two deaths occurred in the Asylum during the year from the following diseases, viz :—

| Ages ... | Under
1 year. | 5-15 | 15-25 | 25-45 | 45-65 | 65 and
over | Total |
|---------------------------|------------------|------|-------|-------|-------|----------------|-------|
| Brain | | | | 3 | 5 | 4 | 12 |
| Diabetes | | | | | 1 | | 1 |
| Gangrene of Lungs ... | | | | | 1 | | 1 |
| Pleurisy | | | | 1 | | | 1 |
| Phthisis | | | 2 | 16 | 6 | | 24 |
| Cancer | | | | 3 | 4 | 2 | 9 |
| Heart Disease | | | 1 | 17 | 10 | 1 | 29 |
| Bronchitis | | 1 | 1 | 3 | 7 | 2 | 14 |
| Pneumonia | | 1 | | 1 | 5 | 3 | 10 |
| Diarrhœa and Enteritis.. | | 1 | | | | | 1 |
| Nephritis & Brights Dis'e | | | 1 | 5 | 7 | | 13 |
| General Paralysis .. | | | 2 | 19 | 9 | | 30 |
| Epilepsy | | 1 | 5 | 4 | 4 | | 14 |
| Inquests | | | | | 1 | | 1 |
| Other Diseases | | | | | 9 | 3 | 12 |
| | | 4 | 12 | 72 | 69 | 15 | 172 |

The following diseases have been notified under the Compulsory Notification Act, viz. :—Scarlet Fever, one case ; Erysipelas, one case.

SMALL-POX.

There have not been any case of Small-pox during the year. Vaccination has not been so successfully carried out as in former years owing to the greater number of exemptions being granted. I have advised your Authority to make some arrangement for the reception into some Hospital should any case arise as your District is especially situated as to catching infection first, from the number of unvaccinated children and secondly, from the district being in direct line between Liverpool and Manchester where tramps are constantly passing between these ports.

SCARLET FEVER.

Twenty-three cases were notified during the year, none proved fatal, the last fatal case occurred three years ago. Nineteen of these cases occurred in Sankey, two in Winwick and two in Rixton Registration Districts. Four cases were sent into Hospital. September and November were the only months free from this disease.

DIPHTHERIA.

Twenty-two cases of this disease were notified, viz :- twelve from Sankey five from Winwick and five from Rixton. Four were sent into Hospital and four proved fatal.

MEASLES.

This disease not being compulsorily notifiable I am unable to give you the exact number of cases, but in May and June it broke out in epidemic form in Burtonwood and I advised the Managers of the Council School and St. Pauls' Roman Catholic School, in both departments to close for fourteen days. In Burtonwood alone, one hundred cases occurred and proved fatal in ten cases.

ENTERIC FEVER.

One case was notified from Rixton and was sent into Hospital. The premises were carefully examined but nothing of an unsanitary nature was found to account for the disease.

WHOOPING COUGH.

Two deaths occurred from this disease which is the same as last year, although we have not had it in epidemic form.

ERYSIPELAS.

Nine cases were notified, seven cases from Sankey and two from Rixton none of which proved fatal. This is an increase on last year.

DIARRHOEA & ENTERITIS.

These diseases caused seven deaths against ten last year which is lower than many previous years and speaks well for the sanitary conditions of the district.

PUERPERAL FEVER

Was responsible for one death which occurred in Sankey. This case was attended by a midwife who was suspended for a month from attending any other case.

BRONCHITIS & PNEUMONIA.

These diseases caused twenty-five deaths, viz: Bronchitis nine and Pneumonia 16, this is about the average of former years.

PULMONARY AND OTHER TUBERCULOUS DISEASES.

Thirteen deaths were caused by Phthisis or Pulmonary Tuberculosis and one from other Tuberculous Disease. This is less than last year, but about the average of previous years. The death rate from this disease will equal .8 per thousand of the estimated population.

CANCER, MALIGNANT DISEASE,

Was fatal in eight cases, against nineteen last year, and gives a rate of .54 per thousand. Three cases were in Sankey, four in Winwick, and one in Rixton.

SCHOOL CLOSURE.

An epidemic of Measles occurred at Burtonwood, and I advised the Managers to close St. Paul's Roman Catholic School from April 28th to May 19th.

Number of children on Register, 200; number of cases of Measles, 70. As the disease continued to spread, I ordered the Managers of the Council School to close in both departments.

MIXED SCHOOL.

| | |
|-----------------------|---------|
| Number on Register | ... 102 |
| „ of cases of Measles | 14 |

INFANT SCHOOL.

| | |
|-----------------------|--------|
| Number on Register... | 140 |
| „ of cases | ... 16 |

This school was closed from May 26th to June 9th.

Chicken-pox and Measles again broke out at St. Paul's Roman Catholic School, Burtonwood, when I again advised the Managers to close the Infant Department for fourteen days, to commence on December the 8th.

INFANT DEPARTMENT.

| | |
|------------------------|--------|
| Number on Register .. | ... 74 |
| „ of cases Chicken-pox | 30 |

UPPER STANDARD.

| | |
|--------------------|---------|
| Number on Register | ... 123 |
| „ of cases Measles | 3 |

WATER SUPPLY.

The Warrington Corporation supplies the greater portion of the district. The water is pure, plentiful, and wholesome.

HOSPITAL ACCOMMODATION.

The Warrington Infectious Diseases Hospital receives and treats our cases whenever possible.

ROUTINE WORK.

I have regularly and systematically gone over and inspected the whole district, and any insanitary conditions have been reported at your monthly meetings, which I have regularly attended.

The Milk Shops, Dairies, Cowsheds, Bakehouses, Common Lodging Houses, Factories and Workshops have been frequently visited and found on the whole satisfactory.

FACTORY AND WORKSHOPS ACT, 1901.

The thirty-five Factories, sixty-two Workshops and four Workplaces in the district have had one hundred and one visits during the year, and all found satisfactory and not found necessary to issue any notices.

TOWN PLANNING—HOUSING OF THE WORKING CLASSES ACT, 1909.

During the year 222 houses have been inspected under Section 17 of the above Act.

| | | | | |
|---|-----|-----|-----|-----|
| Number of closing orders made | ... | ... | ... | 4 |
| „ repaired after closing orders made | ... | ... | ... | 2 |
| „ of houses in which defects were found | ... | ... | ... | 176 |

The general defects found were want of free circulation of air, damp and defective walls for want of damp-courses and pointing, defective roofs, window frames and floors.

PHYSICAL CHARACTERS OF THE DISTRICT.

The district is situated on the North side of the River Mersey, and extends from the boundary of Widnes to that from Cadishead, a distance of twelve miles. It is mostly low lying and flat, with very little natural drainage, consequently it is cold and wet. The subsoil on the West side and Centre portion being clay, while on the East side there is moss land.

There are plenty of workmen's houses throughout the district, those in the country being old but habitable, whilst others in the villages are mostly new. The occupation of the inhabitants being mostly agricultural; but in the west there are coal miners. Milk supply is abundant and wholesome. There are 62 purveyors of milk on the register. The Dairies, Milkshops and Cowsheds are frequently visited and found on the whole satisfactory, clean and sanitary as regards space, ventilation and drainage, but the grooming of the cows is sadly neglected. I enclose you sickness and mortality returns, also your Inspector's Report.

I am, Gentlemen,

Your Obedient Servant,

RICHARD SEPHTON,

Medical Officer of Health.

Springfield,

Culcheth, Nr. Warrington.

March 24th, 1914.

SUMMARY OF MEDICAL OFFICER'S REPORT FOR 1913.

RURAL DISTRICT OF WARRINGTON.

Medical Officer of Health ; RICHARD SEPTON, Salary, £170.

Inspector of Nuisances ; FRANK W. KERFOOT, Salary, £170.

What is the character of the Hospital Accommodation ? For Small-pox, none
For other Infectious Diseases : Warrington Fever Hospital.

Is it joint or otherwise ? Otherwise. Payments made for each patient sent
no retaining fee paid.

No. of Beds available for your District ? For Small-pox, none. For other
Infectious Diseases, as many as vacant.

No. of cases removed to Hospital from your District ? Small-pox, none.
Enteric Fever, 1. Diphtheria, 4. Scarlet Fever, 4. Total, 9.

Deaths in Hospital of Patients from your District ? Two from Diphtheria.

How is disinfection carried out ? Houses, Sharratt's Formalide Fumigators.

No. of houses disinfected ? 46. Apparatus used for Clothing, Bedding, &c
(steam or otherwise) ? Steam. Where is apparatus situated ? Warring-
ton Fever Hospital. If apparatus at a Hospital is available, is it used
for the disinfection of clothing, bedding, &c., of patients not removed
to the Hospital ? In some cases. If not, please state how disinfection
of clothing, &c, in these cases is carried out : Fumigated in bedrooms.

Are any Diseases not specifically mentioned in the Infectious Diseases
Notification Act notifiable (for instance Measles, Whooping Cough, Diarr-
hoea, Chicken Pox, Ophthalmia Neonatorum, &c.) ? No.

Any Schools closed ? Yes, two. If so, for what disease ? Measles and
Chicken Pox.

Diseases specially prevalent ? Scarlet Fever, Diphtheria, Measles. Period ?
All throughout the year. Measles, fourth quarter.

No. of Special Reports made under Art. XIX. (15 and 16) Sanitary Officers
Order, 1910 ? None.

Bacteriological Examinations. No. and nature of specimens examined ? No.

Arrangements (if any) made under the Diphtheria Anti-toxin Order, 1910 ?
Anti-toxin supplied.

"The Housing of the Working Classes Acts, 1890 to 1900."

Has your Authority determined the procedure to be adopted for the
inspection of your District as required by Article 1 of the Regulations ?
Yes.

Has your Authority prepared, as required by Article 1 (3), a list of dwell-
ing houses, the early inspection of which is desirable ? Yes.

Has your Authority designated an officer to undertake the special inspec-
tion of houses and to keep the records stipulated by Article 2. If so,
what officer ? Inspector.

Have the necessary books, forms, &c., for keeping the required records been obtained? Yes.

Action taken in 1913:—

No. of Dwelling-houses inspected under Sec. 17 of the Act of 1909? 222.

„ Dwelling-houses considered unfit for human habitation? 4.

„ Representations to Authority with a view to making Closing Orders? 4.

„ Closing Orders made? 4.

„ Dwelling-houses in which defects were remedied without making Closing Orders? 126.

„ Dwelling-houses put into a fit state of habitation after making Closing Orders? 2.

„ Dwelling-houses demolished? Nil.

General character of defects to exist? Want of ventilation and dampness.

Is there a deficiency of housing accommodation? No.

Source of Water Supply.

What is its condition? Very good. Possibilities of contamination? None. Is it subject to your inspection? Yes.

Is Scavenging and Removal of House Refuse carried out satisfactorily? Yes.

How performed (by Sanitary Authority, Contract, or Occupiers of Houses? By Contract in Penketh and Sankey and by occupiers of houses in other Townships.

How is the refuse disposed of? Carted away and used on Agricultural land.

Has a Destructor been provided? No.

Sewage Disposal Works, Method of Treatment? Precipitation in tanks at Burtonwood.

What is the character of the Drainage System? Socket-pipes. Good.

Drain Testing, Flushing, &c.? Carried out by Inspector.

Action taken with regard to the Pollution of Streams? None.

Canal Boats: Number Inspected? 27. Number of Infringements of Acts? 11

What is the condition of the Bakehouses? Good.

„ „ Slaughter Houses? Satisfactory. Has a public Abattoir been provided? No.

„ „ Lodging Houses? Fair. Are they Registered? Yes.

What is the Sanitary conditions of the Schools? Good.

Daries, Cowsheds, and Milkshops—Are they periodically inspected? Yes.

What is their condition? Fairly good. Have Regulations been made under the Order of the L.G.B.? Yes. Are they enforced? Yes.

Amount of air space in cubic feet required for each cow? No regulation in force as to amount of air space.

No. of Cowkeepers? No. on Register? 62.

No. of Dairymen or Purveyors of Milk (other than Cowkeepers)? No. on Register? 62.

Action taken (if any) as to tuberculous milk? No action taken as to tuberculous milk.

Total amount of Food seized as unfit for Human Consumption? None.

Department of Inspector of Nuisances. No. of Statutory Notices served? 50. Informal? 60. Nuisances remedied? 235. No. of Legal Proceedings taken and result? None.

No. of Privy Middens? 703 Pail Closets? 1675. Fresh Water Closets? 395. Waste Water Closets? 13. No. of Privy Middens converted during 1913? To W.C.'s 3. To Pails, &c., 13. No. of Pail Closets converted to W.C.'s 3.

Does Council contribute towards the cost of conversion of either privies or pail closets or both? If so how much? No.

Smoke. No. of Observations? 8. No. of Legal Proceedings taken? None. What is the time limit allowed for the emission of black smoke per hour? 10 minutes.

Has the Authority adopted—

The Infectious Disease (Prevention) Act, 1890? Yes.

The Public Health Acts Amendment Act 1890? No.

The Public Health Acts Amendment Act, 1907? Sections 15, 16, 17, 23 and 33.

The Notification of Births Act, 1907? No.

Has a Health Visitor been appointed? No.

Notable Sanitary improvements during 1813 An improved Sanitary Condition of the whole district in regard to houses, back yards and passages.

Chief Sanitary requirements of District. Better sewerage and water supply in some parts of the district.

Signed,

RICHARD SEPHTON,

March 24th, 1914.

Medical Officer of Health.

VITAL STATISTICS OF WHOLE DISTRICT DURING 1913 AND PREVIOUS YEARS.

TABLE I.—Warrington Rural District.

| Year. | Population estimated to Middle of each Year. | BIRTHS. | | TOTAL DEATHS REGISTERED IN THE DISTRICT. | | TRANSFERABLE DEATHS. | | NETT DEATHS BELONGING TO THE DISTRICT. | | | |
|-------|--|---------|-------|--|-------|--|--|--|-----------------------------|--------------|-------|
| | | Number. | Rate. | Number. | Rate. | of Non residents registered in the District. | of Residents registered beyond District. | Under 1 Year of Age. | | At all Ages. | |
| | | | | | | | | Number. | Rate per 1,000 Nett Births. | Number. | Rate. |
| 1 | 2 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 1908 | 12826 | 283 | 22'06 | 137 | 10'06 | 210 | 10 | 21 | 109'5 | 147 | 11'5 |
| 1909 | 13157 | 296 | 22'5 | 147 | 11'1 | 228 | 4 | 21 | 71'2 | 156 | 11'8 |
| 1910 | 13412 | 283 | 21'1 | 129 | 10'9 | 219 | 18 | 27 | 95'4 | 129 | 10'9 |
| 1911 | 14073 | 248 | 17'6 | 128 | 9'1 | 219 | 23 | 25 | 98'8 | 151 | 10'7 |
| 1912 | 14289 | 282 | 19'7 | 167 | 11'4 | 198 | 13 | 39 | 121 | 163 | 11'4 |
| | — | — | — | — | — | — | — | — | — | — | — |
| 1913 | 14615 | 275 | 18'8 | 134 | 9'3 | 16 | 18 | 25 | 91'5 | 152 | 9'3 |

Area of District in acres { 19'927
(exclusive of area covered by water)

Total population at all ages 14615
Number of inhabited houses 1730
Average number of persons per house 5½
At Census of 1911.

TABLE II. Cases of Infectious Disease notified during the year 1913.

| NOTIFIABLE DISEASE. | CASES NOTIFIED IN WHOLE DISTRICT. | | | | | | | TOTAL CASES NOTIFIED IN EACH LOCALITY. | | | NO. OF CASES REMOVED TO HOSPITAL FROM EACH LOCALITY. | | | |
|---|-----------------------------------|----------------|--------|---------|----------|----------|----------|--|---------|--------|--|---------|--------|----------------------------------|
| | At all Ages. | At Ages—Years. | | | | | | Sankey | Winwick | Rixton | Sankey | Winwick | Rixton | Total cases removed to Hospital. |
| | | Under 1 | 1 to 5 | 5 to 15 | 15 to 25 | 25 to 45 | 45 to 65 | | | | | | | |
| Small-pox ... | | | | | | | | | | | | | | |
| Cholera ... | | | | | | | | | | | | | | |
| Diphtheria (including Membranous croup) ... | 22 | | 9 | 12 | | 1 | | 12 | 5 | 5 | | | | 4 |
| Erysipelas ... | 9 | | | | 4 | 2 | 1 | 7 | | 2 | | | | |
| Scarlet fever ... | 23 | | 8 | 12 | 1 | 2 | | 19 | 2 | 2 | | | | 4 |
| Typhus fever ... | | | | | | | | | | | | | | |
| Enteric fever ... | 1 | | 1 | | | | | | | 1 | | | | 1 |
| Relapsing fever ... | | | | | | | | | | | | | | |
| Continued fever ... | | | | | | | | | | | | | | |
| Puerperal fever ... | 1 | | | | | | 1 | 1 | | | | | | |
| Poliomyelitis ... | | | | | | | | | | | | | | |
| Pulmonary Tuberculosis | 12 | | | 1 | 6 | 4 | 1 | 9 | 1 | 2 | | | | |
| Other forms of Tuberculosis | 12 | | 3 | 2 | 2 | 3 | 2 | 4 | 4 | 4 | | | | |
| Totals ... | 80 | | 21 | 27 | 13 | 12 | 6 | 52 | 12 | 16 | | | | 9 |

IN BOROUGH OF WARRINGTON AND SANKEY—CORPORATION HOSPITAL.

IN SANKEY SANATORIUM.

| IN SANKEY SANATORIUM. | | | | | | | | | | | |
|---|-----|----|----|----|---|---|----|----|---|----|----|
| Meningitis | 5 | 2 | | 2 | | | 1 | | | | |
| Organic Heart Disease... | 20 | | 1 | | 3 | | 8 | | | 6 | |
| Bronchitis | 9 | 3 | 1 | | | | | 1 | | 4 | |
| Pneumonia (all forms) ... | 16 | 2 | | 1 | | | 5 | | | 1 | |
| Other diseases of Respiratory organs ... | | | | | | 3 | | 4 | | | |
| Diarrhoea and Enteritis | 7 | 4 | 2 | | | | | | | 1 | |
| Appendicitis & Typhlitis | | | | | | | | | | | |
| Cirrhosis of Liver ... | 4 | | | | | | 4 | | | | |
| Alcoholism | | | | | | | | | | | |
| Nephritis and Bright's Disease | 1 | | | | | | 1 | | | | |
| Puerperal Fever | 1 | | | | | | | 1 | | | |
| Other accidents and diseases of Pregnancy and Parturition .. | | | | | | | | | | | |
| Congenital Debility and Malformation, including Premature birth | 8 | 8 | | | | | | | | | |
| Violent Deaths, excluding Suicide | 12 | | 1 | | 1 | | 1 | 6 | | 2 | |
| Suicides | 2 | | | | | | | | 1 | | |
| Other Defined Diseases | 29 | 4 | | 2 | | 2 | 10 | | | 11 | |
| Diseases ill-defined or unknown | | | | | | | | | | | |
| All causes | 152 | 25 | 13 | 10 | 9 | 8 | 40 | 20 | | 27 | 11 |

1-INSPECTION.

INCLUDING INSPECTIONS MADE BY SANITARY INSPECTORS OR INSPECTORS OF NUISANCES.

| Premises. | Number of | | |
|--|-------------|------------------|---------------|
| | Inspections | Written Notices. | Prosecutions. |
| Factories (including Factory Laundries) ... | 35 | None. | None. |
| Workshops (including Workshop Laundries) | 62 | | |
| Workplaces (other than outworkers' premises included in Part 3 of this Report) ... | 4 | | |
| Total | 101 | None. | None. |

2-DEFECTS FOUND.

| Particulars. | Number of Defects. | | | Number of Prosecutions. |
|--|--------------------|----------|-----------------------------|-------------------------|
| | Found. | Remedied | Referred to H M. Inspector. | |
| <i>Nuisances under the Public Health Acts.</i> | | | | |
| Want of Cleanliness | 1 | 1 | | |
| Sanitary Accommodation not separate for sexes. | | | | |
| Total | 1 | 1 | | None. |

3-HOME WORK.

| NATURE OF WORK. | Lists received from Employers. | Outwork in unwholesome premises. Sec. 108 | Outwork in infected premises, Sec. 109, 110 |
|---------------------------------|--------------------------------|---|---|
| Wearing apparel :
Making ... | | | |
| File making | | | |
| Total | | None. | None. |

4-REGISTERED WORKSHOPS.

| | | | | | | |
|--|-----|-----|-----|-----|-----|----|
| Workshops | ... | ... | ... | ... | ... | 30 |
| Bakehouse | ... | ... | ... | ... | ... | 1 |
| Workshops on the Register at the end of the year | | | | | | 31 |

OTHER MATTERS.

Matters notified to H.M. Inspector of Factories:—

Failure to affix Abstract of the Workshop and Factory Act (s 133) 0

*To the Chairman and Members of the Warrington
Rural District Council.*

GENTLEMEN,

I have again the pleasure of presenting to you my Annual Report of Nuisances and other matters dealt with during the year 1913.

The number of inspections made were 1,439, which include Dwelling-houses, Farms, Cowsheds, Slaughter-houses, Factories, Workshops, and Knackers' Yards, etc.

The number of statutory notices served were 50, informal notices 60.

Thirteen cases have not yet received attention by the owners.

Old drains taken up, cleaned and relaid 14. New drains laid 5. Slop-stone pipes defective 11. Untrapped gullies to drains 24. Channels defective 4. Yards defective 22. Spouting defective 21. Lavatory and soil pipes defective 5. Yard drains defective 3. Houses dirty 2. Houses overcrowded 1. Foul ditches cleaned out 1. Foul ditches piped and filled up 1. Swine kept so as to be a nuisance 3. Privies and ashpits defective 21. Pail closets defective 5. Privies and ashpits full and overflowing 61. Pails and ashtubs defective 113. Urinals defective 2. Privies converted to pail system 13. Pail closets converted to water closets 3. New pail closets erected 4. Accumulation of ashes and refuse 20. Houses disinfected 46. Samples of water analysed 1. New houses erected 34. Lodging-houses inspected 2. Licenses granted under Petroleum Acts 9. Approximate number of privy middens 703. Water closets 395. Pail closets 1,675. Waste water closets 13. Flush closets 12.

DAIRIES, COWSHEDS AND MILKSHOPS ORDER.

There are 62 persons registered as Purveyors of Milk in the Council's District. The Cow Sheds on the whole are kept fairly clean, but there is still room for improvement with regard to the grooming of the cows. One cowshed has been ventilated, new windows provided and floors repaired.

FACTORY AND WORKSHOPS ACT, 1901.

The Factories and Workshops have been inspected and were found in a satisfactory condition. It was not found necessary to issue any notices for limewashing, etc.

HOUSING TOWN PLANNING ACT, 1909.

During the past year 222 houses have been inspected under Section 17 of the Housing Town Planning Act, 1909. Number of closing orders made 4. Number of houses which after the making of closing orders were repaired and made habitable, 2. Number of houses in which defects were found 175.

The general character of the defects found was the want of free circulation of air, damp and defective walls for the want of damp courses and pointing, defective roofs, window frames and floors, etc,

CANAL BOATS ACTS.

As required by Section 3 of the Canal Boats Act 1884. I submit my Annual Report for the year 1913. I have visited the Canal Boats on my rounds through the district and have inspected 27 boats, being two more than the previous year. The boats plying on the Sankey Canal are chiefly engaged in the manure trade and a few carrying sugar to Earlestown, the coal trade having entirely gone. I found them registered for 86 persons and the number found totalled Males 42, Females 3. There are a few minor cases of infringements, but it was not found necessary to take legal proceedings. Certificates of registration not produced 3. Certificates not identifying owner 1. Boats not properly marked and numbered 4. Cabins not known when painted 14. All these were in good condition with the exception of one which required painting. Cabins dilapidated 1. No double bulkheads for carrying offensive cargoes 1. No infectious cases were reported.

FRANK W. KERFOOT,

INSPECTOR.

HOBBING TOWN PLANNING ACT, 1908

The first part of the Act deals with the powers of the Local Planning Committee in relation to the planning of the town. It provides that the Committee may, after consulting the Local Planning Board, make a plan for the town, and may also make a plan for the town, and may also make a plan for the town.

The second part of the Act deals with the powers of the Local Planning Committee in relation to the planning of the town. It provides that the Committee may, after consulting the Local Planning Board, make a plan for the town, and may also make a plan for the town, and may also make a plan for the town.

CASES, 1908-1918

The first case is the case of the Local Planning Committee in relation to the planning of the town. It provides that the Committee may, after consulting the Local Planning Board, make a plan for the town, and may also make a plan for the town, and may also make a plan for the town.

FRANK W. KERRICK

The second case is the case of the Local Planning Committee in relation to the planning of the town. It provides that the Committee may, after consulting the Local Planning Board, make a plan for the town, and may also make a plan for the town, and may also make a plan for the town.